Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2026): 8.748 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 13 | Issue: 4 | April 2026 -Peer-Reviewed Journal

MODERNIZING COMPULSORY INSURANCE SYSTEMS IN EMERGING ECONOMIES: THEORETICAL FOUNDATIONS AND EMPIRICAL EVIDENCE FROM UZBEKISTAN

Masimdjanova Muqaddam Xikmatovna
Teacher of Journalism and Mass Communications University of Uzbekistan

ABSTRACT
This study examines the institutional, structural, and regulatory dimensions of the compulsory insurance market in Uzbekistan. The analysis identifies key challenges, including market concentration, sectoral imbalances, and inefficiencies in claims and data systems. Based on empirical evidence and international comparison, the study proposes policy directions to enhance market efficiency, transparency, and financial stability.
KEYWORDS: *Compulsory Insurance, Insurance Market, Market Structure, Risk Management, Financial Stability*

INTRODUCTION

Compulsory insurance occupies a distinctive and theoretically sophisticated position within the broader architecture of modern financial systems. Unlike voluntary insurance, which is based on the discretionary exchange of risk transfer for premium payments, compulsory insurance schemes impose legally binding obligations on individuals, enterprises, or public entities to obtain and maintain specified insurance coverage. This institutional mechanism serves as a corrective response to fundamental market failures inherent in insurance markets, particularly those arising from information asymmetries, adverse selection, moral hazard, and the presence of negative externalities.

From the perspective of welfare economics, the rationale for compulsory insurance is well established. Classical and modern theoretical contributions (Arrow, 1963; Akerlof, 1970) demonstrate that in the absence of regulatory intervention, insurance markets may fail to achieve efficient risk allocation due to asymmetric information and strategic behavior of agents. Mandatory participation expands the risk pool, mitigates selection bias, enhances financial stability, and ensures protection not only for insured individuals but also for third parties and society at large. In this sense, compulsory insurance functions as both a financial instrument and a socio-economic safeguard, contributing to macroeconomic resilience, income smoothing, and systemic risk reduction.

In transitional and emerging economies, the role of compulsory insurance becomes even more pronounced, as institutional weaknesses, limited financial literacy, and underdeveloped market infrastructures exacerbate existing inefficiencies. In the case of Uzbekistan, the compulsory insurance market holds particular strategic importance within the broader context of economic transformation. Since gaining independence in 1991, the country has been progressively shifting from a centrally planned system toward a market-oriented economy. This transition has intensified since 2016 under the reform agenda initiated by President Shavkat Mirziyoyev, which prioritizes financial sector deepening, capital market development, and institutional modernization.

Within this reform trajectory, the insurance sector and compulsory insurance in particular has been identified as a key component of financial system strengthening. Policy documents such as Presidential Decree No. PP-2693 (2016) and the national Insurance Development Concept through 2025 explicitly emphasize the expansion of insurance coverage, enhancement of regulatory frameworks, improvement of risk management practices, and alignment with international standards. These initiatives reflect a broader recognition that a well-functioning insurance system can facilitate investment, reduce fiscal burdens associated with contingent liabilities, and support sustainable economic growth.

However, despite these strategic priorities, the empirical development of the compulsory insurance market in Uzbekistan remains constrained by a range of structural and institutional challenges. These include regulatory fragmentation, insufficient actuarial and statistical infrastructure, limited diversification of insurance products, weak enforcement mechanisms, and inefficiencies in claims settlement processes. Moreover, a persistent deficit of public trust in insurance institutions continues to undermine participation rates and overall market effectiveness.

Importantly, these challenges cannot be fully understood as isolated technical shortcomings. Rather, they reflect deeper systemic issues related to governance quality, institutional coordination, behavioral economics factors, and the evolving relationship between the state and market actors in a transitioning economy. Consequently, addressing these constraints requires not only regulatory reforms but also a comprehensive analytical framework that integrates theoretical insights with empirical realities.

LITERATURE REVIEW

The theoretical justification for government-mandated insurance is primarily rooted in market failure theory, which explains the inability of unregulated markets to achieve efficient outcomes under conditions of imperfect information and externalities. The seminal contribution of Michael Rothschild and Joseph Stiglitz (1976) demonstrates that insurance markets characterized by adverse selection where insurers cannot accurately distinguish between high-risk and low-risk individuals tend to produce inefficient equilibria or may fail to function altogether. In such settings, low-risk individuals may exit the market due to high premiums, leading to market unraveling. Compulsory insurance addresses this inefficiency by enforcing universal participation, thereby expanding the risk pool, stabilizing actuarial balance, and restoring market viability.

