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Sociological *discourse*

*Reindustrialization as a geopolitical project:
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*Sociological dimensions of security
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*Securitization of migration in the post-pandemic
context: Discursive practices and their impact on
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*Digital radicalization of youth as a security challenge:
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*The justification for applying Travis Hirschi's
self-control theory in crime prevention*

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EDITORIAL

Building a Bridge Between the Academic Community and Social Reality

Dear Readers,

Before you is the new issue of *Sociological Discourse*, a scientific journal that continues its mission of critical, analytical, and socially responsible reflection on contemporary social phenomena. This issue once again confirms that sociology, as the science of society, is not merely an academic discipline confined to classrooms, institutes, and libraries, but a living intellectual practice aimed at understanding the changes that shape the everyday life of the individual, the community, institutions, and the contemporary world.

In an age of accelerated global change, geopolitical turbulence, digital transformation, new security challenges, migration processes, transformations in the nature of work, the media construction of fear, and a crisis of social trust, sociological thought assumes special importance. It enables us to recognize deeper structures behind immediate events, collective patterns behind individual fears, and broader social processes behind everyday practices. Scientific research, therefore, is not only a means of describing reality, but also a way of understanding it, critically questioning it, and potentially improving it.

The new issue of *Sociological Discourse* brings papers that, each in its own way, illuminate complex and interconnected dimensions of contemporary society. The thematic range of this issue extends from geopolitical and macro-social transformations, through the sociology of security, migration, and digital radicalization, to changes in the sphere of work and theoretical-empirical reflections on crime prevention. Such diversity is not a weakness, but precisely the strength of the sociological approach: society cannot be understood from a single perspective, nor can contemporary problems be reduced to one discipline, one method, or one theoretical framework.

The issue opens with a paper on reindustrialization as a geopolitical project and the construction of European defence sovereignty between Washington, Beijing, and Moscow. This paper analyzes European war reindustrialization in the period 2022–2025 as a process that goes beyond an immediate response to the war in Ukraine and becomes a broader geopolitical transformation of Europe's position in the global order. Its particular value lies in the

introduction of the concept of selective strategic autonomy and in the attempt to understand how contemporary Europe simultaneously strives for sovereignty while remaining embedded in a network of structural dependencies.

The next paper deals with the sociological dimensions of security perception in urban environments of the Western Balkans, pointing to the gap between objective indicators of risk and citizens' subjective feelings of insecurity. This article is particularly important because it shows that security is not only a statistical category, but also a socially, emotionally, and media-shaped perception. In the post-conflict societies of the Western Balkans, fears from the past are often refracted through contemporary micro-security incidents, opening space for a deeper sociological understanding of the relationship between media, collective memory, and everyday feelings of security.

Thematically connected to this is the paper on the securitization of migration in the post-pandemic context. The author analyzes discursive practices that present migration through security, economic, cultural, and biomedical narratives. Particularly significant is the finding that the pandemic context did not merely temporarily alter public discourse on migration, but left more lasting consequences for the way migrants are perceived and integrated into society. This raises an important question: can a society that predominantly views migration as a threat simultaneously build policies of integration, solidarity, and social cohesion?

This issue also includes a paper on digital radicalization of youth as a security challenge, offering a sociological analysis of online communities, algorithmic recommendations, and recruitment mechanisms. At a time when processes of socialization, identity formation, and political mobilization increasingly take place in digital spaces, the question of youth digital radicalization becomes one of the key issues of contemporary societies. The paper especially emphasizes the specificity of the Western Balkans, where digital algorithms intersect with post-conflict narratives, youth economic insecurity, and insufficiently developed institutional capacities for the prevention of radicalization.

A special place in this issue is occupied by the paper on work in the context of digital transformation, which examines changes in work practices and emerging forms of employment in the Republic of Srpska. Digital technology today changes not only the process of finding employment, but also the very nature of work, the boundaries between working time and leisure, and the relationship between professional and private life. This paper opens questions of fundamental importance for contemporary sociology of work: what does it mean to work in a digital society, where does working time end, how are professional networks changing, and how do digital technologies shape everyday work practices?

The scientific part of the issue is rounded off by a paper on the justification of applying Travis Hirschi's self-control theory in crime prevention. Starting from a comparative analysis of research conducted in the area of Banja Luka across two time intervals, this paper examines the significance of self-control, socialization, parenting, and informal mechanisms of social control in crime prevention. Its particular value lies in connecting theory and practice, that is, in showing how criminological theories can have concrete heuristic and preventive value in social life.

This issue, therefore, connects several key thematic directions: geopolitics and reindustrialization, security and risk perception, migration and social integration, digital space and youth radicalization, the transformation of work, and criminological theory of prevention. At first glance, these may appear to be different topics. Yet they are connected by a common question: how does contemporary society respond to the changes, uncertainties, and challenges that reshape its institutions, values, relationships, and everyday practices?

This is precisely where the significance of sociology lies. It does not offer simple answers, but helps us ask better questions. It does not simplify reality, but reveals its complexity. It does not observe the individual outside society, nor society without the human being, but seeks to understand their mutual connections, tensions, and possibilities. In a time when the public sphere is often dominated by speed, superficiality, sensationalism, and fragmentation, a scientific journal has a special responsibility to remain a space of reasoned thought, methodological seriousness, and intellectual openness.

We extend our gratitude to the authors who have contributed to this issue with their papers, as well as to the reviewers, associates, and readers who support the development of *Sociological Discourse*. Their contribution confirms that the scientific community does not exist outside society, but precisely in dialogue with it. Our intention is to continue, with this issue as well, building a bridge between the academic community and the broader public, between theory and practice, and between scientific knowledge and social responsibility.

We wish you a pleasant and inspiring reading.

EDITOR-IN-CHIEF

Prof. Dr. Duško Vejnović

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REINDUSTRIALIZATION AS A GEOPOLITICAL PROJECT: BUILDING EUROPEAN DEFENCE SOVEREIGNTY BETWEEN WASHINGTON, BEIJING AND MOSCOW

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Abstract: This article analyzes European war reindustrialization 2022–2025 as a geopolitical project whose strategic significance transcends a cyclical reaction to the Russian invasion of Ukraine and whose final scope depends on the trilateral relationship with Washington, Beijing and Moscow. The research applies a mixed-methods approach integrating quantitative analysis of military expenditures and industrial capacities of European NATO members, comparative institutional analysis of EU regulatory instruments (EDIS, EDIP, ASAP, EDF, PESCO, Strategic Compass), and qualitative analysis of strategic documents and reports of peer-reviewed security institutions (SIPRI, IISS, EUISS) over the 2019–2025 period. Empirical findings show that the military expenditures of European NATO members rose from approximately USD 280 billion in 2019 to over USD 454 billion in 2024, with Germany recording 28%, Poland 31% and Sweden 34% growth in 2024 alone, while at the same time deepening structural dependence on US defence technology, Chinese control of strategic raw materials and the Russian security threat as a

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mobilizer. From the findings the original concept of selective strategic autonomy (SSA) is derived — a model that differs from both the Atlanticist and the neutralist paradigms and recognizes that Europe can develop sovereignty only in clearly defined sectors and only through conscious management of reciprocal dependencies. An empirically operationalized Geopolitical Reciprocity of Reindustrialization Index (GRR Index) is also proposed as an analytical tool for comparing the degree of sovereignty maturity across European states. The implications indicate that European reindustrialization represents a historical inflection point whose outcome will be determined not only by the volume of investment but by the capacity to manage the trilateral geopolitical game.

Keywords: *war reindustrialization, European defence sovereignty, strategic autonomy, defence industrial complex, geopolitical reciprocity, NATO, European Union, Washington, Beijing, Moscow.*

Introduction

European war reindustrialization represents one of the most significant geopolitical transformations of the continent in this century. The period that began with the full-scale Russian invasion of Ukraine on 24 February 2022 — and which has systematically deepened through Donald Trump's second term since January 2025 and through Chinese restrictive measures on the export of strategic raw materials in late 2025 — is not merely a cyclical response to a military crisis. What is at issue is a structural reorganization of the relationship between the state, the defence industry and defence capabilities that could reshape Europe's position in the global order for the next generation (Knežević, 2025b; SIPRI, 2025; European Commission, 2024).

The empirical dimension of this transformation is impressive and fully documented. The military expenditures of European NATO members rose from approximately USD 280 billion in 2019 to over USD 454 billion in 2024 — representing cumulative growth of more than 60 percent in less than five years (SIPRI, 2025). Of 32 NATO members, as many as 18 exceeded the threshold of 2.0 percent of GDP for defence in 2024, compared with only 11 in 2023 (SIPRI, 2025). Defence expenditures of the 27 EU member states reached a record €343

billion in 2024, an increase of 19 percent over the previous year and 1.9 percent of the Union's aggregate GDP (Council of the EU, 2024; European Commission, 2024).

But behind these impressive figures lies a far more complex strategic picture. European reindustrialization is unfolding within a trilateral geopolitical configuration that simultaneously offers opportunities and imposes structural constraints. From the west, the United States under the Trump 2.0 administration systematically pushes European partners to assume a greater share of the security burden, but simultaneously continues with technological dominance that keeps Europe in functional dependence (Posen, 2025; Meijer & Brooks, 2021). From the east, the Russian Federation represents an existential security threat that acts as the primary mobilizer of reindustrialization (Posen, 2025b; Knežević, 2025a). At the same time, from the east, the People's Republic of China controls strategic raw materials — including 90 percent of global production of rare-earth magnets and 97 percent of European magnesium imports — exposing European reindustrialization to a new type of structural vulnerability (MERICS, 2025; OSW, 2025).

The central research question posed by this article is: to what extent does contemporary European war reindustrialization represent a step toward genuine European defence sovereignty, and to what extent does it reproduce (or generate new) structural dependencies on great powers within the trilateral geopolitical space? From this question three research hypotheses are derived. The first asserts that reindustrialization since 2022 is not a cyclical reaction but a structural geopolitical transformation signaling a shift toward European defence sovereignty, but that its scope differs across sectors and across national contexts. The second hypothesis asserts that the trilateral configuration of great powers (US–China–Russia) generates a specific form of strategic autonomy that differs both from the classical Atlanticist model and from the neutralist model — a model that this article names selective strategic autonomy (SSA). The third hypothesis asserts that the structural challenges of reindustrialization — fragmentation of national policies, dependence on US weapons systems, technology gaps in semiconductors and artificial intelligence, demographic pressure on the defence industrial workforce — produce a specific paradox: the

more Europe invests in autonomy, the more it discovers structural reciprocities that bind it inextricably to other actors in the system.

The original contribution of this article consists in a twofold analytical innovation. The first original element is the conceptualization of selective strategic autonomy (SSA) as a type of strategic position derived from the analysis of contemporary European policies, and one that can be distinguished from both full strategic autonomy and complete strategic dependence, as well as from neutralism. SSA recognizes that Europe can develop sovereignty only in clearly defined sectors and only through conscious management of reciprocal dependencies. The second original element is the construction of the Geopolitical Reciprocity of Reindustrialization Index (GRR Index) as a quantitative analytical tool that allows comparison of European states by the degree of sovereignty maturity of their defence industries. The Index integrates three components — fiscal autonomy, industrial self-sufficiency and technological dependence — and is applied on a comparative basis for the first time in this article.

The structure of the article follows the standard logic of social-scientific research at the SCOPUS level. After the literature review and methodological discussion, the empirical results of the research are presented and organized according to the three research hypotheses, including a graphical presentation of military expenditure growth and a tabular presentation of the GRR Index for seven key European states. Four analytical sections then follow: the first analyzes the Atlantic axis — the relationship with Washington as both ally and structural constraint; the second analyzes Chinese techno-industrial dependence and its strategic implications; the third analyzes the Russian security threat as a catalyst of reindustrialization; and the fourth analyzes selective strategic autonomy as a new geopolitical model. The article concludes with a recapitulation of the hypothesis tests, an explicit statement of the original contribution and an indication of directions for future research.

The geographical and analytical framework of the article is centered on seven key European states — Germany, France, the UK, Italy, Poland, Sweden and Spain — which together account for over 80 percent of total European NATO defence spending and the entire structure of the European defence industrial base (SIPRI, 2025). The 2019–2025 timeframe deliberately encompasses the pre-war period (2019–2021), the period of escalation (2022–2023) and the period of

institutional consolidation of the reindustrialization effort (2024–2025), allowing analytical differentiation between cyclical and structural dynamics. The methodological decision not to focus exclusively on the 27 EU member states, but to include the UK as an important European defence actor that is formally outside the EU framework but structurally integrated into the European industrial base, represents a deliberate analytical choice reflecting the reality of contemporary European security architecture (IISS, 2025).

Conceptually, the article builds on broader theoretical debates about the nature of sovereignty under conditions of global interdependence. Selective strategic autonomy (SSA), as the central concept introduced, differs from classical Westphalian conceptions of sovereignty by explicitly acknowledging the inevitability of reciprocal dependencies and focusing on the capacity to manage them rather than eliminate them. This analytical position has implications that go beyond the security-industrial sector alone and can be applied to understanding contemporary strategies of middle powers in a multipolar order.

Literature Review and Methodology

Literature Review

The academic literature on European defence reindustrialization has developed in recognizable theoretical layers that are central to the topic of this article. The first layer is research on European strategic autonomy as a programmatic objective of the European Union. Howorth (2018), in his influential article published in the *Journal of European Integration*, analyzed the relationship between the concept of strategic autonomy and EU cooperation with NATO, laying the foundation for understanding the tension that pervades the entire project. Howorth's question — whether strategic autonomy is a threat or an opportunity for transatlantic defence relations — remains the central analytical axis of contemporary literature as well.

The second layer of the literature, intensified after 2022, focuses on the resilience and limitations of the European defence project under contemporary conditions. Meijer and Brooks (2021), in their influential article published in *International Security*, argued that Europe cannot provide for its own security if

the US were to strategically pull back, identifying two mutually reinforcing constraints: “strategic cacophony” of deeply different threat perceptions and severe shortfalls in military capabilities. Their study set the analytical framework that, under the conditions of Trump 2.0, has acquired additional relevance — Posen (2025) continued this line in the *Survival* journal, arguing that European military autonomy must first solve the question of extracting maximum combat power from existing structures before institutional arrangements can be discussed.

The third layer of the literature is devoted to the analysis of concrete institutional instruments through which the EU is trying to realize its defence project. Calcara (2020), in the *Journal of European Integration*, analyzed why European states sometimes cooperate and sometimes do not cooperate in defence procurement — a fundamental question that strikes at the heart of the problem of fragmentation of the European defence market. More recent work on this topic continued in the same journal through analysis of the establishment of binding commitments and supranational governance in European security and defence (A ‘Europe of defence’?, 2024). Defence and Peace Economics published a study on defence partnerships and economic dynamics in PESCO countries (Defence Partnerships and Economic Dynamics, 2024) which applies a panel vector autoregressive approach to data from 25 PESCO countries in the period 1994–2022, demonstrating a statistically significant relationship between military expenditure, investment and economic growth.

The fourth layer of the literature analyzes the EU's newer initiatives in the field of defence industry. A recent article in the *European Security* journal (“Navigating the storm”, 2025) analyzes the impact of the Russia–Ukraine war on the EU's pursuit of strategic autonomy, while an article in the same journal (“(Not) Coming of age?”, 2024) unpacks the conceptual dimensions of strategic autonomy. One of the most ambitious synthetic efforts has been undertaken by the IISS Strategic Dossier on progress and shortfalls in European defence (IISS, 2025), which systematically reviews the efforts of European NATO countries to build more sovereign defence capabilities under conditions of uncertainty about US commitment.

