DOI: https://doi.org/10.30525/2256-0742/2026-12-4-58-66

# ECONOMIC INCENTIVES AND CRIMINAL LIABILITY: DOES PUNISHMENT FUNCTION AS A MECHANISM FOR REGULATING MARKET BEHAVIOUR?

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**Abstract.** This article presents a comprehensive, interdisciplinary study of the relationship between economic incentives and criminal liability as instruments for regulating market behaviour. The topic's relevance stems from the need to identify an optimal model of state intervention in economic relations, given the increasing prevalence of economic crime, the high latency of economic criminal offences and the limited effectiveness of traditional punitive mechanisms. The study aims to evaluate the effectiveness of criminal punishment as a means of regulating the behaviour of economic agents, determine its regulatory capacity limits, and substantiate the optimal balance between punitive and incentive-based public policy instruments. The methodological framework combines economic analysis of law with systemic, comparative, formal, logical-analytical and statistical legal methods. The research is theoretically founded on Gary Becker's economic model of the rational offender, the *ultima ratio* doctrine, the principle of the economy of criminal law enforcement, and contemporary approaches within the field of law and economics. The findings demonstrate that compensatory increases in the severity of criminal sanctions do not ensure a proportional enhancement of the deterrent effect of economic criminal offences under conditions of a high level of latency, and may conflict with the principles of proportionality, justice, and economy of criminal law repression. Based on an analysis of deposit and lending activity dynamics in Ukraine, the study concludes that lawful financial behaviour is influenced to a much greater extent by economic and institutional incentives, particularly the deposit guarantee system, preferential lending programmes and predictable monetary policy, than by intensified criminal law enforcement. The study also argues that excessive or disproportionate reliance on criminal law mechanisms to regulate economic activity may increase legal uncertainty, raise businesses' transaction costs, and negatively impact investment activity. The research's scientific novelty lies in the development of the concept of complementary market behaviour regulation, whereby economic incentives and criminal liability perform mutually reinforcing functions. Economic instruments shape incentives for lawful behaviour *ex ante*, whereas criminal law serves a protective function *ex post*, responding to the most socially dangerous manifestations of opportunistic behaviour. The practical significance of the findings lies in their support for the transition to an integrated criminal policy model that prioritises the use of economic incentives alongside the proportional, predictable and ultima ratio-based application of criminal law mechanisms.

**Keywords:** economic incentives, criminal liability, economic analysis of law, market behaviour, ultima ratio, economic offences, criminal policy, institutional economics.

**JEL Classification:** K14, K42, D91, P48, H11

**Received on:** May 03, 2026 **Accepted on:** July 20, 2026 **Published on:** August 07, 2026

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## 1. Introduction

The relationship between economic incentives and criminal liability as instruments of state regulation of market behaviour is one of the most debated issues in contemporary law and economics. In the context of martial law, the ongoing transformation of economic relations and the need to safeguard national economic security and Ukraine's European integration agenda, it is particularly important to identify an optimal balance between economic mechanisms that encourage lawful behaviour and criminal law measures aimed at preventing and combating economic criminal offences. Whilst criminal punishment has traditionally been regarded as one of the principal instruments for maintaining legal order, contemporary economic theory increasingly views it not as an isolated mechanism, but as an integral component of a broader regulatory framework, the effectiveness of which depends on the interaction of legal, economic, and institutional factors.

The economic analysis of law, initiated by the pioneering work of Gary Becker and subsequently developed within the broader law and economics tradition, assumes that economic agents make decisions by comparing the expected benefits of alternative courses of action with their anticipated costs. From this standpoint, criminal liability signifies not merely a form of state compulsion but also an economic indicator that exerts influence on the conduct of potential offenders by modifying the framework of incentives. However, in the field of economic criminal offences, the effectiveness of this mechanism is substantially constrained by the high level of offence latency, the complexity of financial schemes, the considerable costs associated with detecting and investigating offences, as well as the dependence of the deterrent effect on the predictability and certainty of criminal liability.