In addition to adverse selection, compulsory insurance also serves as a mechanism to internalize third-party externalities. A classical example is motor vehicle insurance. In the absence of mandatory coverage, an uninsured driver responsible for an accident may be unable to compensate victims, effectively shifting the financial burden onto injured parties, public healthcare systems, or the state. As articulated by Steven Shavell (1986), mandatory third-party liability insurance ensures that potential tortfeasors possess sufficient financial capacity to meet their obligations, thereby aligning private incentives with social welfare and reducing the fiscal exposure of the state.

From the perspective of institutional economics, the effectiveness of compulsory insurance extends beyond formal legal requirements. Douglass North (1990) emphasizes that the performance of formal institutions such as insurance mandates depends critically on the interaction with informal institutions, including cultural norms, trust, and behavioral patterns. In transition economies, where informal institutional frameworks may lag behind formal reforms, compulsory insurance systems often face implementation constraints. These include weak enforcement, low compliance, and limited public trust factors that cannot be adequately explained within purely neoclassical models and require a broader institutional analysis.

The governance of compulsory insurance markets can be examined through several competing regulatory paradigms. The public interest theory of regulation posits that state intervention is justified as a means of correcting market failures and maximizing social welfare. This perspective is consistent with the developmental state model, where government plays an active role in shaping financial markets and ensuring social protection.

In contrast, public choice theory, as developed by George Stigler (1971) and Sam Peltzman (1976), highlights the risk of regulatory capture. According to this view, regulatory agencies may be influenced by industry stakeholders, leading to outcomes that prioritize sectoral interests over public welfare. This risk is particularly pronounced in insurance markets characterized by high concentration and limited competition, where dominant firms may exert disproportionate influence over regulatory processes.

More recently, the risk-based supervision paradigm, promoted by the International Association of Insurance Supervisors, has emerged as a global standard for insurance regulation. Through its Insurance Core Principles (ICPs), this framework emphasizes proportionality, forward-looking risk assessment, and the protection of policyholders. The extent to which national regulatory systems such as that of Uzbekistan have adopted and effectively implemented these principles represents a critical dimension of contemporary insurance sector analysis.

The development of insurance markets in transition economies follows identifiable structural patterns. Early empirical work by Outreville (1996) established a strong relationship between insurance market development and key macroeconomic variables, including income levels, financial sector depth, and institutional quality. These findings have been reinforced by subsequent cross-country studies (Beck & Webb, 2003; Arena, 2008), which confirm that institutional strength and economic development are central determinants of insurance penetration.

In the early stages of market development, compulsory insurance segments often account for a disproportionately large share of total premiums. This reflects their role as a stable and predictable source of revenue, which supports the gradual expansion of voluntary insurance markets. By providing a foundational risk-pooling mechanism,

compulsory insurance facilitates the development of actuarial expertise, regulatory capacity, and market infrastructure.

The experience of Central and Eastern European (CEE) countries offers valuable comparative insights. In countries such as Poland, the Czech Republic, and Hungary, the liberalization and privatization of the insurance sector during the 1990s were accompanied by the strengthening of compulsory insurance frameworks, particularly in motor, liability, and agricultural insurance. These measures played a pivotal role in anchoring market development, standardizing insurance products, and enhancing actuarial capacity. However, outcomes varied significantly across countries, largely depending on the effectiveness of supervisory institutions and the strength of the rule-of-law environment, as highlighted by Leverty and Grace (2010).

ANALYSIS AND RESULTS

The compulsory insurance market in Uzbekistan demonstrates the characteristics of a moderately concentrated oligopolistic structure, reflecting both historical institutional legacies and contemporary regulatory dynamics. As of 2023, the five largest insurers accounted for 58.3% of total compulsory gross written premiums (CR5 = 58.3), while the Herfindahl–Hirschman Index (HHI) of 1,247 indicates a medium level of market concentration in accordance with the classification criteria of the U.S. Department of Justice.

This structural configuration suggests the coexistence of competitive pressures and market dominance, where a limited number of large insurers exert significant influence over pricing, underwriting standards, and claims management practices. Notably, state-affiliated insurance companies collectively control approximately 31.4% of the compulsory insurance segment, underscoring the continued role of public sector institutions in strategically important and socially sensitive insurance lines. Such a configuration reflects a hybrid institutional model in which market mechanisms operate alongside state participation, potentially enhancing stability but also raising concerns regarding competitive neutrality and efficiency.