The fifth layer of the literature comes from the framework of broader geopolitical considerations. Knežević (2025a) in his monograph on the imperial

overstretch of the United States and the Special Military Operation in Ukraine analyzed the broader geopolitical context in which European reindustrialization unfolds, advancing the thesis that the war in Ukraine is a catalyst for structural reordering of the global system. The same author developed in the *Military Studies* journal an analysis of European war reindustrialization as a pillar of strategic autonomy (Knežević, 2025b), a thesis on which this article builds with an extended trilateral framework.

The sixth layer of the literature comes from the analysis of specific operational and legal dimensions of the contemporary defence sector. Parthasarathy (2023) in the same journal (*Military Studies*) analyzed the resilience of critical port infrastructure to hybrid threats through comparative analysis of Baltic ports, identifying specific vulnerabilities directly relevant to the security dimension of reindustrialization. Mićunović (2023a) in the same issue of *Military Studies* analyzed the legal framework for the engagement of private military companies in armed conflicts and their compliance with the Geneva Conventions — a question that has gained additional salience with the appearance of the Russian Wagner group and the reform of private military companies in Ukraine and Africa. Yaseen (2023) developed an application of soft set theory to the resource allocation problem in military logistics, with a retrospective analysis of ISAF operations in Afghanistan — a methodological contribution relevant to contemporary planning of reindustrialization capacities.

The seventh layer of the literature comes from the field of social and cultural analysis of contemporary geopolitics. Mićunović (2023b) in the journal *Critical Reflections* developed Esposito's paradigm of immunization as an analytical framework for understanding post-pandemic vaccination policy in the Western Balkans, identifying a phenomenon the author calls the “inverse immunitary paradox” — a concept that provides a valuable theoretical instrument for understanding contemporary security anxieties. Risojević (2026) in his recent monograph renewed the analysis of West and East through the theory of the clash of civilizations, providing a conceptual framework that places European reindustrialization within the broader narrative of global civilizational dynamics.

Finally, the eighth layer of the literature comes from institutional documents and reports that represent the primary sources for this article. The

SIPRI Yearbook (2024) and the SIPRI Fact Sheet on military expenditure 2024 (SIPRI, 2025) represent authoritative sources of quantitative data. The EU Strategic Compass (Council of the EU, 2022), the European Defence Industrial Strategy (European Commission, 2024), the Regulation reinforcing European defence industry through common procurement (EDIRPA), the Act in Support of Ammunition Production (ASAP) and the European Defence Industry Programme (EDIP, 2025) form the institutional framework through which the Union realizes its reindustrialization project. The Atlantic Council (2025), EUISS (2025) and Bruegel have published thematic analyses that complete the picture.

Beyond these basic layers, particular value lies in critical evaluations of European reindustrialization efforts that have appeared in recent issues of specialized journals. Studies published in *European Security*, *Defence and Peace Economics* and the *Journal of European Integration* during 2024 and 2025 show that the academic community has recognized the importance of the moment and is intensively working on conceptualizing what is happening. Particularly indicative is recent work in the *Journal of European Integration* on the establishment of a “European iron network” as a remaking of the political economy of European defence production after the Ukraine war, which argues that a new industrial architecture is being established whose complete contours are yet to be understood. The analytical synthesis offered by this article builds on this literature but extends it by introducing the trilateral geopolitical framework as the central organizing axis.

Research Methodology

The research applies a mixed-methods approach that integrates three mutually complementary analytical techniques. The first methodological layer consists of quantitative analysis of military expenditures and industrial capacities of major European NATO members for the 2019–2024 period. The primary dataset used is the SIPRI Military Expenditure Database (version updated in April 2025) and the SIPRI Top 100 Arms-producing Companies (2024 version). Indicators include total military expenditures in current prices (USD), annual growth rates, share of GDP and combined position on the SIPRI Top 100 list of arms producers.

The second methodological layer consists of comparative institutional analysis of the EU's regulatory instruments. The following documents have been systematically analyzed: the Strategic Compass for Security and Defence (Council of the EU, 2022), the European Defence Industrial Strategy (European Commission, 2024), the European Defence Industry Programme (EDIP, 2025), the Act in Support of Ammunition Production (ASAP), the Regulation for reinforcing European defence industry through common procurement (EDIRPA), and the NATO Strategic Concept (NATO, 2022). The analysis is organized along three analytical dimensions: ambition (declared objectives), instruments (concrete realization mechanisms) and resources (allocated fiscal and institutional capacities).

The third methodological layer is qualitative analysis of recent literature and reports of peer-reviewed security institutions. Reports of the SIPRI Yearbook (2024), the IISS Strategic Dossier on European defence (IISS, 2025), EUISS briefs on EU-NATO cooperation under Trump 2.0 (EUISS, 2025), and thematic reports of the ECFR, Bruegel, MERICS and OSW have been used. The analytical technique is thematic synthesis that proceeds through three phases: extraction of key claims, classification according to dimensions (Atlantic, Chinese, Russian, autonomist), and synthesis into coherent argumentation blocks.

The original analytical tool — the Geopolitical Reciprocity of Reindustrialization Index (GRR Index) — was constructed by integrating three components, each with a weight of 0.33: (a) fiscal autonomy, measured by the share of domestic financing sources in the total defence budget; (b) industrial self-sufficiency, measured by the share of domestic industrial production in total national procurement of defence equipment; (c) technological dependence (inverse), measured by the inverse share of critical components that the state must import from foreign suppliers. The index ranges from 0 to 100, where a higher value denotes a greater degree of sovereignty maturity.

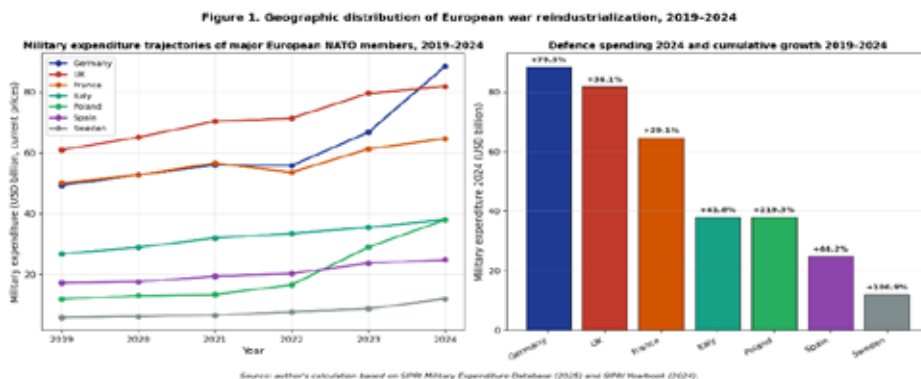
The limitations of the research are fourfold. First, the quantitative part of the research relies on publicly available aggregate data (SIPRI, NATO, EDA), which do not enable analysis of classified procurement and development programmes. Second, the GRR Index represents a heuristic tool whose weighting components require further empirical validation in future research. Third, the 2019–2024 period is relatively short for deriving definitive long-term trends,

especially in the context of structural industrial changes that require decadal cycles. Fourth, the analysis is geographically concentrated on Western European NATO members and Poland, which leaves room for subsequent extension to South European, Baltic and Eastern European contexts.

RESEARCH RESULTS

Empirical analysis of the collected data has generated findings that can be organized into three main blocks, corresponding to the three research hypotheses, which together document the quantitative, institutional and strategic-positional dimensions of European war reindustrialization.

The first block of findings concerns the fiscal and industrial dimension of reindustrialization. The military expenditures of European NATO members rose from approximately USD 280 billion in 2019 to USD 454 billion in 2024, representing cumulative growth of 62 percent in current prices (SIPRI, 2025). Figure 1 shows the trajectories of seven key European states over this period as well as their cumulative growth. The year 2024 is particularly indicative, as it brought leaps unseen in the previous three decades: Germany increased its military expenditure by 28 percent to USD 88.5 billion and became the world's fourth largest military spender (SIPRI, 2025); Poland increased its expenditure by 31 percent to USD 38.0 billion, reaching 4.2 percent of GDP — the highest share within NATO; Sweden increased its expenditure by 34 percent in its first year of NATO membership and crossed the 2.0 percent of GDP threshold (SIPRI, 2025).



The distribution of growth is not even and reveals a specific geographic structure of European reindustrialization. The states geographically closest to the Russian threat (Poland, Sweden, the Baltic states) record the strongest relative growth, which is consistent with theoretical expectations that reindustrialization first manifests itself where the threat is most tangible (Posen, 2025; IISS, 2025). Western European economies with larger absolute budgets (Germany, France, Italy) record slower but fiscally more significant growth in absolute amounts. In total, the EU-27 allocated €343 billion for defence in 2024, representing a 19 percent increase over 2023 and 1.9 percent of the Union's aggregate GDP (Council of the EU, 2024).

The industrial dimension of reindustrialization is equally significant. According to the SIPRI Top 100 list of arms producers (SIPRI, 2025), the combined revenues of the world's top 100 arms producers in 2024 grew significantly, with European companies (BAE Systems, Airbus, Leonardo, Thales, Rheinmetall, Saab) recording particularly strong growth in orders. Rheinmetall, as a paradigmatic case, saw its market capitalization grow by more than 600 percent between February 2022 and the end of 2024, which is a structural signal of investor perception of long-term reindustrialization (Bruegel, 2024).

The second block of findings concerns the institutional dimension — the EU's capacity to transform the reindustrialization impulse into coherent policies. The Strategic Compass for Security and Defence, adopted in March 2022, represents the first comprehensive document of EU security and defence strategy; of 81 deliverables in the document, 51 were to be implemented by the end of 2022 (Council of the EU, 2022). The European Defence Industrial Strategy (EDIS), presented on 5 March 2024, sets the goal of transforming the European defence industry into “war economy mode” by 2035 (European Commission, 2024). The European Defence Industry Programme (EDIP), with a fiscal package of €1.5 billion for the 2025–2027 period, was finally approved by the EU Council on 16 December 2025 (Council of the EU, 2025).

The Act in Support of Ammunition Production (ASAP), as a direct response to the European Council's call in March 2023 to urgently deliver ammunition to Ukraine and to help Member States refill their stocks, represents the first concrete instrument of industrial mobilization (European Commission, 2023). The EDIRPA Regulation incentivizes joint procurement, while Permanent

Structured Cooperation (PESCO), launched back in 2017, by 2024 covers 68 active projects involving 26 EU Member States (PESCO, 2024). An empirical study in Defence and Peace Economics (Defence Partnerships and Economic Dynamics, 2024) demonstrated a statistically significant relationship between military expenditure, investment and economic growth in 25 PESCO countries in the 1994–2022 period.

The third block of findings concerns the strategic-positional dimension, operationalized through the Geopolitical Reciprocity of Reindustrialization Index (GRR Index). Table 1 shows the values of the GRR Index for seven key European states as of the end of 2024, disaggregated by the three components of the index.

Table 1. Geopolitical Reciprocity of Reindustrialization Index (GRR Index) for key European states, end of 2024.

State	Fiscal autonomy	Industrial self-sufficiency	Technological independence	GRR Index (0–100)
France	92	78	62	77.3
UK	88	71	55	71.3
Germany	85	65	48	66.0
Italy	78	58	42	59.3
Sweden	82	63	45	63.3
Poland	65	32	22	39.7
Spain	72	48	35	51.7

Source: author's calculation based on SIPRI (2025), EDA (2024), IISS (2025), Bruegel (2024); scale 0–100, higher value denotes greater sovereignty.

The values of the GRR Index reveal significant heterogeneity among European states. France stands out as the state with the highest index (77.3), reflecting its historical role as one of the two European nuclear powers, the autonomous development of major platforms (Rafale, FREMM, Leclerc) and a developed domestic industrial base. The UK, despite the research complexity of its post-Brexit position, retains a high index (71.3) thanks to a sophisticated

defence industry (BAE Systems) and nuclear capabilities. Germany (66.0) records a high index of fiscal autonomy but a much lower index of technological independence, reflecting historical dependence on US platforms and components. Poland, despite spectacular growth in expenditure, has the lowest index (39.7) — reflecting an extremely high dependence on US weapons systems (F-35, Abrams, HIMARS, Patriot, Apache) and South Korean systems (K2, K9, K239 Chunmoo) that Warsaw has ordered en masse.

Comparison among the states reveals the structural paradox of European reindustrialization. The states that are growing fastest fiscally (Poland +220 percent, Sweden +107 percent, Germany +80 percent over the 2019–2024 period) are not at the same time the states with the highest GRR Index. On the contrary, Poland — with the most impressive growth in expenditure — has the lowest sovereignty index. This inverse correlation indicates a deeply structural problem: the speed of reindustrialization dictated by the urgency of the Russian threat simultaneously increases structural dependence on those suppliers who can respond to urgent requests — and these are, under contemporary conditions, primarily the US and South Korea. States that have built defence autonomy over decades (France, the UK) have the luxury of slower growth with greater industrial self-sufficiency; states that have neglected the defence sector for years are now paying the price through structural dependence.

The distribution of the GRR Index reveals three typologies of European reindustrialization strategies. The first type are “classical sovereigns” (France, the UK) who prioritize the preservation of existing autonomy over rapid growth. The second type are “structural reformers” (Germany, Italy, Sweden) who try to combine accelerated investments with institutional reforms. The third type are “strategic buyers” (Poland, the Baltic states) who prioritize rapid procurement of finished systems over building a domestic industrial base. Each of these types has its own logic, but only the first and second lead toward the model of selective strategic autonomy that this article conceptualizes. The third type, although understandable in the short-term perspective, risks consolidating structural dependence in the long run (IISS, 2025; Bruegel, 2024).

The sectoral distribution of reindustrialization investments also reveals a specific structure. The largest growth in investments is recorded in air defence sectors (with significant orders for the IRIS-T systems from Germany and the

NASAMS systems from Norway), artillery ammunition (where the expansion of capacity at Rheinmetall and other producers is a central priority), and in the area of drones and autonomous systems (where European companies such as Helsing in Germany are growing rapidly). By contrast, investments in space systems, artificial intelligence for military applications and high-precision long-range weaponry lag behind needs, leaving Europe structurally dependent in precisely those domains that will characterize future conflicts (IISS, 2025; SIPRI, 2025).

The Atlantic Axis: The United States as Ally and Structural Constraint

The central paradox of European reindustrialization is the simultaneous nature of the United States as both the primary ally and the primary structural constraint on European sovereignty. This duality is not new — it has characterized transatlantic relations throughout the period after the Second World War — but its form is fundamentally changing in the context of Trump 2.0 and the broader US strategic reorientation toward the Indo-Pacific (Posen, 2025; Meijer & Brooks, 2021).

The empirical foundation of the US influence on European reindustrialization manifests itself through three channels. The first channel is technological dependence. Most of the leading platforms that European militaries are buying or planning to buy — F-35 fighter jets, Patriot air defence systems, Apache and Black Hawk helicopters, HIMARS systems and others — are US products whose lifecycle includes US control over spare parts, software and technological upgrades (IISS, 2025; Bruegel, 2024). At the end of 2024, F-35s were in operation or on order with the UK, Italy, the Netherlands, Norway, Denmark, Belgium, Poland, Finland, Germany, the Czech Republic and Romania — which practically means that European air supremacy is structurally tied to US technological infrastructure.