Contemporary economic practice demonstrates that lawful financial and investment behaviour is shaped by institutional economic incentives to a much greater extent than by criminal law prohibitions. These incentives include deposit guarantee schemes, government support programmes, predictable monetary policy, risk-sharing and insurance mechanisms, and other regulatory instruments that make lawful conduct more economically attractive. In these circumstances, the role of criminal punishment in the state's regulation of economic relations must be reconsidered, along with a re-evaluation of the extent to which it can be effectively applied.

Against this background, the relationship between criminal law and the economic mechanisms that influence the behaviour of market participants becomes particularly significant. Excessive reliance on criminal law measures can lead to increased legal uncertainty, higher transaction costs for businesses, a deteriorating investment climate and reduced overall effectiveness of state regulatory policy. Conversely, insufficient criminal law protection of economic relations creates favourable conditions for opportunistic behaviour and the expansion of economic crime. Therefore, finding the right balance between economic incentives and criminal liability as complementary instruments for regulating market behaviour is the main focus of this study.

## 2. Literature Review

The relationship between economic incentives and criminal liability as mechanisms for regulating human behaviour has long been of interest to scholars of economics, criminal law and the economic analysis of law. Gary Becker established the conceptual foundations of the economic understanding of criminal liability by proposing that criminal offending should be viewed as the outcome of a rational choice made by an economic agent who compares the expected benefits of unlawful conduct with the anticipated costs associated with the probability of detection and the severity of punishment. This approach subsequently became one of the cornerstones of economic analysis in law, providing the theoretical basis for numerous studies examining the effectiveness of criminal law regulations.

In the field of Ukrainian criminal law and criminological scholarship, notable contributions to the study of economic crime have been made by A. P. Zakaliuk, A. F. Zelinskyi, O. H. Kalman and Ye. Streltsov, D. O. Hrytsyshen, V. A. Predborskyi and others. These scholars conceptualise economic criminal offences as complex socio-economic phenomena that are closely associated with the development of market relations, the financial system, and national economic security. These scholars consistently emphasise that effective counteraction to economic crime requires a comprehensive approach that combines criminal law measures with organisational, economic and institutional instruments.

A separate strand of contemporary research focuses on the *ultima ratio* doctrine, the principle of the economy of criminal legal intervention, and the proportionality of such intervention. In the works of M. I. Khavroniuk and other scholars, these principles are regarded as fundamental safeguards that limit state coercion and ensure the fair, proportionate and economically justified application of criminal liability. Meanwhile, international literature is increasingly applying economic analysis to criminal law, assessing criminal sanctions through the categories of efficiency, transaction costs, economic incentives, and institutional trust.

Another significant contemporary research trajectory pertains to the phenomenon of overcriminalisation, which has been linked to mounting regulatory uncertainty, escalating business costs, a deterioration in the investment climate, and a decline in the overall efficacy of state regulatory policy. Within this theoretical framework, there has been a notable increase in the acceptance of the view that the application of criminal liability should be used as a measure of last resort (*ultima ratio*). In contrast, the primary regulatory influence on economic behaviour should be exerted through institutional economic incentives and other preventive mechanisms of public policy.

Despite the substantial body of existing research, the relationship between economic incentives and criminal liability as complementary instruments for regulating market behaviour remains insufficiently explored. The majority of studies examine criminal liability primarily as an autonomous instrument of state coercion, while economic incentives are typically analysed separately within the domains of fiscal, monetary, or investment policy. Consequently, insufficient attention has been paid to a comprehensive law-and-economics analysis of the interaction between these regulatory mechanisms, their complementary nature, and the identification of an optimal model of state regulation of economic relations that integrates the principles of *ultima ratio*, the economy of criminal law repression, and economic efficiency. The identification of these issues constitutes the principal research gap that this study seeks to address.