A more granular analysis of premium distribution across product lines reveals a pronounced structural imbalance within the compulsory insurance segment (Table 4). The market is heavily dominated by motor third-party liability (MTPL) and employer liability insurance, which account for 38.7% and 22.4% of total premiums, respectively. This concentration indicates that the expansion of compulsory insurance in Uzbekistan is primarily driven by liability-based instruments that are more easily enforceable within formal economic activities and regulatory oversight frameworks.

In contrast, agricultural crop insurance, despite being legally mandated and supported through public subsidies, constitutes only 8.3% of total compulsory premiums. This figure is disproportionately low relative to the agricultural sector's contribution of approximately 24% to national GDP, thereby revealing a significant underinsurance gap. From a structural perspective, this discrepancy reflects a combination of factors, including limited actuarial data availability, high systemic risk exposure, insufficient product customization, and institutional inefficiencies in subsidy allocation mechanisms.

The analysis of loss ratios across product lines further highlights substantial heterogeneity in risk exposure and claims dynamics. While the aggregate loss ratio of 60.7% suggests an overall balance between premiums and claims, disaggregated data reveal considerable variation—from 29.4% in professional liability insurance to 72.1% in agricultural insurance. Such disparities may indicate inconsistencies in pricing adequacy, differences in claims reporting behavior, and varying levels of risk concentration. In particular, lower loss ratios in certain segments may reflect either conservative underwriting practices or latent inefficiencies in claims settlement processes, including underreporting and administrative barriers.

In terms of growth performance, all compulsory insurance lines recorded positive expansion in 2023 compared to the previous year, with especially high growth observed in professional liability (+44.7%) and hazardous installation liability (+35.2%). This trend reflects the ongoing formalization of insurance coverage and the strengthening of regulatory enforcement mechanisms. However, the uneven distribution of growth rates suggests that market development remains uneven and, to a significant extent, administratively driven rather than demand-led.

A comparative assessment of Uzbekistan's compulsory insurance market relative to selected transition and emerging economies reveals a persistent developmental gap. Key indicators such as insurance penetration (premium-to-GDP ratio) and insurance density (premium per capita) remain significantly below not only OECD

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2026): 8.748 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 13 | Issue: 4 | April 2026 -Peer-Reviewed Journal

benchmarks but also more advanced post-Soviet economies, including Kazakhstan and Russia, as well as Central and Eastern European (CEE) countries such as the Czech Republic and Poland.

Table 4. Compulsory Insurance Premium Distribution by Product Line, Uzbekistan (2023)

Product Line	GWP (UZS bn)	Share (%)	Loss Ratio (%)	Growth vs 2022 (%)
Motor Third-Party Liability (MTPL)	849	38.7	68.4	+28.3
Employer Liability	491	22.4	54.2	+31.7
Passenger Carrier Liability	197	9.0	47.8	+22.4
Agricultural Crop Insurance	182	8.3	72.1	+18.9
Hazardous Installation Liability	154	7.0	38.6	+35.2
Professional Liability (Notaries, Auditors)	131	6.0	29.4	+44.7
Medical Insurance (Foreign Citizens)	109	5.0	61.3	+19.8
Other Compulsory Lines	80	3.6	43.7	+25.1
TOTAL	**2,193**	**100.0**	**60.7**	**+31.0**

Source: author's calculations.

To contextualise Uzbekistan's performance, Table 5 provides a comparative analysis across selected transition and emerging economies. The data reveal a consistent pattern: Uzbekistan's penetration depth and density metrics lag not only OECD comparators but also more advanced CIS peers such as Kazakhstan and Russia, as well as V4 transition economies (Czech Republic, Poland). Notably, Uzbekistan's loss ratio of 60.7% in compulsory lines while appearing adequate masks significant cross-line heterogeneity and is artificially suppressed by claims underreporting and delayed settlement practices.

Table 5. Compulsory Insurance Market Indicators, Selected Countries, 2023

Country	Penetration (% GDP)	Density (USD/capita)	Loss Ratio (%)	Compulsory Share (%)	No. Compulsory Lines
Germany	3.82	2,847	76.3	18.4	7
Czech Republic	2.14	892	72.8	24.1	11
Poland	1.78	614	70.2	31.3	13
Russia	1.31	384	65.7	38.8	15
Kazakhstan	0.87	142	62.4	42.3	17
Georgia	0.63	78	58.9	38.7	14
Azerbaijan	0.58	67	55.2	44.1	16
Uzbekistan	0.42	34	60.7	45.2	18
Kyrgyzstan	0.28	14	49.3	51.4	12
Tajikistan	0.17	7	43.1	58.7	9

Source: Author compilation.