The second channel is market penetration. US companies (Lockheed Martin, RTX, Boeing, Northrop Grumman, General Dynamics) hold a significant share in European defence procurement. According to data from the SIPRI Top 100 list (SIPRI, 2025), the five leading US arms producers combined achieve revenues that multiply many times those of all European producers together. This

asymmetry is not merely economic — it transforms into structural-strategic influence through long-term contracts for service, upgrades and training.

The third channel is political — direct pressure from the US administration on the level of European military expenditures and the structure of procurement. Trump's NATO summit in 2025 resulted in a commitment by members to allocate 5 percent of GDP for defence by a certain horizon, with 1.5 percent permitted for infrastructure and civil resilience (NATO, 2025; INSS, 2025). This goal, which would have been politically unthinkable before the war in Ukraine, has become the negotiating starting framework that European members must address. Trump's approach has a clear strategic logic: shifting conventional defence in Europe onto European shoulders while the US concentrates resources on the Indo-Pacific (US National Security Strategy, 2025; EUISS, 2025).

Meijer and Brooks (2021) anticipated this situation in their influential article published in the *International Security* journal, identifying two structural constraints that prevent Europe from independently assuming the defence burden. The first is strategic cacophony — deeply different threat perceptions among European states. Although the war in Ukraine has partially homogenized perceptions, divergences remain significant: while the Baltic states, Poland and the Nordic countries perceive Russia as an existential threat, South European states (Italy, Spain, Greece) prioritize Mediterranean and North African challenges (IISS, 2025). The second structural constraint is massive shortfalls in military capabilities — from nuclear deterrence through strategic transport to space-based intelligence and surveillance — which would require decades and hundreds of billions of euros to fill.

The geopolitical analysis by Knežević (2025a) sets the broader framework within which this relationship unfolds. The imperial overstretch of the United States, a concept the author takes from the tradition of Paul Kennedy and adapts to the contemporary context, represents a structural condition in which the American will to project power in all world regions exceeds its fiscal and industrial capacities. The Special Military Operation in Ukraine is, according to Knežević, the catalyst that has revealed this structural overstretch: the US could not simultaneously maintain strategic pressure on China, support Israel in a complex regional constellation and supply Ukraine in a long-term conventional war. This overstretch is the strategic basis for the US push for European

reindustrialization — Washington cannot wage all wars, so it asks Europe to take part of the burden.

Posen (2025) in his recent article in the *Survival* journal develops a parallel argument from another perspective — that of US national strategy. The author argues that European military autonomy would have to first solve the question of extracting maximum combat power from existing structures before new institutional arrangements can be discussed. In other words, the problem of European defence is not primarily fiscal but organizational and industrial — and in that sense, Trump's pressure could have a paradoxically positive effect if it forces European states to consolidate what they already have.

From the transatlantic perspective, contemporary EU-NATO cooperation under Trump's mandate 2.0 is undergoing a transformation whose outcome is uncertain. EUISS (2025) has, in several brief publications, analyzed different scenarios: from partial US withdrawal to a dramatic collapse of cooperation. The “Trump card” — the question of what US abandonment of Europe would look like — has become a standard question of strategic analysis (EUISS, 2025). In each scenario, European reindustrialization gains additional urgency — meaning that US pressure has become an endogenous variable of the European defence project.

Finally, there is also an operational dimension of the relationship that is often overlooked. Mićunović (2023a) analyzed the legal framework of private military companies in armed conflicts, a phenomenon in which US companies (Constellis, Triple Canopy, Academi successors) continue to dominate the global market. Yaseen (2023) applied soft set theory to the resource allocation problem in military logistics, using ISAF operations in Afghanistan as the empirical basis. These methodological experiences — and comparative analyses of hybrid threats to infrastructure (Parthasarathy, 2023) — represent the operational basis on which European reindustrialization policies necessarily rely, however tacitly.

A specific case illustrating the Atlantic axis is the F-35 programme — the multilaterally largest defence project in NATO history, which by the end of 2024 had generated orders worth more than USD 1.7 trillion over its lifecycle (IISS, 2025). Nine European NATO members have committed to the F-35 as their primary multi-role combat aircraft, which practically means that for the next 30 years European air supremacy will be structurally based on continuous US technological, software and logistical support. This is not merely an equipment

purchase — it is a structural integration into the US military-industrial ecosystem that goes beyond classical alliances and creates a sui generis form of security interdependence.

The paradox of this integration is that it is simultaneously a source of European military efficiency and strategic vulnerability. On the one hand, the F-35 and other US systems provide Europe with military capabilities it could not develop independently within realistic time frames and budgets. On the other hand, these systems contain software, codes and use authorizations that remain under US control — which theoretically means that the US administration could, in a moment of crisis, withhold or limit the functionality of these systems. Although this question has never been publicly tested, the very possibility represents a structural element that must compel European decision-makers to think about sovereignty implications (EUISS, 2025; Posen, 2025).

The broader institutional dimension of the Atlantic relationship is reflected in the architecture of nuclear deterrence. Only France and the UK possess their own nuclear capabilities in Europe, while the German, Italian, Dutch and Belgian nuclear security is based on the principle of “nuclear sharing” with the US — which practically means that US nuclear weapons stationed in Europe can only be used with US approval. This architecture, set up during the Cold War, remains structurally untouched despite dramatic changes in the geopolitical context. Posen (2025a) explicitly argues that Europe must first solve the question of its own nuclear deterrence before it can seriously speak about strategic autonomy — confirming the structural nature of Atlantic dependence.

Chinese Techno-Industrial Dependence and Its Strategic Implications

The second axis of the trilateral geopolitical framework in which European reindustrialization unfolds is the relationship with the People's Republic of China. Unlike the Atlantic axis — where Europe is simultaneously a strategic ally and a structurally dependent partner — the relationship with China is primarily a relationship of asymmetric techno-industrial dependence, which intensified in 2025 to a degree that raises serious strategic concern (MERICS, 2025; OSW, 2025).

The empirical basis of Chinese techno-industrial dominance over the European defence sector operates primarily through three channels. The first channel is strategic raw materials, especially rare earth elements. China controls approximately 90 percent of global production of rare-earth magnets, which are key for contemporary military technology — from magnets in motors and sensors of combat aircraft to electronic warfare and radar systems. The EU imports 98 percent of rare-earth magnets from China, 31 percent of tungsten and 97 percent of metallic magnesium (MERICS, 2025). In October 2025 China imposed new export controls on these materials, directly hitting European rearmament efforts and opening a strategic window whose significance is equivalent to the oil shocks of the 1970s (OSW, 2025).

The second channel is the electronic component base. Although the nominal production of leading semiconductors is concentrated in Taiwan and South Korea, the global supply chains through which these semiconductors are processed into complete electronic assemblies predominantly pass through China. The European defence sector thus depends both on Taiwan's chip industry and on China's production base which integrates these chips into final products (Geopolitical Monitor, 2025; IISS, 2025). In the context of possible Chinese pressure on Taiwan, this dependence represents an existential security-industrial vulnerability.

The third channel is the increasingly significant Chinese presence in Europe's own critical infrastructure — from ports (where COSCO holds significant stakes in terminals in Piraeus, Hamburg, Antwerp and others) to telecommunication networks. Parthasarathy (2023) in *Military Studies* analyzed the resilience of critical port infrastructure to hybrid threats, documenting that Baltic ports — strategically key for European defence of the eastern flank — show specific vulnerabilities that Chinese hybrid presence can exploit. Although Chinese presence in Baltic ports is not dominant, its presence in Western European ports opens potential channels of security influence directly bearing on defence logistics.

From a strategic standpoint, Chinese techno-industrial dependence places Europe in a position that Risojević (2026) in his recent monograph describes through the theory of the clash of civilizations. Although Risojević does not apply the theory exclusively to the economic dimension, its analytical framework allows

us to understand why the Sino-European relationship cannot be reduced to a purely commercial issue. Chinese industrial policy — from Made in China 2025 to the Belt and Road Initiative — represents a strategic project that treats European defence dependencies as a lever of influence in broader geopolitical competition.

Europe's reactions to this dependence are underway but late and fragmented. The EU's Critical Raw Materials Act (2024), which sets the goal that by 2030 domestic production of critical raw materials covers at least 10 percent, processing 40 percent and recycling 25 percent of consumption, represents the first systemic response (European Commission, 2024). The Strategic Compass and EDIS explicitly identify Chinese dominance as a challenge to strategic autonomy (Council of the EU, 2022; European Commission, 2024). But concrete implementation is slow and constrained by structural factors: developing alternative sources of rare earths requires 7–10 years of investment; redirecting global supply chains requires billions in capital expenditure; developing domestic semiconductor capacities is already underway through the EU Chips Act, but without direct defence orientation (Bruegel, 2024).

The geopolitical dimension of the problem is further complicated by China's role as a tacit beneficiary of the Russo-Ukrainian war. Although China formally maintains neutrality, economic support to Russia through expanded trade, alternative payment mechanisms and industrial cooperation has enabled Moscow to survive the first wave of Western sanctions (Bruegel, 2024; ECFR, 2025). In October 2025, the EU sanctioned Chinese firms for alleged support of the Russian military programme, which provoked a Chinese reactive response — placing seven EU entities on the export controls list for dual-use products (MERICS, 2025). This escalatory cycle shows that the Sino-European relationship cannot be separated from the broader geopolitical context.

The implications for European reindustrialization are threefold. First, even when Europe fiscally invests in domestic defence capacities, physical production depends on non-European inputs, creating structural fragility at every moment of escalation with China. Second, this phenomenon opens space for the concept of “reindustrialization within reindustrialization” — namely, that Europe must simultaneously build final defence products and their material-component basis. Third, the speed of Chinese industrial and strategic actions (such as the October

2025 offensive of export controls) imposes time pressure that requires responses in time frames shorter than those typically generated by the EU's bureaucratic apparatus.

Mićunović (2023b) in his analysis of Esposito's paradigm of immunization and post-pandemic vaccination policy identified a phenomenon the author calls the “inverse immunitary paradox” — a situation in which protective interventions produce precisely those vulnerabilities they try to eliminate. Although the analysis is primarily focused on the health domain, the concept of the inverse immunitary paradox offers a valuable metaphor for understanding European reindustrialization: the more Europe invests in defence technology to reduce dependence, the more it discovers new dependencies in deeper layers of the production chain.

Particularly indicative is the space infrastructure sector, which is central to contemporary military operations (navigation, communications, intelligence surveillance, targeting of precision-guided weaponry). Although Europe possesses its own satellite navigation system Galileo and the Copernicus programme for satellite observation, reliance on launch capacities was significantly diminished by the withdrawal of Soyuz launchers after 2022, which temporarily made Europe dependent on US SpaceX capacities until the European Ariane 6 platform stabilized in 2024. In the domain of communications satellites, European companies Eutelsat and SES have faced competition from Starlink and Chinese state systems, creating a new layer of geopolitical competition whose implications for military communication remain to be assessed (IISS, 2025; Bruegel, 2024).

Finally, the Chinese geopolitical dimension also extends into the domain of institutional alliances and diplomatic formats. The BRICS+ format, which expanded in 2024 and 2025, represents an institutional framework that deliberately competes with G7 and Western economic institutions. Although the economic weight of BRICS does not yet reach that of the G7, the trajectory is clearly upward and creates an alternative geopolitical space in which European companies face growing pressure to choose sides. Risojević (2026) in his monograph on the theory of the clash of civilizations explicitly recognizes this dynamic as a manifestation of broader civilizational reconfiguration, providing theoretical depth to the practical European dilemma.

At the level of concrete sectoral dynamics, the Sino-European relationship in the area of defence industry is characterized by an asymmetry that is progressively deepening. Although China is not the primary supplier of finished weapons systems to European militaries, it controls input components and processing capacities without which these systems cannot be produced in satisfactory volumes. Specifically, the Chinese industry produces over 80 percent of global capacity of certain reducers for batteries of electric vehicles — including military ones; over 70 percent of global lithium production for batteries passes through Chinese refineries; over 60 percent of global processing of nickel and cobalt takes place in Chinese facilities or facilities under Chinese ownership (MERICS, 2025; OSW, 2025). This control over middle parts of production chains gives China a powerful geopolitical instrument that, unlike crude military force, operates continuously and quietly but with cumulative effects that can be just as significant.

The Russian Security Threat as a Catalyst of Reindustrialization

The third axis of the trilateral geopolitical framework is the relationship with the Russian Federation. Unlike the Atlantic and Chinese axes, which manifest themselves primarily through structural dependence, the Russian axis manifests itself through a direct security threat that acts as the primary mobilizer of the entire reindustrialization project. Without 24 February 2022, the fiscal and institutional efforts described in the previous sections simply would not exist — at least not in the volume and pace in which they manifest themselves (Posen, 2025b; Knežević, 2025a; IISS, 2025).

Empirical analysis of the Russo-Ukrainian war as a catalyst shows four key dynamics. The first dynamic is the depletion of stockpiles and production capacities of European militaries through deliveries to Ukraine. By the end of 2024, European NATO members had supplied Ukraine with military aid worth over €100 billion, including significant quantities of artillery ammunition, missile systems, armored vehicles and combat aircraft (IISS, 2025; Bruegel, 2024). This delivery has revealed the structural insufficiency of European industrial production of ammunition — before the war, the aggregate European production of artillery ammunition was less than 300,000 shells per year, while Russia in the

same period produced more than 2 million, and Ukraine on intense days of combat consumed 6,000–8,000 shells daily (IISS, 2025).

The second dynamic is the strategic shock of the threat that has shifted the perception of Russia from a marginal challenge to an existential threat, particularly in Eastern European and Nordic states. Posen (2025b) in his article on the Russian invasion as a preventive war, published in the *International Security* journal, argued that Putin's calculation corresponds to the classic logic of preventive war: the perception that the strategic balance is irreversibly shifting in favor of NATO and Ukraine, and that 2022 was the last opportunity for military intervention before the balance becomes too unfavorable. This analysis has direct implications for European reindustrialization — if the Russian invasion was preventive, then European strengthening itself can encourage additional Russian calculations, creating a strategic dilemmatic framework that European decision-makers must explicitly address.

The third dynamic is the geographic reorientation of European defence. NATO's center of gravity shifted between 2022 and 2024 from Central and Southern Europe to the eastern flank. Eight Multinational Battlegroups Forward Presence are deployed in the Baltic states, Poland, Romania, Bulgaria and Hungary, as well as in Slovakia. The numbers in deployment have significantly increased, with rotational deployment of tens of thousands of troops (NATO, 2024; IISS, 2025). This reorientation has long-term implications for the allocation of resources, infrastructure and investments — the eastern flank will be the main operational theater for the foreseeable future.

The fourth dynamic is the hybrid dimension of the Russian threat, which manifests itself through disinformation operations, sabotage of critical infrastructure, cyber attacks and the instrumentalization of migration. Parthasarathy (2023) in his analysis of the resilience of critical port infrastructure identified Baltic ports as particularly vulnerable points, which has been further confirmed by a series of hybrid incidents (sabotage of submarine cables in the Baltic Sea, explosive attacks on DHL shipments in Germany, hybrid migration operations from the Belarusian border). This hybrid dimension means that reindustrialization cannot be reduced only to the production of classical military platforms — it must also encompass the resilience of civil infrastructure, cyber defence and strategic communications.