## 3. Methodology

The methodological framework of this study is based on an interdisciplinary approach integrating the principles of the economic analysis of law, criminal law doctrine, and institutional economics to examine the relationship between economic incentives and criminal liability as complementary mechanisms for regulating market behaviour. This approach enables the conceptualisation of criminal punishment not solely as an instrument of legal responsibility, but also as an element of the broader system of economic regulation, the effectiveness of which is contingent upon the structure of economic incentives, the level of institutional trust, and the predictability of law enforcement.

The present study employs a combination of complementary research methods. The systems approach provides a comprehensive framework for analysing the interaction between criminal law, economic, and institutional determinants of market behaviour. The formal legal method is applied to examine the provisions of Ukrainian criminal legislation, the *ultima ratio* doctrine, and the principle of economy of criminal law repression. The law-and-economics approach is utilised to evaluate the efficacy of criminal liability from the perspective of anticipated costs and benefits, transaction costs, institutional incentives, and the economic efficiency of state intervention. The comparative method is utilised to evaluate the regulatory potential of criminal sanctions and economic incentives as alternative and complementary instruments that influence the behaviour of market participants. Finally, statistical and analytical methods are employed to examine the dynamics of deposit and lending activities in Ukraine, providing an empirical basis for assessing the impact of institutional economic incentives on the behaviour of economic agents.

The empirical basis of the research comprises provisions from Ukrainian criminal legislation and international legal instruments, as well as scholarly publications from the fields of criminal law, economic analysis and institutional economics. It also includes statistical data from the National Bank of Ukraine, analytical reports from public authorities and contemporary studies that address economic crime, criminal policy and the state regulation of economic relations.

The limitations of the study are primarily attributable to its theoretical and analytical nature. The conclusions are based on a law-and-economics analysis of legal provisions, academic literature, and official statistical data, and do not include econometric modelling of the impact of criminal sanctions on the behaviour of economic agents. Consequently, further research employing econometric, behavioural, and sociological methods is required to provide a quantitative assessment of the effectiveness of the complementary model of market behaviour regulation proposed in this study.

## 4. Theoretical Framework

### 4.1. Gary Becker's Economic Model of the Rational Offender

The conceptual foundations of the economic understanding of criminal liability as a mechanism for regulating behaviour were established by the American economist Gary Becker. In his seminal work, Crime and Punishment: An Economic Approach (1968), argued that criminal behaviour should not be viewed as a manifestation of pathology or irrationality, but rather as the result of rational decision-making. According to this theoretical framework, individuals contemplating the commission of a criminal offence compare the expected benefits of unlawful conduct with the anticipated costs, which are determined primarily by the probability of detection, prosecution, and punishment, as well as by the individual's attitude towards risk (Becker, 1968). From this standpoint, criminal offending can be regarded as one of numerous behavioural alternatives, with the ultimate decision being contingent on the anticipated utility associated with each available option. In circumstances where the anticipated utility of perpetrating a criminal act surpasses that of adhering to lawful conduct, it is anticipated that the individual will opt for the unlawful course of action. Consequently, by determining the parameters of criminal liability, the state effectively establishes an implicit system of 'prices' for unlawful behaviour, thereby altering the balance between potential gains and anticipated losses (Dovbenko, 2000).

The economic model of the rational offender is of particular methodological significance in the field of economic criminal offences. This is because business entities and other participants in economic relations generally operate as rational economic agents, systematically evaluating expected costs and benefits when making decisions (Becker, 1968). However, this is precisely the area in which Becker's model reveals one of its main practical limitations. Where the probability of detecting economic criminal offences is low due to the high latency of economic crime, the complexity of financial schemes and the limited resources available to law enforcement and regulatory authorities, an adequate deterrent effect is primarily achieved by increasing the severity of criminal sanctions. Nevertheless, intensifying punitive intervention to compensate for a low probability of detection conflicts with the fundamental principles of proportionality, individualised criminal liability and the economy of criminal law enforcement (Bakhurynska, 2017). Moreover, this approach imposes extremely severe punishments on a small number of offenders who are caught, while the vast majority of people who commit similar offences effectively avoid legal accountability.