The benchmarking analysis exposes a paradox: Uzbekistan has the second-highest number of compulsory insurance lines among comparators (18),yet achieves the second-lowest penetration depth. This inverse relationship between the breadth of mandatory coverage and actual market depth suggests that the problem is not a deficit of mandates but a deficit of enforcement, actuarial infrastructure, and institutional capacity to deliver on existing mandates. This finding fundamentally redirects the policy challenge: from legislative expansion toward implementation effectiveness.

CONCLUSION

The findings of this study demonstrate that the development and effective functioning of the compulsory insurance market in Uzbekistan cannot be ensured through isolated regulatory or technical adjustments, but rather require a systemic and institutionally coordinated approach. The analysis confirms that the current market structure is characterized by moderate concentration, sectoral imbalances, and a significant reliance on administratively enforced insurance lines, particularly in liability segments. At the same time, the limited penetration of strategically important areas such as agricultural insurance reveals structural inefficiencies and an underutilization of risk transfer mechanisms within key sectors of the economy.

Empirical results further indicate that, although aggregate indicators such as premium growth and loss ratios suggest relative stability, these metrics conceal substantial heterogeneity across product lines and are affected by

institutional constraints, including claims underreporting and delayed settlement practices. This underscores the need for improving transparency, strengthening actuarial infrastructure, and enhancing the credibility of insurance institutions. Comparative analysis with transition and developed economies highlights a persistent gap in penetration and density indicators, confirming that Uzbekistan's compulsory insurance market remains in a developmental stage requiring deeper financial and institutional integration.

From a theoretical and practical perspective, the study substantiates that the effectiveness of compulsory insurance systems depends on the coherent interaction of regulatory frameworks, market incentives, institutional quality, and behavioral factors. In this regard, priority directions include strengthening risk-based supervision, improving enforcement mechanisms, expanding data integration, ensuring regular updating of actuarial parameters, and fostering public trust. Consequently, the modernization of compulsory insurance in Uzbekistan should be viewed as a multidimensional reform process aimed not only at increasing coverage, but also at enhancing efficiency, sustainability, and its contribution to overall financial system development.

REFERENCES

1. *Akerlof, G. A. (1970). The Market for "Lemons": Quality Uncertainty and the Market Mechanism. Quarterly Journal of Economics, 84(3), 488–500.*
2. *Arena, M. (2008). Does Insurance Market Activity Promote Economic Growth? A Cross-Country Study for Industrialized and Developing Countries. Journal of Risk and Insurance, 75(4), 921–946.*
3. *Arrow, K. J. (1963). Uncertainty and the Welfare Economics of Medical Care. American Economic Review, 53(5), 941–973.*
4. *Beck, T., & Webb, I. (2003). Economic, Demographic, and Institutional Determinants of Life Insurance Consumption Across Countries. World Bank Economic Review, 17(1), 51–88.*
5. *Leverty, J. T., & Grace, M. F. (2010). The Robustness of Output Measures in Property-Liability Insurance. Journal of Risk and Insurance, 77(4), 905–938.*
6. *North, D. C. (1990). Institutions, Institutional Change and Economic Performance. Cambridge University Press.*
7. *Outreville, J. F. (1996). Life Insurance Markets in Developing Countries. Journal of Risk and Insurance, 63(2), 263–278.*
8. *Peltzman, S. (1976). Toward a More General Theory of Regulation. Journal of Law and Economics, 19(2), 211–240.*
9. *Rothschild, M., & Stiglitz, J. (1976). Equilibrium in Competitive Insurance Markets: An Essay on the Economics of Imperfect Information. Quarterly Journal of Economics, 90(4), 629–649.*
10. *Shavell, S. (1986). The Judgment Proof Problem. International Review of Law and Economics, 6(1), 45–58.*
11. *Stigler, G. J. (1971). The Theory of Economic Regulation. Bell Journal of Economics and Management Science, 2(1), 3–21.*
12. *International Association of Insurance Supervisors (IAIS). (2023). Insurance Core Principles (ICPs). Geneva.*