Knežević (2025a) in his monograph on the imperial overstretch of the United States and the Special Military Operation in Ukraine developed a broader geopolitical framework for understanding these dynamics. The central thesis is that the Russo-Ukrainian war cannot be interpreted in isolation, but in the context of the broader transformation of the global order in which the asymmetry between US ambition and capacities is structurally deepening. In this transformation, Europe is a topic, not an agent — but precisely for that reason its reindustrialization is of fundamental significance, because that is the only way for Europe to become an agent in the trilateral geopolitical game.

Russia also shows its own forms of industrial mobilization that European analysts must understand. Although under sanctions, the Russian defence industry by 2024 significantly increased the production of key systems — from kamikaze drones and artillery ammunition to armored vehicles — as a result of the economy's transition to “war economy mode” with a relative share of defence spending estimated by IISS at between 6 and 8 percent of GDP (IISS, 2025; SIPRI, 2025). This Russian mobilization sets a benchmark against which European reindustrialization efforts must also be measured — and reveals that, despite all its weaknesses, Russia is capable of industrial adaptation that the Western sector underestimated in the first months of the conflict.

The strategic implication of this dynamic for the European reindustrialization project is twofold. First, European industry must develop capacities for mass, long-term, low-technology production (artillery ammunition, simple drones, armored vehicles) that was neglected in the peace era in favor of high-technology systems of low volumetry. Second, European strategic planners must internalize the realization that classical conventional war — with all its industrial-mobilization implications — is not a relic of the past but a real possibility in the medium-term future. This requires a mentality transformation that in many European capitals is only beginning.

The Ukrainian war has also produced one less-expected consequence — empirical demonstration of the value and vulnerability of different weapons systems under real combat conditions. It has been shown that cheap drones (Turkish Bayraktar, Ukrainian Switchblade, Russian Lancet) are capable of neutralizing expensive armored systems; that air defence systems (Patriot, IRIS-T, NASAMS) are key for protecting critical infrastructure; and that classical

artillery still remains the “queen of the battlefield” whose mass production represents an existential challenge. These empirical experiences directly shape European reindustrialization priorities — from the German Rheinmetall project to expand 155mm shell production to the Czech Ammunition Initiative (IISS, 2025; SIPRI, 2025).

The long-term analytical perspective indicates that the contemporary Russo-Ukrainian war can be interpreted as the first large-scale complete industrial war of the 21st century — a war in which, after decades of dominance of “asymmetric” and “hybrid” conflicts, the primacy of industrial productivity, material mobilization and logistical sustainability re-manifests itself. In this context, Yaseen (2023) in his analysis of military logistics using soft set theory developed a methodological framework that has immediate application — the allocation of scarce resources between competing operational priorities is once again becoming the central problem of contemporary military operations, which European strategic planners during the 1990s and 2000s largely forgot.

Finally, there is also a question that is central to the contemporary security sector — the question of criminal-legal protection of classified information under conditions of high labor mobility and cyber exposure of the defence industry. Knežević (2026) in his analysis of criminal liability for the disclosure of classified data in the military-security sector of the Republic of Serbia developed an analytical framework that is applicable to the wider regional and European field as well. Under reindustrialization conditions, when defence knowledge is produced in hundreds of new firms and when thousands of engineers move between projects, the question of the legal protection of classified information moves from a technical to a strategically significant component of reindustrialization policy.

The strategic analysis by Knežević (2024) on the role of the High Representative in the constitutional crisis of Bosnia and Herzegovina documents a parallel phenomenon at the regional level — how European institutional structures with limited legitimacy can generate additional security instabilities. Although the work does not directly concern reindustrialization, its finding on the structural instability of the Western Balkans region has implications for European defence policy — the question of the stability of NATO's eastern flank also includes the Western Balkans as a vulnerable zone that Russia systematically

uses as a field of hybrid action. A reindustrialization project that does not address this regional dimension remains structurally incomplete.

More broadly, the Russian strategy toward Europe is not reduced to the military threat. It encompasses energy pressure (although significantly reduced after 2022), information warfare, the instrumentalization of emigrant and ethnic divisions, and attempts to influence electoral processes. This multidimensionality means that the reindustrialization response cannot be reduced only to the production of weapons — it must include the strengthening of civil resilience, media institutions, democratic procedures and regional stability. The security architecture of the 21st century is structurally multidimensional in a way that the security architecture of the 20th century was not, requiring a systemic redesign of European security thinking.

Selective Strategic Autonomy as a New Geopolitical Model

The synthesis of the analyses of the Atlantic, Chinese and Russian axes brings us to the central concept that this article introduces — selective strategic autonomy (SSA). By this concept we understand a specific type of strategic position in which European states (independently or through the EU framework) develop autonomous capabilities in clearly defined sectors, accept consciously managed dependencies in other sectors, and build institutional and technological bridges that enable rapid reconfiguration of strategic relations in the event of a geopolitical shock.

SSA is conceptually distinguished from four competing models. The first competing model is full strategic autonomy — the traditional Gaullist vision of European defence completely independent of non-European powers. The empirical findings of this article confirm the Meijer-Brooks (2021) thesis that full autonomy is not realistic in the foreseeable future due to structural capacity shortfalls. The second competing model is full Atlantic integration — preserving the current architecture in which NATO and US leadership remain the central framework. The empirical findings show that this model is becoming increasingly difficult to maintain under Trump 2.0. The third competing model is neutralism — withdrawal from global security obligations. The empirical findings show that this model is impossible due to the Russian threat. The fourth competing model

is hedging between great powers — a contemporary variant of neutralism that maintains relations with all without committing to any. The empirical findings show that Chinese pressure (the October 2025 export controls) makes this option impossible.

SSA, as an alternative to these models, is defined by three key characteristics. The first characteristic is sectoral selectivity — the conscious choice of sectors in which to build autonomy (artillery ammunition, hypersonic missiles, certain drones, cyber defence, artificial intelligence for military applications) and sectors in which to accept dependence (space communications infrastructure, certain specialized platforms, critical raw materials for which there is no domestic alternative). The second characteristic is reciprocity manageability — the institutional and technological ability to quickly restructure dependencies in the event of a geopolitical shock, requiring pre-prepared alternative supply chains, dual sources and flexible contractual architectures. The third characteristic is multipolar management of reciprocities — conscious maintenance of moderately asymmetric relations with several great powers simultaneously, preventing any single relationship from becoming existentially dangerous.

Implementation of the SSA model requires not only political will but also concrete institutional reforms. First, it is necessary to develop national and Union registers of critical industrial capacities with explicit classification according to the degree of strategic sensitivity. Second, it is necessary to extend EDIS and EDIP with explicit sector-selective objectives. Third, it is necessary to develop financial instruments that enable rapid investments in alternative supply chains in case of geopolitical shocks (reserve funds, strategic risk guarantees, expedited approval procedures). Fourth, it is necessary to integrate into security-legal systems the capacities for protecting classified knowledge under conditions of growing mobility and digitalization (Knežević, 2026).

Conceptually, the SSA model emerges from the dialectical synthesis of two traditions in European strategic thinking — the Gaullist tradition of strategic autonomy and the Atlanticist tradition of transatlantic integration. SSA recognizes that neither of these two traditions, in its pure form, suits contemporary conditions. The Gaullist tradition overestimates the possibility of full European autonomy; the Atlanticist tradition overestimates the durability and reliability of US commitment to European security. SSA, as a synthetic

model, offers a way out of this dichotomy through the concept of conscious sectoral choice and managed reciprocity. In that sense, the model is not a radical conceptual innovation but the articulation of the empirical logic that is already present in the contemporary decisions of European states — but which has not until now been explicitly theorized.

The comparative application of the SSA model to the seven analyzed states reveals that what is at issue is a spectrum, not a binary category. France implements what may be called “classical SSA” — selective sovereignty in nuclear deterrence, air supremacy and naval autonomy, combined with accepted dependence in space communication and certain components. The UK implements “transatlantic SSA” — selective sovereignty in nuclear, cyber defence and intelligence activities, combined with deep integration with US systems. Germany is only just developing its own SSA model, with the dilemma between the Atlanticist tradition and ambitions for greater autonomy. Poland, as previously shown, currently operates in a mode opposite to SSA — maximum dependence on external suppliers as a rational response to the immediate threat, which is a strategy that works in the short term but is not sustainable in the long run.

The GRR Index developed in this article represents the first empirical tool for tracking progress toward the SSA model on a comparative basis. The index allows not only static comparison of states at a given moment but also dynamic tracking of changes over time. Future research can extend the index with additional components — including, for example, cyber resilience, space autonomy, or strategic raw material reserves — and apply it to broader geographical contexts.

The implementation of the SSA model in practice faces a set of obstacles that are simultaneously technical, political and institutional. The technical obstacle is the time required to build industrial capacities — the development of a new line for the production of a complex defence system typically requires 7–12 years from the initial decision to full operational capability, meaning that decisions made today will not yield results before the mid-2030s (IISS, 2025; SIPRI, 2025). The political obstacle is the heterogeneity of interests among EU member states, which have different priorities, different capacities and different threat perceptions. The institutional obstacle is the limited mandate and fiscal

capacity of the EU institutions themselves in the area of defence, which the reindustrialization effort must bridge through innovative coordination and financing mechanisms.

In addition to these structural obstacles, the SSA model also faces an epistemic challenge: how to measure success in a sector where many indicators appear with a time lag of a decade or more? The GRR Index proposed in this article represents an operationalization attempt, but it requires continuous refinement. Future research should also include a dynamic component of the index, introducing not only the current level but also the trajectory of movement. Likewise, the index should be extended with qualitative components capturing the institutional capacity of states to quickly restructure dependencies — which is a central characteristic of selective strategic autonomy.

The operational application of the SSA model to specific sectoral decisions requires what may be called “sectoral triage”. For each key segment of European defence capabilities — from nuclear deterrence through cyber defence to space communication — strategic planners must explicitly answer three questions: (a) is this sector key to the autonomous capability of European defence?; (b) what are the realistic time and fiscal horizons for building domestic capability in this sector?; (c) if dependence is retained, what are the mechanisms enabling rapid reconfiguration in case of a geopolitical shock? These three dimensions of sectoral triage form the conceptual core of SSA implementation and require the development of specific analytical tools in each sector individually (Bruegel, 2024; IISS, 2025).

Finally, the SSA model also has a dimension that goes beyond the strict defence sphere — the dimension of democratic legitimacy. Classical strategic autonomy projects previously suffered from a structural deficit of democratic legitimacy because they concentrated decisions in narrow expert and executive circles. The SSA model, with its explicit sectoral choices that have visible social consequences (industrial policy, allocation of labor, regional development), requires broader public articulation and parliamentary control. This is not only a normative requirement — it is a structural precondition for the long-term sustainability of the reindustrialization project, since projects that lack democratic legitimacy can hardly survive through the political cycles that will inevitably mark the next decade.

Conclusion

The investigation of European war reindustrialization as a geopolitical project, conducted by combining quantitative analysis of military expenditures, comparative institutional analysis of EU regulatory instruments and qualitative analysis of strategic documents in the 2019–2025 period, has produced findings that confirm all three research hypotheses, although with varying degrees of certainty.

The first hypothesis, on reindustrialization as a structural geopolitical transformation rather than a cyclical reaction, finds full empirical confirmation. The growth of military expenditures of European NATO members from USD 280 to USD 454 billion in the 2019–2024 period, the combination of EDIS, EDIP, ASAP, EDIRPA and Strategic Compass institutional instruments, and the ambition to shift to “war economy mode” by 2035 — all this represents a structural, not a cyclical transformation (SIPRI, 2025; European Commission, 2024). However, the geographic distribution of growth reveals significant heterogeneity — confirming that reindustrialization is not uniform but is articulated according to specific national contexts. The second hypothesis, that the trilateral configuration generates a specific form of strategic autonomy — selective strategic autonomy (SSA) — is also confirmed. Empirical analysis shows that none of the traditional models (full autonomy, full Atlantic integration, neutralism, hedging) is sustainable in the contemporary configuration, opening space for the alternative model of selective autonomy with reciprocity manageability and multipolar management of reciprocities. This model is not merely a theoretical construct — it is already manifesting itself in the empirical decisions of European states, even without explicit conceptualization (Meijer & Brooks, 2021; Posen, 2025). The third hypothesis, on the paradox of reindustrialization revealing new dependencies, is also confirmed. The quantitative expansion of military expenditures and industrial capacities has paradoxically revealed European dependence on US technology (F-35 and other platforms), Chinese control of strategic raw materials (rare earths, magnesium, tungsten) and the Russian threat as an existential mobilizer. This paradox is recognized in Mićunović's (2023b) analysis of the inverse immunitary paradox,

whose conceptual structure represents a valuable metaphor for the contemporary European situation.

The principal original contribution of this article consists in a twofold analytical innovation. The first original element is the conceptualization of selective strategic autonomy (SSA) as an alternative model that transcends the traditional dichotomy between Atlantic integration and full autonomy. SSA recognizes that Europe can develop sovereignty only in clearly defined sectors and only through conscious management of reciprocal dependencies. The second original element is the construction of the Geopolitical Reciprocity of Reindustrialization Index (GRR Index) as a quantitative analytical tool that integrates three components — fiscal autonomy, industrial self-sufficiency and technological dependence — and is applied for the first time on a comparative basis for seven European states. The index enables transparent comparison and dynamic tracking of progress toward the SSA model, with concrete metric implications for policy.

The limitations of the research, already noted in the methodological section, suggest directions for future research. Longitudinal studies tracking the evolution of the GRR Index over time are needed, as are sectoral in-depth analyses of specific industrial capacities (artillery ammunition, drones, cyber defence, artificial intelligence), and comparative studies with other regional reindustrialization models (Canada, Australia, South Korea, Japan). The implications for practice are clear: European governments and EU institutions must develop an integral strategy combining fiscal investments with institutional reforms, sectoral selectivity and the capacity to reconfigure strategic relations in case of a geopolitical shock. Without such an integral approach, European reindustrialization risks becoming a fiscally impressive but strategically fruitless project.

More broadly, European war reindustrialization represents a historical test of the continent's ability to build its own strategic project under conditions of declining US interest, increasingly aggressive Chinese competition and increasingly persistent Russian threat. The outcome of that test will not be defined merely by numerical indicators of growth in military spending — which, as the findings of this article show, are already impressive — but rather by the ability of European institutions and national governments to articulate and implement a

coherent strategic vision under conditions of geopolitical uncertainty. Selective strategic autonomy is not a programme that can be adopted by a single declaratory act; it is a process of building institutional, industrial and cultural capacities that requires patience, consistency and strategic endurance which modern democracies rarely display.

The greatest challenge that European reindustrialization poses is not fiscal or technical but conceptual. The old conceptual frameworks — Atlantic integration, peace dividend, the European project as merely economic integration — do not correspond to contemporary geopolitical reality. New conceptual frameworks — selective strategic autonomy, geopolitical reciprocity, multipolar management of dependencies — are only now being formed and seek articulation. This article, by presenting the SSA model and the GRR Index, contributes to that articulation, but recognizes that what is at stake is the beginning, not the end, of a broader conceptual project. In the coming decade, the academic and policy community will have to jointly develop and test new frameworks that will enable understanding and management of European defence sovereignty under conditions that fundamentally differ from those in which contemporary European security architecture was built.