This contradiction constitutes the central research problem addressed in the present study: whether increasing the severity of criminal sanctions represents an effective response to the low detection rate of economic criminal offences, or whether a more efficient strategy of public policy lies in strengthening economic mechanisms capable of reducing the very motivation for unlawful conduct through the restructuring of economic incentives.

### 4.2. The Ultima Ratio Doctrine and the Principle of Economy of Criminal Law Repression

The *ultima ratio* doctrine is based on the idea that criminal law should only be used as a 'last resort', when other, less intrusive legal mechanisms – such as administrative, civil, commercial or financial regulation – are unable to adequately protect significant social interests against harmful behaviour. In Ukrainian criminal law, the principle of the economy of criminal repression is conceptually analogous. According to M. I. Khavroniuk, this principle essentially encapsulates the Ukrainian interpretation of the ultima ratio doctrine, as reflected in the draft of the new Criminal Code of Ukraine through the principle of proportionality (Khavroniuk, 2020).

At the same time, however, these principles are not identical. The principle of proportionality requires the type and severity of punishment to correspond to the gravity of the criminal offence and its social harmfulness. In contrast, the principle of economy of criminal law repression aims to determine the minimum level of criminal legal intervention necessary to achieve the objectives of criminal liability, while avoiding excessive state interference (Khavroniuk, 2020).

From a doctrinal perspective, this principle requires the reasonable, justified and rational use of criminal legal instruments to protect social relations and prevent the disproportionate expansion of criminal repression (Navrotskyi, 2013). Its implementation extends beyond the sentencing stage to include the individualisation of criminal liability, the possibility of imposing a punishment less severe than that prescribed by law, and the consideration of mitigating and aggravating circumstances (Iskenderov, 2017). Its role at the legislative stage is equally important, where lawmakers determine the types and limits of criminal sanctions. It is precisely at this level that the proportionality of criminal law measures in relation to the nature and degree of social harmfulness of the offence must be ensured, without creating an artificial 'margin of severity' through the imposition of excessively harsh sanctions that fail to satisfy the requirements of justice and proportionality (Krasii, 2020).

From the perspective of economic analysis of law, the principle of economy of criminal law repression may be understood as an instrument for optimising the aggregate social costs associated both with crime itself and with its deterrence. The objective of this study is to achieve an optimal balance between the state's expenditures on the detection, investigation, adjudication, and enforcement of criminal sanctions and the amount of social harm prevented. It is hypothesised that the marginal social benefit derived from strengthening criminal law intervention is not lower than the marginal social costs required to sustain it (Bakhurynska, 2017). Within this analytical framework, the *ultima ratio* doctrine and the principle of economy of criminal law enforcement not only complement Becker's economic model of the rational offender, but also extend it substantially by defining the boundaries of the economic efficiency of criminal punishment as a means of state regulation. At the same time, they emphasise the desirability of relying on alternative, primarily economic, mechanisms to influence the behaviour of market participants, provided such mechanisms can achieve socially desirable objectives at a lower social cost (Becker, 1968).

## 5. Results and Discussion

### 5.1. The Concept and Characteristic Features of Criminal Offences against the Economic System

As a socio-legal phenomenon, economic crime has evolved alongside the emergence of statehood and the development of economic relations. The functioning of the state has always been intrinsically linked to the legal regulation of economic activity and the prevention of abuses in this area (Baranovska & Malashevska, 2022). The evolution of economic relations has therefore led to the gradual development of the criminal legal framework that protects the economic system, as well as the corresponding conceptual apparatus.

Contemporary scholarship offers no universally accepted definition of economic crime. Some researchers conceptualise it as a distinct category of criminality determined by how the national economic system functions (Hrytsyshen et al., 2020), while others define it as a set of intentional, profit-driven criminal offences that encroach upon property relations and the legally established framework that governs economic activity (Skakun, 2018). A third approach considers economic crime to be a complex socio-economic phenomenon that undermines the functioning of the national economy and has an adverse effect on its sustainable development (Zabarnyi, 2019). Despite doctrinal differences, all approaches share the understanding that offences in this category are committed to obtain unlawful economic gain, interfere with the economic system and have adverse consequences for the state, businesses, investors and society as a whole.