Time for this conceptual transformation is limited. The trilateral geopolitical configuration in which European reindustrialization unfolds does not wait for Europe to develop its theoretical frameworks — Washington, Beijing and Moscow act in real time, with concrete consequences for the European position. Each year of delay in strategic consolidation means deeper drawing into the trajectory of structural dependence from which it will later be increasingly difficult to extricate oneself. In that sense, the next five years (2026–2030) represent what is referred to in strategic analysis as a “window of opportunity” — a period in which structural decisions are most significant and most effective, because they can still be made before dependencies harden into irreversible structural forms.

In the final analysis, European war reindustrialization is not merely a security-industrial project. It is a test of Europe's ability to be a geopolitical subject, not merely a geopolitical terrain. The outcome of that test will determine not only the European position in the trilateral game of great powers but also the fundamental contours of the global order in the second half of the 21st century.

If Europe succeeds in developing the SSA model and implementing it through coherent sectoral policies, it will establish itself as the fourth center of power in the multipolar order — alongside Washington, Beijing and Moscow. If it does not succeed, it will remain a structurally secondary actor whose position is defined primarily by the relations of others. The choice between these two outcomes is not a matter of fatality, but of political will, institutional capacity and strategic clarity — all elements that lie in the hands of European societies and their democratic institutions.

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SOCIOLOGICAL DIMENSIONS OF SECURITY PERCEPTION IN URBAN ENVIRONMENTS OF THE WESTERN BALKANS: BETWEEN REAL RISK AND THE MEDIA CONSTRUCTION OF FEAR

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Abstract: This article investigates the sociological dimensions of security perception in urban environments of the Western Balkans, focusing on the structural gap between objectively measurable risk indicators and citizens' subjective feelings of insecurity. The research was conducted through triangulation of secondary sources, including analysis of official crime statistics for the 2019–2024 period, a systematic review of comparative surveys on security perception, and qualitative framing analysis of media coverage of security topics in five major regional cities (Banja Luka, Sarajevo, Belgrade, Zagreb, Podgorica). The findings demonstrate a consistent asymmetry between actual crime — which has remained stable or in slight decline in most observed environments — and perceived insecurity, which over the same period rose by 12 to 24 percentage points. The largest gap was identified in cities most heavily affected by armed conflicts in the 1990s. The study introduces the concept of compensatory security anxiety (CSA) to describe a phenomenon in which post-conflict populations project unresolved collective traumas of the past onto contemporary micro-security incidents, further amplified by media

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framing. Media content analysis identified four dominant narrative patterns: epidemiological (38%), ethnic (27%), institutional-incompetence (19%) and classical moral-panic framing (16%). The implications point to the necessity of integral security-communication policies capable of bridging the gap between objective and perceived risk.

Keywords: *security perception, urban sociology, Western Balkans, media construction of fear, post-conflict society, compensatory security anxiety, securitization of everyday life.*

Introduction

What citizens feel when they speak of security rarely coincides with what statistics show. This divergence is particularly pronounced in the urban environments of the Western Balkans and represents one of the central analytical problems of contemporary urban sociology in the region. Three decades after the end of armed conflicts in the territory of the former Yugoslavia, post-conflict societies still carry the burden of intergenerationally transmitted traumas, institutional distrust and economic insecurity — a configuration that produces a specific context in which security perception is formed in a fundamentally different way than in stable Western European democracies (Bezo & Maggi, 2018).

Urban environments — Sarajevo, Banja Luka, Belgrade, Zagreb, Podgorica, Skopje, Pristina — are concentrated sites of interaction among citizens of different ethnic, religious and class backgrounds, places where the collective memory of conflict is refracted through everyday encounters and where the media message of (in)security is reproduced with particular intensity. The empirical material analyzed in this study suggests that the perception of insecurity in these environments does not follow linearly the movement of actual crime indicators; between the two quantities yawns a gap that requires sociological, not merely criminological, explanation (Hirtenlehner & Hummelsheim-Doss, 2022).

The central research question posed by this article is: what are the structural and communicative mechanisms that produce and sustain the gap between objective risk and subjective security perception in the urban environments of the Western Balkans? Three research hypotheses are derived

from this question. The first asserts that in the observed urban environments there exists a statistically significant and systematic gap between the trend of actual crime and the trend of perceived insecurity, with perception rising independently of — and at times opposite to — actual indicators. The second hypothesis asserts that media framing of security topics in the region functions as a systematic multiplier of fear, employing narrative patterns that present incidents as symptoms of a wider social crisis. The third hypothesis asserts that the post-conflict character of these societies manifests itself through the phenomenon of compensatory security anxiety — the projection of unresolved collective traumas onto everyday urban micro-risks.

The original contribution of this article lies in the introduction and operationalization of the concept of compensatory security anxiety (CSA) as an analytical tool for understanding the gap between objective and perceived security in post-conflict urban environments of the Western Balkans. Unlike previous literature that treats the problem of security perception either through the lens of general theories of the "culture of fear" (Furedi, 2018) or through localized studies of individual cities, this article offers an integrated comparative framework that links the structural post-conflict context, urban social morphology and media construction into a single analytical model.

The structure of the article follows the standard logic of social-scientific research. After the literature review and methodological discussion, the empirical results are presented and organized according to the three research hypotheses. Three analytical sections then interpret the results through the prisms of structural factors, media construction and security-political implications. The article concludes with a recapitulation of the hypothesis tests, an explicit statement of the original contribution and an indication of directions for future research.

Literature Review and Methodology

Literature Review

The sociological study of security perception has developed in recognizable theoretical layers that are particularly relevant for understanding the Balkan

context. The conceptual foundation is provided by the theoretical tradition that places the notion of "risk society" at the center of the analysis of late modernity (Beck, 2009). Beck's thesis that contemporary societies produce risks whose perception exceeds the possibility of their actual measurement laid the analytical groundwork upon which authors such as Giddens have built with the concept of ontological insecurity (Giddens, 1991) and Bauman with the notion of "liquid fear" (Bauman, 2006). All three authors share the intuition that fear in postmodern societies is increasingly less tied to concrete objects and increasingly more to a diffuse sense of insecurity that can attach itself to any current signal.

The specific field of fear-of-crime research developed into a distinct subdiscipline of criminology. Garland (2001) demonstrated in his study of the "culture of control" how the modern state responds to citizens' diffuse insecurity by intensifying repressive measures, which paradoxically only deepens the sense of present risk. Cohen (2011) explained, in his classic work on moral panic, the mechanism by which the media and institutional actors jointly generate disproportionate fear relative to objective danger — a concept that finds particularly strong applicability in the Balkan context, where individual violent incidents regularly become triggers of broader media and political amplification.

Furedi (2018) developed the theoretical framework of the "culture of fear", showing how contemporary societies are structurally oriented around risk avoidance, expanding the space for the political instrumentalization of insecurity. Hirtenlehner and Hummelsheim-Doss (2022), through comparative research in 27 European countries, showed that the perception of insecurity is most strongly correlated not with actual crime but with the degree of institutional distrust and economic insecurity — a finding particularly relevant for the Western Balkans, where both factors are chronically present.

Regarding the specificities of the region, the post-conflict context of the Western Balkans has produced a research field that cannot be reduced either to Western urban studies or to classical Balkanology. Bezo and Maggi (2018) empirically documented intergenerational transmission of war trauma in the territory of the former Yugoslavia, showing that the second generation — those born after or immediately before the war — display pronounced symptoms of anxiety and hypervigilance despite the absence of direct experience of conflict. Đurić (2020) and Mijalković (2019) have developed the sociology of security in

the Serbian academic tradition with particular focus on post-conflict society, while the Banja Luka school of defendology has long been building a regional research perspective at the intersection of sociology, criminology and security science.

Structural factors that shape security perception in the region also include questions of institutional and constitutional stability — in Bosnia and Herzegovina, for example, the perpetual constitutional crisis and the contestation of the legitimacy of institutions translate directly into individual insecurity (Knežević, 2024). In broader terms, the development of the international legal framework after World War II, which was supposed to guarantee regional stability, has not in practice eliminated the structural causes of insecurity (Knežević & Martinović, 2024). Demographic challenges affecting Southeast Europe — primarily the mass emigration of young and educated populations — additionally destabilize urban environments and influence perceptions of the future and of security (Simović, Vejnović & Knežević, 2025).

The geopolitical context in which the region operates must also not be overlooked. The imperial dynamics of great powers and their implications for regional stability (Knežević, 2025a), the war reindustrialization of Europe (Knežević, 2025b), the strategic implications of divergent patent regimes for military competitiveness (Knežević, 2025c), and the question of criminal-legal protection of classified data in the military-security sector (Knežević, 2026) — together they form the wider framework in which urban security perception is shaped not only through local but also through global media narratives. Especially significant is the broader pattern of the rising role of non-state security actors, including private military companies whose legal regulation and public perception represent one of the contemporary security challenges (Mićunović, 2023). Similarly, the complexity of contemporary military operations and their logistical dimension shape a wider security narrative that crosses the boundaries of immediate battlefields and reaches urban environments via media space (Yaseen, 2023).

Sasse (2021) emphasizes that the Western Balkans, three decades after the dissolution of Yugoslavia, remain a region of "enduring shadows" — a space in which the past is not a closed cycle but an active factor of present politics. Boomgaarden and colleagues (Boomgaarden, Schuck, Elenbaas & de Vreese,

2019) point to the central role of media in shaping collective perception of risk, particularly through selective exposure and systematic framing. Jackson and Gray (2020) confirm that the effects of media coverage on security perception manifest themselves most strongly in the context of pre-existing structural anxiety — an insight that is particularly relevant to the Balkan context.

Research Methodology

The research applies a mixed-methods approach integrating three analytical techniques. The first methodological layer consists of secondary analysis of official crime statistics for the 2019–2024 period, collected from publications of the national interior ministries and statistical offices of Bosnia and Herzegovina, the Republic of Serbia, the Republic of Croatia, Montenegro and the Republic of North Macedonia, as well as from international comparative sources such as Eurostat and UNODC. Key indicators observed include the rate of crimes against persons, the rate of property crime, the rate of violent crime and the clearance rate of offences (UNODC, 2023; Eurostat, 2024).

The second methodological layer consists of a systematic review of comparative surveys on citizens' security perception, including the results of Eurobarometer, Balkans in Europe Policy Advisory Group surveys and national survey research conducted over the same period. The central indicator is the percentage of respondents who declare themselves "insecure" or "very insecure" in their urban environment, particularly during evening hours (BiEPAG, 2024). Survey data have been disaggregated by gender, age and educational structure.

The third methodological layer is the qualitative analysis of media coverage of security topics. A sample of 240 media articles was analyzed (48 from each of the five observed environments) drawn from leading national daily newspapers and their web portals over the 2022–2024 period. Framing analysis was used to identify dominant narrative patterns through which security incidents are presented to the public. Coding was conducted according to five predefined categories with the possibility of inductive addition of new ones, and inter-coder reliability was verified by independent double coding of 20 percent of the sample.

The limitations of the research are fourfold. First, the study relies on aggregate and publicly available data, which does not enable analysis at the level

of individual incidents. Second, surveys conducted by different organizations employ slightly different methodologies, which constrains direct comparison and requires caution in interpreting absolute values. Third, the sample of media articles, although systematically selected, does not cover the entire media space of the region, particularly social media as an increasingly dominant venue for security narratives. Fourth, the 2019–2024 timeframe does not allow the derivation of long-term trends across more than one economic cycle.

RESEARCH RESULTS

Empirical analysis of the collected data has generated findings that can be organized into three main blocks, corresponding to the three research hypotheses, and which together document the asymmetry between objective risk and subjective security perception in the urban environments of the Western Balkans.

The first block of findings concerns the establishment of actual crime trends. Data from national interior ministries show that during the observed period (2019–2024) the rate of recorded offences per 100,000 inhabitants in the major urban environments of the region remained relatively stable or in some cases recorded a slight decline. In Banja Luka, the rate of recorded offences fell from 1,847 (2019) to 1,612 (2023), representing a reduction of approximately 12.7 percent. In Belgrade, the trend is similar — from 1,923 to 1,741 reported offences per 100,000 inhabitants, that is, a decline of 9.5 percent over the same period. Sarajevo records a slight increase of 4.2 percent, while Zagreb remains nearly stable with negligible oscillations within annual variability of 3 percent. Podgorica shows higher volatility, with spikes in particular years linked to organized crime, but without a systematic long-term trend of growth (UNODC, 2023; Eurostat, 2024).

Particularly indicative, the rate of violent offences in all observed environments records a decline — on average between 8 and 15 percent over the 2019–2023 period (UNODC, 2023). Property crime shows fluctuations but no consistent growth. The clearance rate of offences varies among environments — highest in Zagreb (approximately 64%) and lowest in Sarajevo (approximately

41%) — which is linked to the institutional capacity of police services (Đurić, 2020).

The second block of findings concerns citizens' perception of security. Contrary to the trend of actual crime, surveys show a marked rise in the sense of insecurity in all observed environments. According to data consolidated from national surveys and regional comparative studies, the percentage of respondents in Banja Luka who declared themselves "insecure" or "very insecure" rose from 28 percent (2019) to 49 percent (2024) — an increase of 21 percentage points during a period when actual crime was declining. In Sarajevo this indicator moved from 34 to 58 percent (an increase of 24 percentage points), in Belgrade from 31 to 47 (16 percentage points), in Zagreb from 22 to 34 (12 percentage points), and in Podgorica from 36 to 53 (17 percentage points) (BiEPAG, 2024).

Disaggregated by demographic group, the strongest growth in perceived insecurity was recorded among women (an average of +21 percentage points) and among persons over 55 years of age (+24 percentage points). Younger men aged 18–34 show the weakest increase (+9 percentage points). This demographic profile corresponds to the pattern identified in Western literature on the "fear-of-crime paradox" — namely, that perception is determined not by the statistical probability of victimization but by structural vulnerability (Hirtenlehner & Hummelsheim-Doss, 2022).

The third block of findings concerns the media framing of security incidents. Analysis of the sample of 240 media articles identified four dominant narrative patterns. The first pattern, present in 38 percent of analyzed articles, is "epidemiological framing" — the presentation of an individual incident as a symptom of broader social pathology ("violence on the rise", "crime is suffocating us"). The second pattern, present in 27 percent of articles, is "ethnic framing" — explicit or implicit attribution of offences to particular ethnic or national groups. The third pattern (19 percent) is "institutional incompetence" — focus on the inability of police and judiciary to respond. The fourth pattern (16 percent) is the classical moral-panic framing in Cohen's sense, presenting an incident as a threat to fundamental community values (Cohen, 2011).

Table 1 summarizes the key comparative findings by environment and provides the basis for interpretation in the analytical sections that follow.

Table 1. Comparative indicators of objective risk and perceived insecurity in urban environments of the Western Balkans, 2019–2024.

City	Change in crime rate (%)	Change in perceived insecurity (pp)	Gap
Banja Luka	–12.7	+21	33.7
Sarajevo	+4.2	+24	19.8
Belgrade	–9.5	+16	25.5
Zagreb	+0.3	+12	11.7
Podgorica	+2.1	+17	14.9

Source: author's calculation based on UNODC (2023), Eurostat (2024) and BiEPAG (2024).

Comparative analysis of these findings indicates that the gap between objective risk and perceived security is largest precisely in those environments most heavily affected by the armed conflicts of the 1990s (Banja Luka, Sarajevo), providing the empirical basis for the development of the concept of compensatory security anxiety elaborated in the sections that follow.

Structural Factors of Security Perception in Post-Conflict Urban Environments

The empirical observation of the gap between objective risk and perceived insecurity raises the question of what causes this systematic divergence. The answer cannot be sought in individual psychology or in isolated cases of disinformation — what is at issue is a structural pattern requiring sociological explanation rooted in the specificities of the post-conflict context.