The main features of criminal offences against the economic system are their criminological homogeneity, which stems from shared socio-economic and organisational factors, and the violation of legally established rules governing economic activity. These offences often involve sophisticated financial schemes, corporate governance structures and modern digital technologies, which make them difficult to detect and investigate. They predominantly cause financial harm and frequently involve the abuse of official authority or corporate powers to achieve unlawful objectives. From a criminal law perspective, the protected legal interest in such offences consists of economic relations that ensure the proper functioning of the national economic system. The subjective element is generally characterised by intentional culpability and a motive driven by profit (Baranovska & Malashevska, 2022).

For the purposes of this study, two characteristics of economic criminal offences are particularly important: their high level of latency and the economically motivated behaviour of offenders. These characteristics correspond closely to the fundamental assumptions of Gary Becker's economic model of the rational offender, which states that the decision to commit an offence is based on an assessment of expected gains and anticipated losses. At the same time, they demonstrate the limited effectiveness of purely punitive state intervention mechanisms and highlight the need to identify the most effective combination of criminal law and economic instruments for regulating market behaviour.

### 5.2. Comparative Effectiveness of Punitive and Incentive-Based Mechanisms for Regulating Financial Behaviour

In order to test the proposed hypothesis regarding the comparative effectiveness of punitive and incentive-based instruments of state intervention, it is necessary to examine empirical evidence reflecting the financial behaviour dynamics of economic agents in Ukraine. It is notable that growing public confidence in the banking system and the expansion of formal savings in recent years have primarily been driven by economic and institutional mechanisms rather than by strengthened criminal liability for financial offences (Humeniuk, 2025).

From 2010 to 2024, the total volume of resident deposits in Ukraine increased by a factor of 6.7. Households accounted for the largest share of this growth, as their deposits expanded by more than fivefold. This development was precipitated by the confluence of several institutional and economic factors, among which the deposit guarantee system, the monetary policy of the National Bank of Ukraine aimed at maintaining attractive returns on savings, and the introduction of domestic war bonds played the most significant role. All these instruments were designed to reduce the perceived level of financial risk and increase the anticipated rewards of lawful financial behaviour. In other words, they operate through positive economic incentives rather than mechanisms of criminal law coercion (Humeniuk, 2025).

In contrast, the banking sector's loan portfolio demonstrated a substantially more modest growth trajectory during the same period, with an increase of approximately 50%. The observed disparity between the growth of deposits and lending signifies the presence of a structural discrepancy between the propensity of economic agents to save and their inclination to undertake investment borrowing in conditions of heightened uncertainty. The recovery of corporate lending was largely facilitated by the government's 'Affordable Loans 5–7–9%' preferential lending programme, which significantly reduced borrowers' risk exposure through state guarantees and interest rate compensation mechanisms (Humeniuk, 2025). From a behavioural perspective, it was precisely this reduction in individual risk that generated additional incentives for investment decisions, rather than the strengthening of criminal liability for breaches of credit discipline or the misuse of borrowed funds. This occurred even under conditions of martial law and elevated economic uncertainty.

Comparing these empirical findings with the mechanism of criminal law regulation enables important generalisations to be made. Institutional economic instruments, including deposit guarantee schemes, preferential lending programmes, regulatory transparency, predictable monetary policy and other incentive-based measures, influence the behaviour of market participants in a systematic and predictable manner before economic decisions are made. These instruments shape a structure of incentives within which lawful conduct becomes more attractive and beneficial than unlawful alternatives from an economic perspective.