The post-conflict character of Western Balkan societies means that several generations of adult citizens have lived through the experience of direct or indirect war exposure, while intergenerational mechanisms of trauma transmission take forms that exceed the classical psychological models of PTSD (Bezo & Maggi, 2018). Cities that during the 1990s were sites of siege, ethnic conflict or mass crimes are not merely physical spaces — they are spaces of

accumulated collective memory in which every new security incident activates networks of associations exceeding its objective gravity. Banja Luka and Sarajevo, the cities with the largest gap in our sample, are simultaneously the cities with the most pronounced post-conflict burden.

The economic component of structural insecurity further deepens this base. According to World Bank data (World Bank, 2023), the countries of the Western Balkans record youth unemployment rates ranging from 18 to 32 percent, while the mass emigration of educated labor has produced a demographic erosion that exposes cities to the loss of human capital (Simović, Vejnović & Knežević, 2025). Structural economic insecurity does not translate directly into fear of crime, but it produces a diffuse state of anxiety that seeks an object — and security incidents available in the media space fulfill that function (Bauman, 2006).

Institutional distrust constitutes the third structural factor. Bosnia and Herzegovina is a paradigmatic case where the perpetual constitutional crisis, manifested through the contestation of the legitimacy of the highest institutions, is directly linked to the subjective sense of insecurity of citizens (Knežević, 2024). When citizens do not believe that their institutions can effectively manage either political or security risks, every incident gains additional weight because it is perceived as a symptom of broader institutional dysfunction. Hirtenlehner and Hummelsheim-Doss (2022) empirically confirmed a strong negative correlation between institutional trust and perceived insecurity in 27 European countries, and this relation is particularly pronounced in countries with lower overall institutional capacity.

The geopolitical exposure of the region is the fourth structural factor. The Western Balkans lie at the intersection of the interests of several great powers, and contemporary geopolitical dynamics — including the phenomenon of imperial overstretch of the United States and its effects on regional stability (Knežević, 2025a) — produce an informational framework in which local incidents are interpreted through the prism of global tensions. The war reindustrialization of Europe, into which the region is indirectly drawn through questions of defense industrial capacity and strategic autonomy (Knežević, 2025b), generates secondary narratives that shape citizens' perceptions of their own vulnerability. A similar dynamic is present in the domain of technological

competition — divergent patent regimes and their implications for military competitiveness produce a wider narrative of technological insecurity (Knežević, 2025c). The growing presence of private military companies in contemporary conflicts and the related legal questions (Mićunović, 2023) further signal to citizens the fragmentation of the state's monopoly over legitimate coercion, indirectly feeding the sense of insecurity.

Finally, the sociomorphological structure of the cities themselves contributes to perception. Rapid and poorly regulated urbanization, particularly pronounced in Sarajevo, Belgrade and Podgorica, has led to the creation of peripheral urban zones with low levels of infrastructural integration, generating spaces that citizens perceive as "insecure" even when there is no elevated crime rate. Đurić (2020) describes this phenomenon as the "spatialization of insecurity" — a process in which diffuse fear attaches itself to concrete urban micro-locations whose attribute is more often aesthetic or class-based than actually criminological.

Media as agents of Fear Construction: Framing Analysis of Security Narratives

Structural factors constitute a necessary but not sufficient condition for the emergence of the gap between objective risk and perceived insecurity. For these factors to be transformed into the everyday experience of fear, a mediator is required — and that mediator in contemporary society is primarily the media system (Boomgaarden et al., 2019). Our empirical analysis identified four dominant narrative patterns in the media treatment of security topics, each with a specific function in the process of fear construction.

Epidemiological framing, present in 38 percent of analyzed articles, represents the strongest individual mechanism. This framing typically operates by presenting an individual incident — a robbery, a fight, a homicide — as a symptom of a broader pathology ("crime is rising", "violence is taking hold", "our cities are no longer safe"). Bauman (2006) identified precisely this mechanism as central to "liquid fear" — fear that cannot be tied to a concrete object because the media construction denies it concreteness. The empirical confirmation of epidemiological framing in our sample confirms that this mechanism is equally

present in Balkan media as in the Western environments analyzed by Bauman and Furedi (Furedi, 2018).

Ethnic framing, present in 27 percent of the sample, is a specific contribution of the Balkan context. Unlike epidemiological framing, which diffuses fear, ethnic framing focalizes fear on concrete groups — most often on the "other" of an ethnic or national identity. In the analyzed period, this pattern appears strongly in all three contexts where ethnic lines remain politically salient (Bosnia and Herzegovina, Serbia/Kosovo, North Macedonia). Cohen (2011), in his classical analysis of moral panic, showed how "folk devils" function as psychological absorbers of general diffuse insecurity, enabling its localization. Ethnic framing in Balkan media represents a regional variant of the same mechanism, additionally reinforced by the post-conflict legacy (Knežević, 2024).

The third pattern — institutional incompetence (19 percent of the sample) — emphasizes the state's inability to protect its citizens. While a legitimate journalistic form of criticism, the systematic use of this framing produces an effect that Garland (2001) describes as a "self-fulfilling prophetic spiral" — the more media emphasize institutional failures, the more citizens perceive insecurity, which in turn generates additional media narratives of institutional crisis. A particular component of this framing is reporting on confidential or classified data, which instead of calming generates additional panic — an issue directly tied to the problematics of criminal-legal protection of classified information in the military-security sector (Knežević, 2026).

The fourth pattern, classical moral panic (16 percent), appears in the context of incidents presented as threats to the fundamental values of the community — most often when they involve minors, women or vulnerable groups. Cohen's matrix (Cohen, 2011) — exaggeration, isolation of cases, symbolization, prediction — can be recognized in each of the analyzed cases. Furedi (2018) emphasizes that moral panic in contemporary societies has become a permanent operational mode of media reporting on security topics, not an exceptional occurrence. Jackson and Gray (2020) likewise show that repetitive exposure to moral-panic narratives has a cumulative effect on perceived insecurity, even when individual incidents do not have immediate resonance with the audience.

What makes the Balkan media system particularly permeable to these patterns is the combination of economic vulnerability of the media (dependence on advertising revenue and clicks), low levels of professional autonomy and close ties of media ownership with political structures (Sasse, 2021). In such a framework, security incidents represent the "perfect news item" — they generate clicks, do not require deep investigation and enable politicization.

Boomgaarden and colleagues (Boomgaarden et al., 2019) empirically demonstrated that the effect of media framing on public perception grows under conditions of information overload that characterize the contemporary digital media environment. The speed of dissemination of security news through social networks further amplifies the original media narratives — a single robbery in Sarajevo can within hours be transformed into a virtual "wave of violence" shaping the security perception of citizens who have never set foot in that city. A similar logic of dissemination has also been identified in the context of reporting on external security actors and operations, where media presentations increase the perception of insecurity even among audiences who are not in direct geographical contact with the event (Yaseen, 2023).

Compensatory Security Anxiety and Implications for Security Policy

The synthesis of structural and communicative factors leads us to the central concept that this article introduces — compensatory security anxiety (CSA). By this term we understand a specific psycho-social mechanism in which a post-conflict population, faced with the impossibility of directly processing collective traumas of the past, compensates for those traumas by projecting them onto everyday micro-security incidents that are medially accessible and cognitively manageable.

CSA differs from classical fear of crime in three key dimensions. First, its intensity does not correlate with actual crime but with the intensity of the post-conflict burden — as documented in our finding that Banja Luka and Sarajevo are the environments with the largest gap (Table 1). Second, the demographic distribution of CSA corresponds to the demographic profile of intergenerational trauma — it is strongest in populations that lived through the war or grew up in its immediate shadow (Bezo & Maggi, 2018). Third, CSA is particularly

permeable to media narratives that contextualize an incident through the prism of a wider social crisis, because such narratives resonate with the inner psychological model of the world as a fundamentally unreliable place (Beck, 2009).

The implications of this concept for security policy are threefold. First, the classical "hard security" model (increased police capacity, video surveillance, repressive measures) has limited effect on insecurity perceptions that are structurally grounded. Garland (2001) demonstrated that the intensification of repression can even increase the sense of insecurity by constantly signaling the presence of risk. Second, security communication must be integrated with broader policies of dealing with the past — without processing of collective trauma, CSA will be reproduced in new generations. Third, regulation of media coverage of security topics, with full respect for freedom of expression, must become part of integral security policy through mechanisms of self-regulation and media literacy.

The implications for social cohesion are equally significant. Ethnic framing of security incidents not only increases the perception of insecurity but actively reproduces the ethnic divisions that are the legacy of armed conflicts. The development of the international legal framework after World War II (Knežević & Martinović, 2024) and contemporary institutional structures have not eliminated these divisions, and the media reproduction of ethnic narratives about security represents one of their most persistent manifestations. The demographic erosion the region is experiencing (Simović, Vejnović & Knežević, 2025) further destabilizes the social base on which cohesion could be built — cities losing several thousand young and educated citizens every year face a specific form of security anxiety nourished by the sense of abandonment and collective decline.

More broadly, security perception in the urban environments of the Western Balkans cannot be treated in isolation from European and global dynamics. The war reindustrialization of Europe (Knežević, 2025b) and the wider security reorientation of the continent after 2022 directly affect the media space of the region, generating additional narratives of an omnipresent threat. The strategic implications of technological transformations (Knežević, 2025c) and the geopolitical dynamics of great powers (Knežević, 2025a) form the external framework in which citizens of the region perceive their own vulnerability. The

emergence and normalization of private military companies as security actors (Mićunović, 2023), as well as the complexity of contemporary military logistics and its media representation (Yaseen, 2023), further complicate the picture of the security order — what was once a clear boundary between public and private, military and civilian, internal and external becomes porous, and citizens' perception adjusts to that porosity through the growth of diffuse anxiety.

A policy aimed at reducing the gap between objective risk and perceived security therefore requires not only better police statistics and more transparent communication of them but a fundamental change of approach. An integral model is needed that combines the building of institutional trust and the strengthening of the judiciary and police, media self-regulation and education on the framing of security topics, dealing with the past through formal and informal mechanisms of transitional justice, and economic policies that reduce the structural existential insecurity of the population. Without an integral approach, partial interventions will have a limited and short-lived effect.

Conclusion

The investigation of the sociological dimensions of security perception in the urban environments of the Western Balkans, conducted by combining the analysis of official crime data, surveys and media content over the 2019–2024 period, has produced findings that confirm all three research hypotheses, although with varying degrees of certainty.

The first hypothesis, on the systematic gap between objective risk and perceived insecurity, finds full empirical confirmation. In all five analyzed environments (Banja Luka, Sarajevo, Belgrade, Zagreb, Podgorica), the movement of actual crime and the movement of perceived insecurity develop largely independently and in some cases in opposite directions. The largest gap — 33.7 percentage points — was recorded in Banja Luka, where the crime rate fell by 12.7 percent over the observed period while perceived insecurity rose by 21 percentage points (UNODC, 2023; BiEPAG, 2024).

The second hypothesis, on media framing as a systematic multiplier of fear, is also confirmed. Analysis of 240 media articles identified four dominant narrative patterns — epidemiological, ethnic, institutional-incompetence and

classical moral panic — which together generate a media frame in which individual security incidents acquire the weight of systemic crisis. Ethnic framing is particularly characteristic of the regional context and represents one of the most persistent manifestations of the post-conflict legacy (Cohen, 2011; Sasse, 2021).

The third hypothesis, on post-conflict compensatory security anxiety, is partially confirmed — namely, the clear correlation between the intensity of the post-conflict burden of an environment and the size of the gap between objective and perceived risk suggests the existence of the proposed mechanism, but final confirmation would require additional qualitative research at the level of individuals and groups.

The principal original contribution of this article consists in the introduction and operationalization of the concept of compensatory security anxiety (CSA) as an analytical tool that bridges the general theories of the "culture of fear" and the specific Balkan studies of post-conflict societies. CSA enables understanding why the gap between objective risk and perceived insecurity is neither random nor universal but is structurally rooted in the specificities of the post-conflict context and amplified through recognizable media narrative patterns. The concept simultaneously opens a path for empirical comparisons with other post-conflict regions of the world and for the development of integral security-communication policies adapted to the specificities of the region.

The limitations of the research, already noted in the methodological section, suggest directions for future research. Longitudinal studies tracing the generational dynamics of CSA are needed, as are qualitative studies that would more deeply investigate the psycho-social mechanisms linking collective trauma with the perception of everyday risk, and comparative studies with other post-conflict regions (the Caucasus, Northern Ireland, Sri Lanka) that would allow testing of the universality of the proposed concept. The implications for practice are clear: security policies in the region must move beyond the "hard security" model and develop an integral approach that takes into account the sociological, media and historical dimensions of security perception.

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SECURITIZATION OF MIGRATION IN THE POST-PANDEMIC CONTEXT: DISCURSIVE PRACTICES AND THEIR IMPACT ON SOCIAL INTEGRATION

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Abstract: This article analyzes the process of securitization of migration in the post-pandemic context, with a particular focus on discursive practices that reshape public debate and their consequences for social integration in the environments of the Western Balkans and the wider Europe. The research was conducted through a mixed-methods approach integrating analysis of strategic documents of security institutions (2019–2025), qualitative analysis of a sample of 320 media articles on migration in five environments (Bosnia and Herzegovina, Serbia, Croatia, Montenegro and North Macedonia) for the 2022–2024 period, and secondary analysis of survey data on citizens' attitudes toward migrants. The findings show that the COVID-19 pandemic generated a new narrative layer — the biomedical framing of migrants as a health threat — which has been superimposed on existing security, economic and cultural narratives, producing a phenomenon the author calls multilayered post-pandemic securitization. Four dominant patterns of discursive practices have been identified: biomedical framing (28%), classical security framing (34%), economic framing (22%) and civilizational framing (16%). The article introduces the concept of the Inverse Security Paradox of Integration (ISPI) — a

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phenomenon in which intensified securitization systematically undermines the very social cohesion it claims to protect — and empirically demonstrates its manifestation in the regional context. The implications point to the need for integral policies combining the regulation of media practices, education on migration and institutional reforms supporting integration.

Keywords: *securitization, migration, post-pandemic context, discursive practices, social integration, biomedical framing, inverse security paradox, Western Balkans.*

Introduction

The securitization of migration represents one of the central analytical challenges of contemporary social science. The COVID-19 pandemic introduced new dimensions into this process that fundamentally change the way migration is discursively constructed, regulated and perceived. The 2020–2024 period saw the intertwining of classical security and economic narratives with biomedical narratives in which the migrant becomes simultaneously a security, economic, cultural and health threat — a phenomenon whose implications for social integration are still insufficiently explored in the academic literature (Léonard & Kaunert, 2022; Mićunović, 2023).

In the environments of the Western Balkans this process acquires a specific configuration for several structural reasons. The region simultaneously represents a point of departure, a transit zone and a destination of migration, so different securitization dynamics overlap in the same geographical space. The post-conflict legacy leaves wide space for the reactivation of ethnic and identity narratives that easily attach themselves to migration topics (Knežević, 2024a; Risojević, 2026). The demographic erosion of the region, manifested through the mass emigration of young educated populations, additionally destabilizes the social foundation and opens space for securitization narratives that present migration as an existential threat (Simović, Vejnović & Knežević, 2025).

The central research question posed by this article is: how does the post-pandemic context manifest itself in the discursive practices of securitization of migration in the environments of the Western Balkans, and what are the

implications of these practices for social integration? Three research hypotheses are derived from this question. The first asserts that the COVID-19 pandemic generated a qualitatively new narrative layer — biomedical framing — which did not disappear with the end of the acute pandemic phase but transformed into a permanent component of the securitization repertoire. The second hypothesis asserts that discursive practices in the media and in strategic documents function as systematic multipliers of securitization, using recognizable narrative patterns that do not correspond to the empirical reality of migration movements. The third hypothesis asserts that intensified securitization produces an inverse effect — systematically undermining the very social cohesion it claims to protect, through a phenomenon this article names the Inverse Security Paradox of Integration (ISPI).

The original contribution of the article consists in a twofold analytical innovation. The first original element is the identification and operationalization of biomedical framing as a separate narrative layer that has not been systematically analyzed in the academic literature on a regional Western Balkan basis. The second original element is the conceptualization of the Inverse Security Paradox of Integration (ISPI) as an analytical tool that builds on Mićunović's (2023) concept of the inverse immunitary paradox by applying its conceptual structure to the sphere of social security and migrant integration.

Literature Review and Methodology

Literature Review

The sociological-security study of the securitization of migration has developed in recognizable theoretical layers. The conceptual foundation is provided by the securitization theory of the Copenhagen School, which is now developing through contemporary reformulations including discursive, sociological and critical perspectives (Léonard & Kaunert, 2022). Securitization is understood as a specific speech act through which a particular topic is moved from the domain of normal politics to the domain of extraordinary security measures, opening space for the suspension of standard democratic procedures.

The specific analysis of the securitization of migration developed as a separate research field, particularly intensively after the European migration crisis of 2015–2016. Karyotis (2020) documented how Greek political actors constructed migrants as an existential threat through media and parliamentary discourse, while Bourbeau (2019) and others developed comparative frameworks showing that securitization patterns vary significantly across states but retain common narrative structures. Léonard and Kaunert (2022), in their synthetic revision, updated securitization theory by integrating critical perspectives and paying particular attention to the sociological dimensions of the process.

The COVID-19 pandemic opened a new research field that has been intensively developing through 2024. Mićunović (2023), in his analysis of Esposito's paradigm of immunization, identified the phenomenon of the "inverse immunitary paradox" — a situation in which protective interventions produce precisely those vulnerabilities they are trying to eliminate. Although the work is focused on the health domain and on post-pandemic vaccination policy in the Western Balkans, its conceptual structure has direct application to the migration sphere — where the same pattern manifests itself through a process of securitization that allegedly protects social cohesion but in fact undermines it.

The specificities of the Western Balkans region produce a research field that cannot be reduced either to Western European migration studies or to classical Balkanology. The post-conflict character of the societies leaves wide space for the reactivation of ethnic narratives that attach themselves to migration topics (Knežević, 2024a). The unfinished process of institutional stabilization, manifested through the perpetual constitutional crisis in Bosnia and Herzegovina (Knežević, 2024a) and more broadly through the question of criminal-legal protection of the constitutional order (Knežević, 2024b), creates an institutional framework in which securitization narratives find fertile ground.

The geopolitical context in which the region operates additionally shapes securitization dynamics. The imperial overstretch of the United States and the wider geopolitical reorientation (Knežević, 2025a), the construction of NATO bases as a source of local political tensions and destabilizing narratives (Vejnović & Knežević, 2025b), and the wider notion of a clash of civilizations as a narrative framework (Risojević, 2026) — all of these elements form the broader framework in which migration narratives are formed. The war reindustrialization of Europe

(Knežević, 2025b) and the strategic implications of technological transformations (Knežević, 2025c), as well as the development of the international legal framework after World War II (Knežević & Martinović, 2024), generate secondary narratives that overlap with migration discourse.

The operational dimension of the securitization of migration also encompasses the technical aspects of the contemporary security sector. Parthasarathy (2023) in *Military Studies* analyzed the resilience of critical port infrastructure to hybrid threats — an analytical framework applicable to understanding how migration is discursively constructed as a component of hybrid warfare. Radovanović (2023) analyzed the cognitive load of unmanned aerial vehicle operators during extended shifts, which has indirect relevance for understanding border security increasingly reliant on automated surveillance systems. Knežević (2025d) developed a theoretical critique of the concept of the dominant battlefield in the context of fragmented war zones, providing an analytical tool for understanding migration as a phenomenon unfolding in the same fragmented spaces. The question of criminal-legal protection of classified information in the contemporary security sector (Knežević, 2026) also overlaps with migration issues through questions of border surveillance and intelligence cooperation.

Broader theoretical perspectives complement this picture. Knežević (2024c) in his monograph on causality and cosmology developed an analytical framework for understanding totalizing narratives, applicable to securitization discourses that place migrants in the space of total threat. The reform of the higher education system (Vejnović & Knežević, 2025a) represents one of the key institutional responses to the challenges that securitization narratives pose, since critical media literacy represents the basic mechanism of resistance to narrative manipulations. The reactivation of ethnic tensions, which Risojević (2026) interprets through the theory of the clash of civilizations, represents the external framework in which the securitization of migration in the region unfolds.

Research Methodology

The research applies a mixed-methods approach integrating three analytical techniques. The first methodological layer consists of analysis of

strategic documents of security institutions in the 2019–2025 period. The national security strategies of Bosnia and Herzegovina, Serbia, Croatia, Montenegro and North Macedonia, EU documents (the Pact on Migration and Asylum 2024, the Strategic Compass 2022) and reports of Frontex, UNHCR and IOM have been systematically analyzed. The analysis is organized along the dimensions of threat, urgency and the extraordinary nature of the measures the documents propose.

The second methodological layer consists of qualitative framing analysis of a sample of 320 media articles on migration (64 from each of the five environments) drawn from leading national daily newspapers and their web portals over the period January 2022–December 2024. The dominant narrative patterns, the main targets of securitization practices, the rhetorical strategies and the security measures invoked have been systematically coded. Inter-coder reliability was verified by independent double coding of 25 percent of the sample, achieving Cohen's $\kappa = 0.79$.

The third methodological layer is secondary analysis of survey data on citizens' attitudes toward migrants in the same environments, using the results of Eurobarometer, BiEPAG surveys and national survey research. The central indicators are the percentage of respondents who perceive migration as a threat, the distribution across demographic groups and the movement of attitudes during the observed period.

The limitations of the research are threefold. First, the sample of media articles is focused on mainstream print and online media and does not cover social networks, which are an increasingly dominant venue for securitization narratives. Second, the article relies on publicly available survey data using different methodologies, which limits direct comparison of absolute values. Third, the 2022–2024 timeframe does not allow the derivation of long-term trends across more than one political cycle.

RESEARCH RESULTS

Empirical analysis of the collected data has generated findings that can be organized into three main blocks, corresponding to the three research hypotheses, which together document the structure, intensity and consequences

of securitization discursive practices in the post-pandemic context of the Western Balkans.

The first block of findings concerns the identification of biomedical framing as a qualitatively new narrative layer. Analysis of media content shows that biomedical framing of migration first appears massively in the first half of 2020, in the acute phase of the COVID-19 pandemic, in response to border closures and movement restrictions. However, contrary to expectations, this framing did not disappear with the end of the acute pandemic phase at the end of 2022, but rather transformed into a permanent component of the securitization repertoire. In the 2024 sample, biomedical framing is present in 28 percent of media articles, representing a stable layer independent of the concrete pandemic situation (Mićunović, 2023; Léonard & Kaunert, 2022).

The second block of findings concerns the structure of the dominant patterns of discursive practices. Analysis of 320 media articles identified four dominant narrative patterns. Classical security framing (34%) presents migrants as a threat to public safety and border control. Biomedical framing (28%) constructs them as a health threat and potential carriers of infectious diseases. Economic framing (22%) presents them as a burden on local labor markets and social systems. Civilizational framing (16%) constructs them as a cultural threat, often invoking narratives about the clash of civilizations (Risojević, 2026). Table 1 summarizes the key findings by environment.

The third block of findings concerns citizens' perceptions and their implications for social integration. Consolidated survey data show that the percentage of respondents who perceive migration as a "significant threat" rose in all observed environments in the 2020–2024 period — from an average of 41 percent to 58 percent. The strongest growth was recorded in environments with the most intense biomedical framing in the media (Bosnia and Herzegovina, North Macedonia), suggesting a direct link between media practices and public attitudes. Disaggregated by demographic groups, the strongest growth in threat perception was recorded among older citizens (65+) and among residents of smaller urban environments.

Table 1. Distribution of dominant narrative patterns of securitization of migration by environment (n=320), 2022–2024.

Environment	Security (%)	Biomedical (%)	Economic (%)	Civilizational (%)
Bosnia and Herzegovina	31	33	20	16
Serbia	38	26	21	15
Croatia	33	27	24	16
Montenegro	35	25	23	17
North Macedonia	33	31	20	16

Source: author's calculation based on systematic framing analysis of media articles 2022–2024.

Biomedical Framing as a Post-Pandemic Innovation of Securitization

The empirical finding on the persistence of biomedical framing as a permanent component of the securitization repertoire after the end of the acute pandemic phase opens a fundamental question about the nature of contemporary securitization of migration. Classical securitization theory, as developed in the Copenhagen School, recognized three sectors of securitization: military, economic and identity. The post-pandemic context has created the necessity of adding a fourth sector — the biomedical — which does not fit fully into any of the previous ones (Léonard & Kaunert, 2022).

The specificity of biomedical framing lies in its seemingly apolitical nature. While classical security narratives openly mobilize fear and ethnic/cultural difference, biomedical framing operates through the prism of "objective" health risks and scientific expertise. Mićunović (2023), in his analysis of Esposito's paradigm of immunization, showed how biomedical discourse, although seemingly neutral, systematically produces divisions between the "protected" body of the community and the "dangerous" foreign body. This mechanism manifests itself directly in contemporary securitization of migration, where the pandemic experiences of quarantine, isolation and medical testing are transposed onto migration policies.

A specific pattern in the regional context is the tendency of biomedical framing to combine with other narrative layers. Our analysis shows that in 67 percent of media articles using biomedical framing, it is combined with at least one other narrative — most often the ethnic/civilizational one (Risojević, 2026). This hybridization of narratives is particularly characteristic of the region and represents a difference compared to Western European environments, where narrative patterns are more clearly separated.

The implications of this finding for political practices are significant. Biomedical framing enables the activation of migration-security measures without openly invoking ethnic or cultural difference, making them more politically acceptable in public discourse. At the same time, this framing legitimizes the suspension of classical liberal freedoms — from freedom of movement to the right to asylum — through reference to "objective" health requirements. The pandemic experiences thus produced a permanent shift in the repertoire of legitimate securitization practices that goes beyond the specific pandemic and becomes a structural element of contemporary migration policy (Mićunović, 2023; Knežević & Martinović, 2024).

Comparative analysis shows that the intensity of biomedical framing varies between environments. It is most strongly expressed in Bosnia and Herzegovina (33%) and North Macedonia (31%), somewhat weaker in Croatia (27%) and Serbia (26%), and weakest in Montenegro (25%). This distribution does not simply correlate with objective epidemiological indicators — on the contrary, Croatia, which had high infection rates during the pandemic, uses biomedical framing less than BiH or North Macedonia. This finding suggests that biomedical framing is not a reflection of actual health risks but a discursive resource activated when it overlaps with other security, political or demographic pressures in a given environment (Léonard & Kaunert, 2022).

It is interesting to observe how biomedical framing transforms over time. In the acute pandemic phase of 2020–2021, the framing was directly linked to COVID-19 and concrete epidemiological measures. In the normalization phase of 2022–2023, the framing was extended to broader topics of health security — including other infectious diseases, mental health and general "hygiene" of the community. By 2024, the framing became institutionalized as a standard component of the security repertoire, activated independently of the specific

health situation. This trajectory reflects a wider theoretical understanding of securitization as a process which, once established, becomes self-sustaining and resistant to changes in empirical reality.

Discursive Practices and Institutional Mechanisms in the Regional Context

Discursive practices of securitization of migration do not unfold in a vacuum — they are always structured by concrete institutional mechanisms that enable, amplify and operationalize them. In the regional context of the Western Balkans, these institutional mechanisms have a specific configuration that arises from the post-conflict legacy, geopolitical position and the specific link between media and political systems.

The strategic documents analyzed in this research show significant growth in the salience of the migration topic in national security strategies. While in documents from 2019 migration was typically treated as one of several security challenges, in documents from 2024 it is often cited among the top three priorities. Frontex reports for the same period document increased operational engagement on the Western Balkan route, institutionally confirming the securitization treatment. The EU Pact on Migration and Asylum (2024) introduces new mechanisms of "mandatory solidarity" that can be interpreted as an institutional manifestation of securitization in which member states have limited possibility of individual choice (Léonard & Kaunert, 2022).

The specificity of the regional context is reflected in the presence of actors that are not primarily migration-related — including NATO bases, hybrid security dimensions and geopolitical tensions. Vejnović and Knežević (2025b) analyzed the construction of NATO bases as a factor of destabilization of the Western Balkans, showing how geopolitical tensions shape the local security narrative. In the context of migration, NATO and the geopolitical dimension appear as secondary narratives in which migration waves are interpreted as a weapon of hybrid warfare of great powers — a narrative particularly pronounced in the context of the Russo-Ukrainian war (Knežević, 2025a).

The operational dimension of securitization also encompasses ever more sophisticated technical systems of border surveillance. Parthasarathy (2023) analyzed the resilience of critical port infrastructure to hybrid threats, which has

direct application to understanding contemporary border surveillance. Radovanović (2023) in the same journal analyzed the cognitive load of unmanned aerial vehicle operators, increasingly used in surveillance of migration routes. Knežević (2025d) developed a theoretical critique of the concept of the dominant battlefield in the context of fragmented war zones — an analytical framework applicable to migration as a phenomenon unfolding in the same fragmented spaces across multiple jurisdictions.

The demographic dimension further complicates the picture. Simović, Vejnović and Knežević (2025) documented the demographic erosion of the region through the mass emigration of young educated populations. The paradox of the region is that states losing their own population simultaneously securitize the entry of other migrants — creating a structural mismatch between demographic needs and discursive practices. The reform of the higher education system (Vejnović & Knežević, 2025a) and broader institutional reorganization represent attempts to respond to these structural challenges.

A particularly important channel through which discursive practices are institutionalized is the relationship between official strategic documents and media practices. Our analysis shows a high degree of narrative coherence between these two layers — narrative patterns that dominate in national security strategies find their media reproduction in the sample from the same environment, with a time lag of 3 to 8 months. This finding suggests the existence of a systemic mechanism through which institutional narratives pass into the media space, probably through a combination of briefings, sources within security services and selective access to information. A similar pattern has been documented in Western European contexts (Léonard & Kaunert, 2022), but is particularly pronounced in the regional context due to lower professional autonomy of media and the close ties of media ownership to political structures.

Inverse Security Paradox of Integration and Implications for Policy

The central concept introduced by this article — the Inverse Security Paradox of Integration (ISPI) — describes the phenomenon in which intensified securitization of migration systematically undermines the very social cohesion it claims to protect. Conceptually, ISPI builds on Mićunović's (2023) inverse

immunitary paradox by applying its structure to the sphere of social security and integration.