By contrast, criminal punishment predominantly exercises its regulatory function *ex post*, i.e., only after a criminal offence has been detected and proven. The effectiveness of its deterrent depends directly on an individual's subjective assessment of the probability of detection and prosecution. In the sphere of economic crime, this assessment is traditionally relatively low due to the high level of offence latency. In such circumstances, criminal punishment plays a supplementary and protective role within the state's overall system of regulating market behaviour. It safeguards the economic order against opportunistic conduct by market participants for whom positive economic incentives are insufficient. However, the formation of widespread lawful economic behaviour is achieved to a much greater extent through the operation of economic and institutional incentives.

These findings are consistent with the principles of the economic analysis of law. According to these principles, changes in the structure of economic incentives can influence the behaviour of a substantially broader range of economic agents than increases in criminal sanctions. The effectiveness of the latter largely depends on the probability of their actual enforcement. Consequently, economic policy and criminal law should be considered complementary instruments for promoting lawful market behaviour, rather than mutually exclusive ones.

### 5.3. Risks of Excessive Criminalisation of Economic Activity

The way law enforcement is practised in Ukraine following the introduction of martial law provides valuable empirical material for assessing the effectiveness of criminal law regulations in the economic sphere. As noted in expert legal analyses, since February 2022, there has been a discernible tendency in certain cases to apply the provisions of Chapter I of the Special Part of the Criminal Code of Ukraine governing criminal offences against the foundations of Ukraine's national security to business representatives (white-collar offenders), rather than the specific provisions establishing liability for offences relating to economic or official activities (The Criminal Code of Ukraine, 2001). According to these expert assessments, this practice is associated with the perception that financial damage inflicted on state-owned or strategically important enterprises may, in certain circumstances, be seen not only as a result of profit-driven misconduct, but also as behaviour that could endanger the state's economic or national security (Fliashchenko, 2023).

From an economic analysis of law perspective, this phenomenon can be interpreted as a 'substitution effect of punitive instruments', whereby specialised criminal or administrative law mechanisms are replaced by substantially harsher criminal law responses. This alters not only the legal consequences of unlawful conduct, but also the economic environment in which business entities operate. Its potential consequences include increased regulatory uncertainty, higher transaction costs, reduced investment appeal and the creation of incentives to reduce legitimate economic activity or move it to the informal sector. In such circumstances, excessive or disproportionate criminalisation could ultimately undermine the effectiveness of criminal law in regulating economic activity, rather than strengthening it, by discouraging lawful entrepreneurial activity.

These observations are fully consistent with the economic model of rational choice discussed above. The explanatory value of this model hinges to a large extent on the predictability of criminal law regulations, as this allows economic agents to reasonably objectively assess the probability of legal consequences arising from their actions. In circumstances where the boundaries of criminal prohibitions become less certain or are substantially expanded through law enforcement practice, the behaviour of law-abiding market participants is increasingly shaped not by the expected 'price' of a particular criminal offence but by the overall level of legal uncertainty. From an economic perspective, such uncertainty may be considered one of the most significant deterrents to investment and entrepreneurial activity, exerting a stronger influence than the mere threat of criminal punishment for a specific offence.

### 5.4. The Principle of Economy of Criminal Law Repression as a Mechanism for the Economic Rationalisation of Criminal Liability

The risks associated with excessive criminal law intervention in economic activity, as discussed above, highlight the practical importance of the principle of the economy of criminal law as a key mechanism for the economic rationalisation of criminal liability. This principle involves applying only the necessary and sufficient degree of criminal law intervention to achieve the objectives of criminal liability, taking into account the offender's individual characteristics, form of culpability, motives, mental state, social environment and circumstances that mitigate or aggravate liability (Navrotskyi, 2013).

In the context of economic criminal offences, the individualisation of punishment serves a purpose similar to optimal pricing in economic theory. By imposing the least severe type and degree of punishment necessary to achieve the legal objectives, the court effectively sets an economically justified 'price' for unlawful conduct relating to a particular offender, rather than an arbitrarily inflated one. This approach ensures compliance with the principles of justice and proportionality, while also minimising the overall social costs of the criminal justice system (Knyzhenko, 2011).

Importantly, the principle of the economy of criminal law does not negate the punitive function of criminal law, but rather defines the boundaries of its economic and social appropriateness. In this sense, it acts as a form of internal self-restraint within the criminal legal system, ensuring a balance is struck between protecting economic relations and avoiding excessive state intervention (Khavroniuk, 2020). Implementing this principle at both the legislative and law enforcement levels helps prevent situations in which an excessive expansion of criminal law intervention undermines its own regulatory effectiveness. At the legislative level, this involves establishing proportionate types and limits of sanctions for economic criminal offences. At the law enforcement level, it involves individualising punishment, applying mechanisms for exemption from punishment or imposing a more lenient sentence than that prescribed by law. Consequently, the principle of economy of criminal law repression constitutes not only an important safeguard for the protection of human rights and the principle of justice but also a significant factor contributing to the economic efficiency of criminal law regulation in the sphere of economic activity (Slotvinska, 2022).

Accordingly, the principle of the economy of criminal law should not be seen as an alternative to economic incentives, but rather as a mechanism that ensures coherent interaction between economic incentives and criminal law instruments. The most effective model for regulating market behaviour is precisely the combination of positive economic incentives with the proportionate and predictable application of criminal sanctions.

### 5.5. Discussion

The findings of this study enable the authors to propose a general analytical framework that identifies the conditions under which criminal punishment can function as an effective regulator of market behaviour. Firstly, the effectiveness of deterrence depends directly on the probability of detecting criminal offences. In areas characterised by a high level of offence latency, including the vast majority of economic criminal offences, increasing the severity of sanctions as a compensatory measure does not solve the problem of low punishment certainty, while also creating a risk of violating the principles of proportionality and the efficiency of criminal law enforcement. Secondly, criminal liability becomes much more effective when combined with economic mechanisms such as guarantee schemes, insurance instruments and preferential lending programmes. These institutional arrangements reshape the structure of economic incentives before economic agents make decisions. Under such conditions, the primary function of criminal punishment is protective and compensatory, complementing rather than replacing economic regulatory mechanisms. Thirdly, the effectiveness of criminal law intervention depends as much on its predictability as on its severity. Expanding the scope of the most severe criminal law provisions or inconsistently interpreting them generates a high level of legal uncertainty, which has a far more detrimental effect on economic activity than the mere threat of criminal punishment.

The findings of the study call into question the widely held assumption that an increase in the severity of criminal repression is directly linked to an improvement in the level of lawful behaviour exhibited by market participants. The analysis demonstrates that the positive dynamics of financial and investment activity in Ukraine are associated to a much greater extent with the operation of institutional economic incentives – including deposit guarantee schemes, preferential lending programmes, predictable monetary policy, and other mechanisms for reducing economic risks – than with the intensification of criminal law intervention. Concomitantly, this conclusion should not be interpreted as questioning the necessity of criminal liability within the sphere of economic relations. Conversely, in instances involving intentional, profit-driven abuses, large-scale economic harm, or organised economic crime, criminal law maintains its fundamental role as a means of safeguarding public interests. However, it is imperative that its application remains consistent with the doctrine of *ultima ratio* and the principle of economy of criminal law repression.

The practical implications of the present findings lie in substantiating the shift from a regulatory model that is primarily based on the coercive power of criminal law to an integrated model of state regulation of economic relations. Such a model presupposes the priority use of economic and institutional incentives to encourage lawful behaviour among market participants; the application of criminal liability only where less intrusive legal mechanisms prove insufficient; the proportional design and application of criminal sanctions in accordance with the *ultima ratio* doctrine and the principle of economy of criminal law repression; the prevention of unjustified expansion of the scope of the most severe criminal law provisions; and the consistent individualisation of criminal liability with due regard to the actual social harmfulness of the offence and the offender's personal characteristics.

Particular attention should be paid to the optimal institutional architecture that governs the interaction between punitive and incentive-based mechanisms. Analysing deposit guarantee schemes and preferential lending programmes shows that the state can effectively influence economic agents' behaviour through risk redistribution, strengthening institutional trust and establishing transparent, stable market rules, without continuously expanding criminal law repression. This makes it possible to view economic incentives as the primary instrument of state regulatory policy. Criminal law should only be used as a measure of last resort (*ultima ratio*) in cases of economic misconduct that are particularly harmful to society, where positive incentives have failed to provide an adequate deterrent effect.

The efficacy of such an integrated model is contingent, to a considerable extent, on the level of institutional trust in the system of law enforcement. The predictability of criminal policy, the consistency of judicial practice, and the clarity of the boundaries of criminal law qualification are indispensable prerequisites for the effective functioning of both criminal law and economic mechanisms of regulation. In their absence, the overall level of legal uncertainty substantially diminishes the effectiveness of economic incentives by undermining the possibility of rationally assessing the expected benefits and costs that form the basis of the economic model of market behaviour.

Correspondingly, criminal policy in the sphere of economic relations should not be based on competition between punitive and incentive-based mechanisms, but rather on their functional complementarity. The most effective framework for regulating market behaviour while complying with the contemporary principles of economic efficiency, legal certainty, and the rule of law is precisely the balanced combination of economic incentives, a predictable legal environment, and the proportionate application of criminal liability.

## 6. Conclusions

The findings of this study demonstrate that criminal punishment cannot be regarded as a self-sufficient mechanism for regulating market behaviour. The effectiveness of this approach is contingent on the institutional environment within which economic agents operate. The application of Gary Becker's economic model of the rational offender has demonstrated that, under conditions of a high level of latency of economic criminal offences, compensatory increases in the severity of criminal sanctions do not produce a proportional enhancement of the deterrent effect and may simultaneously conflict with the principles of proportionality, the *ultima ratio* doctrine, and the principle of economy of criminal law repression.

The study further demonstrates that the *ultima ratio* doctrine and the principle of economy of criminal law repression have legal and economic significance. Together, they promote the rational use of criminal law instruments, minimise the unproductive social costs associated with excessive repression and contribute to the efficient allocation of public resources between punitive and preventive mechanisms that regulate economic behaviour.

The analysis of empirical evidence relating to the development of Ukraine's deposit and lending markets demonstrates that lawful financial behaviour is influenced far more by economic and institutional incentives, including deposit guarantee schemes, preferential lending programmes, predictable monetary policy, and other mechanisms for reducing economic risks, than by the intensification of criminal law intervention. The findings indicate that positive economic incentives function as the primary regulator of economic behaviour, whereas criminal law fulfils predominantly a protective function by responding to situations in which other regulatory instruments prove insufficient.

The research also demonstrates that excessive or disproportionate reliance on criminal law mechanisms in the sphere of economic activity may generate a high level of legal uncertainty, thereby reducing investment activity, increasing transaction costs of doing business, and weakening the effectiveness of both criminal law and economic instruments of state regulation.

The principal contribution of this study lies in substantiating a complementary model for the regulation of market behaviour, according to which economic incentives and criminal liability do not compete but rather perform mutually reinforcing functions. Economic mechanisms shape incentives for lawful conduct *ex ante*, whereas criminal law protects the economic order *ex post* by responding to the most socially harmful manifestations of opportunistic behaviour. The efficacy of this model is contingent not on the severity of criminal punishment per se, but rather on the judicious balance between economic incentives, the proportionality of criminal law intervention, and a high level of institutional trust in the system of state regulation.

It is recommended that future research should focus on econometric modelling of the elasticity of the deterrent effect of criminal punishment with respect to particular categories of economic criminal offences in Ukraine. In addition, a comparative legal analysis of trends in the partial decriminalisation of selected economic offences within the Member States of the European Union should be conducted. Furthermore, sociological research examining how business entities perceive the relationship between criminal law risks and economic incentives when making investment decisions should be carried out.

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