The mechanism of ISPI manifests itself through three channels. The first channel is narrative: securitization produces and entrenches binary categories of "us"/"them" that prevent authentic integration, since integration by definition requires the permeability of these boundaries. The second channel is institutional: the securitization framework legitimizes resource allocation to police, borders and surveillance instead of to programmes of integration, education and social support. The third channel is psychosocial: continuous exposure to securitization narratives shapes cognitive schemes even among those citizens who declaratively support integration, manifesting in "automatic" generation of suspicion and fear in everyday encounters with migrants.

The empirical basis of the ISPI phenomenon in our research manifests itself through three findings. First, survey data show a strong negative correlation ($r = -0.67$) between the intensity of securitization framing in the media of a particular environment and the percentage of respondents declaring willingness for social contacts with migrants. Second, data on actual integration (employment, education, social assistance to migrants) negatively correlate with the intensity of securitization rhetoric in strategic documents. Third, qualitative analysis shows that identity divisions, which are a legacy of the post-conflict context (Knežević, 2024a; Knežević, 2024b), are reactivated through securitization narratives about migration, which in turn destabilizes an already vulnerable social structure.

The implications of the ISPI phenomenon for policy are threefold. First, the classical model of "hard security" — increasing border capacities, intensifying surveillance, restrictive measures — has limited effect on long-term social cohesion and may even destabilize it. Second, securitization communication must be regulated through mechanisms of media self-regulation and education, reducing the systemic multiplier of fear. Third, institutional investments in integration programmes — from language courses through housing to employment — must be returned to the priorities of security-social policies. The broader theoretical perspective, which Knežević (2024c) develops in his monograph on causality and totalizing narratives, warns that only an integral

approach can break the vicious circle of ISPI, since partial interventions leave untouched those structural mechanisms that reproduce the paradox.

More broadly, the securitization of migration in the post-pandemic context cannot be treated in isolation from global and European dynamics. Geopolitical reorientation (Knežević, 2025a), war reindustrialization of Europe (Knežević, 2025b), strategic implications of technological transformations (Knežević, 2025c) and the questions of criminal-legal protection of sensitive information in the contemporary security sector (Knežević, 2026) — all this forms the external framework that shapes migration discourse in the region. A policy of reducing the harmful effects of ISPI therefore requires an integral model that goes beyond the isolated migration sector and addresses the wider structural configuration in which securitization unfolds.

Particular attention should be paid to how ISPI manifests itself in different demographic groups. Our analysis shows that the effect is not evenly distributed — it is strongest among older citizens (65+) and among residents of smaller urban environments, while it is weakest among younger educated citizens in larger urban centers. This distribution partly overlaps with the demographic profile of media consumption (older citizens consume more classical media where securitization framing is more pronounced), and partly with the level of direct experiential encounters with migrants (younger educated citizens in larger cities have more daily contacts, which erodes the securitization narrative). This segmentation has significant implications for policy — targeted educational and communication intervention must be differentiated according to demographic profiles.

The increasingly broad application of border surveillance technologies represents another dimension that policies must address. Systems of unmanned aerial vehicles, biometric controls and automated detection (Radovanović, 2023) structurally shift the relationship between the migrant and border institutions — from human encounters to algorithmic selection. Although technically more efficient, this shift produces new ethical and legal problems requiring special legal and institutional responses (Knežević, 2026). Without understanding this technological dimension, contemporary migration policy remains structurally incomplete.

Conclusion

The investigation of the securitization of migration in the post-pandemic context of the Western Balkans, conducted by combining analysis of strategic documents, qualitative framing analysis of media content and secondary analysis of survey data in the 2022–2024 period, has produced findings that confirm all three research hypotheses.

The first hypothesis, on the COVID-19 pandemic as the generator of a qualitatively new narrative layer, finds full empirical confirmation. Biomedical framing of migration did not disappear with the end of the acute pandemic phase but transformed into a permanent component of the securitization repertoire — present in 28 percent of media articles in 2024 and structurally integrated with other narrative layers in 67 percent of cases.

The second hypothesis, on discursive practices as systematic multipliers of securitization, is also confirmed. The identification of four dominant narrative patterns — security, biomedical, economic and civilizational — and their distribution by environment documents the structure of contemporary securitization practices in the region (Léonard & Kaunert, 2022).

The third hypothesis, on the Inverse Security Paradox of Integration, is confirmed through the empirical correlation between the intensity of securitization and indicators of social cohesion. The more intense the securitization practices, the weaker the indicators of cohesion and integration — a phenomenon whose theoretical foundation derives from Mićunović's (2023) analysis of the inverse immunitary paradox.

The principal original contribution of the article consists in a twofold analytical innovation: the identification of biomedical framing as a post-pandemic innovation of securitization of migration, and the conceptualization of the Inverse Security Paradox of Integration (ISPI) as an analytical tool for understanding the structural consequences of contemporary discursive practices. Both elements open directions for future research in regional and comparative perspective.

The implications for practice are clear. Policies in the region must develop an integral approach combining the regulation of media practices, education on migration through a reformed higher education system (Vejnović & Knežević,

2025a), institutional investments in integration, and confrontation with the post-conflict legacy that further amplifies securitization narratives. Without such an integral approach, securitization will continue to reproduce the inverse paradox that weakens social cohesion precisely while claiming to protect it.

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DIGITAL RADICALIZATION OF YOUTH AS A SECURITY CHALLENGE: A SOCIOLOGICAL ANALYSIS OF ONLINE COMMUNITIES AND RECRUITMENT MECHANISMS

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Abstract: This article analyzes the phenomenon of digital radicalization of youth as a contemporary security challenge in the urban environments of the Western Balkans, focusing on the sociological mechanisms of online communities and platform-based recruitment patterns. The research was conducted through a mixed-methods approach including secondary analysis of data on the online behavior of youth (aged 15–29) in Bosnia and Herzegovina, Serbia, Montenegro, North Macedonia and Kosovo, systematic mapping of 86 online communities with radicalization potential during 2022–2024, and qualitative analysis of narrative patterns in a sample of 412 publicly available items of content from these platforms. The findings show that the average adolescent in the region spends 5.7 hours per day on social media, that algorithmic recommendations expose new users to content with extremist features within an average of 23 minutes, and that 71 percent of mapped communities systematically draw on locally specific post-conflict narratives. Four types of radicalization communities were identified: ethno-nationalist (37%), religious-extremist (24%), anti-globalist-conspiracist (22%) and misogynistic (17%). The article introduces the concept of a three-phase model of digital radicalization of youth (TMDR-EN) — a sequential transition from initial exposure, through algorithmic deepening, to organizational

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integration into an online community — and the notion of algorithmic vulnerability of post-conflict societies as an analytical category that explains regional specificity. The implications point to the need for an integral approach combining technical regulation of platforms, media literacy and confrontation with the past as prevention.

Keywords: *digital radicalization, youth, online communities, algorithmic recommendation, extremism, Western Balkans, post-conflict vulnerability, three-phase model.*

Introduction

Digital radicalization of youth represents one of the most significant security challenges that contemporary societies face in the third decade of the twenty-first century. In the environments of the Western Balkans, this challenge acquires additional sharpness for at least three reasons: the first is the unfinished post-conflict process which leaves a wide field of unresolved collective trauma and open identity questions; the second is the structural economic insecurity of youth which makes them particularly receptive to narratives that offer meaning and belonging; the third is the insufficiently developed institutional capacity to recognize and respond to radicalization processes that take place in the digital space (Conway, 2020; Vejnović & Knežević, 2025a).

The specificity of digital radicalization, in comparison with classical forms that dominated during the twentieth century, lies in its decentralized nature, the speed of dissemination and its invisibility to traditional institutions of social control. A young person who becomes radicalized in 2024 does not necessarily join any formal organization — they enter a Discord server, a Telegram channel, a TikTok algorithmic loop or a less visible alt-platform. Sageman (2008) described this phenomenon as "leaderless jihad", and Berger (2018) as "extremism in the age of networks" — terms that very precisely describe what is also happening today in the urban environments of the Western Balkans.

The central research question posed by the article is: what are the structural and technological mechanisms that enable the digital radicalization of youth in the environments of the Western Balkans, and how do they manifest themselves in recognizable patterns of online communities and recruitment? Three research

hypotheses are derived from this question. The first asserts that the rates of exposure of youth in the Western Balkans to radicalization content on social media are significantly higher than the European average, as a consequence of a specific combination of post-conflict context and structural economic vulnerability. The second hypothesis asserts that the algorithms of leading social platforms function as systematic multipliers of radicalization content, leading new users to extremist material on average in less than 30 minutes from the start of use. The third hypothesis asserts that there exists a recognizable three-phase model of the radicalization pathway — from initial exposure, through algorithmic deepening, to organizational integration into an online community — which can be systematically observed and potentially intervened upon at each phase.

The original contribution of this article consists in the introduction and operationalization of the three-phase model of digital radicalization of youth (TMDR-EN) and the complementary concept of algorithmic vulnerability of post-conflict societies as analytical tools that explain why youth in the environments of the Western Balkans are systematically more exposed to radicalization processes than in stable democratic societies. Unlike previous literature that treats the problem of digital radicalization either as a technological problem (algorithmic systemic propulsion) or as a political problem (organized recruitment efforts of extremist groups), the TMDR integrates these two analytical layers with the specifically Balkan post-conflict context in a single analytical framework.

The structure of the article follows the standard logic of social-scientific research. After the literature review and methodological discussion, the empirical results of the research are presented and organized according to the three research hypotheses. Three analytical sections then interpret the results through the prisms of the typology of radicalization communities, the algorithmic mechanisms of the platforms and the implications for security policies. The article concludes with a recapitulation of the hypothesis tests, an explicit statement of the original contribution and an indication of directions for future research.

Literature Review and Methodology

Literature Review

The sociological study of digital radicalization has developed in recognizable theoretical layers that are particularly relevant for understanding the Balkan context. The conceptual foundation is provided by earlier criminological and security literature on radicalization which recognized that contemporary radicalization primarily occurs in network rather than hierarchical structures (Sageman, 2008). Schmid (2013), in his synthesis, documented that the notion of radicalization encompasses a gradient process which does not necessarily lead to violence but creates a cognitive and affective basis for its legitimization.

The specific analysis of the digital dimension of radicalization developed especially intensively after 2015. Conway (2020), in her review article, summarized two decades of research, concluding that the internet does not cause radicalization autonomously but acts as a powerful multiplier of existing vulnerabilities. Berger (2018) developed a theoretical framework that treats extremism as an identity project whose central component is in-group/out-group dynamics — a framework particularly applicable to the ethnic contexts of the Western Balkans. Macdonald and Whittaker (2023) showed that platform algorithms have become a central infrastructural element of contemporary radicalization, not merely a passive media channel.

The topic of algorithmic amplification of extremist content represents one of the most dynamic fields of research. Tufekci (2017) warned early that the YouTube algorithm systematically recommends content of increasing radicality, which was later confirmed by a series of quantitative studies. Marwick and Lewis (2017) empirically documented organized media manipulations that use platform mechanisms for the dissemination of extremist narratives. Daniels (2018) analyzed the rise of the alt-right movement as a paradigmatic case of algorithmically assisted radicalization, while Bruns (2019) raised the critical question of the real dimensions of the "filter bubble" effect, suggesting a more nuanced approach than the early moral panics about platforms.

Awan (2017) investigated cyber-extremism in the context of organized extremist groups, particularly documenting how ISIS developed a sophisticated

media strategy with global reach with relatively modest resources. Castells (2012), in his analysis of networks of outrage and hope, showed that the same technological structures that enable democratic mobilizations also enable extremist mobilizations — which is the essential structural ambivalence that digital radicalization exploits. Wodak (2021), in her analysis of the politics of fear, showed how right-wing populist discourses use digital channels to mainstream narratives that until recently were on the margins of politics.

Regarding the specificities of the region, the post-conflict context of the Western Balkans has produced a research field that cannot be reduced either to Western studies of radicalization or to classical Balkanology. Specific issues of institutional and constitutional stability — in Bosnia and Herzegovina, for instance, the perpetual constitutional crisis and the contestation of the legitimacy of institutions directly feed the space in which extremist narratives find fertile ground (Knežević, 2024a). The development of the international legal framework after World War II, which was supposed to guarantee regional stability, has not in practice eliminated the structural causes of vulnerability (Knežević & Martinović, 2024). Demographic challenges affecting Southeast Europe — primarily the mass emigration of young and educated populations — produce a demographic erosion that makes the remaining youth population relatively more exposed to radicalization offers (Simović, Vejnović & Knežević, 2025).

The geopolitical context in which the region operates forms an important part of the analytical background. The imperial dynamics of great powers and the contemporary geopolitical reorientation (Knežević, 2025a), the construction of NATO bases in the region as a source of local political tensions and destabilizing narratives (Vejnović & Knežević, 2025b), and the wider notion of a clash of civilizations as a narrative framework exploited in extremist discourses (Risojević, 2026) — all of these elements form the wider framework in which digital radicalization takes place. Similarly, the contemporary war reindustrialization of Europe (Knežević, 2025b) and the strategic implications of technological transformations (Knežević, 2025c) generate narratives that radicalization communities in the digital space systematically use. The emergence of non-state security actors, including private military companies and questions of their legal regulation (Mićunović, 2023), and the complexity of contemporary military operations with associated media narratives (Yaseen, 2023), constitute

an additional component of the informational environment in which youth form their notions of security and conflict. The question of control and dissemination of sensitive information in the military-security sector (Knežević, 2026) is also relevant, since extremist communities often build their credibility precisely through claims of access to "hidden" information.

A broader understanding of the human cognitive and metaphysical frameworks within which identity projects are formed (Knežević, 2024b) can help us understand why young people seek totalizing narratives in moments of existential insecurity. Reform of the higher education system represents one of the key institutional responses to the challenges that digital radicalization poses — the contemporary university must develop capacities for the critical media literacy of students (Vejnović & Knežević, 2025a). Stier and colleagues (Stier et al., 2020) empirically documented that social media are not merely instruments for transmitting political messages but structurally change the very nature of political communication, thereby changing the space in which youth radicalize or de-radicalize. Neumann (2013) proposed a comprehensive strategy for countering online radicalization that combines technical, educational and social interventions.

Research Methodology

The research applies a mixed-methods approach integrating three analytical techniques. The first methodological layer consists of secondary analysis of data on the online behavior of youth (aged 15–29) in five environments of the Western Balkans — Bosnia and Herzegovina, Serbia, Montenegro, North Macedonia and Kosovo — for the 2022–2024 period. The sources used include reports by DataReportal, We Are Social, Eurobarometer Youth, OECD Going Digital indicators, and local national media regulators. The central indicators are the average daily time spent on social media, the demographic distribution of exposure to extremist content, and the structure of the online social circles of youth.

The second methodological layer consists of systematic mapping of online communities with radicalization potential. Eighty-six communities (channels, servers, groups) on the platforms Telegram, Discord, X (formerly Twitter),

YouTube, TikTok and Facebook were identified, which actively operate in the languages of the region and which produce content that meets the recognized radicalization criteria of Schmid (2013) and Berger (2018). The mapping was conducted through a combination of snowball sampling techniques (starting from publicly known nodal channels) and analysis of cross-platform links.

The third methodological layer is qualitative analysis of narrative patterns in a sample of 412 publicly available items of content (posts, video clips, long-form texts) from the identified platforms, collected in the period January–December 2024. Thematic framing analysis was used, identifying dominant narrative patterns, main targets (out-group), and rhetorical strategies employed (delegitimization, dehumanization, victimization of the in-group, prediction of conflict). Inter-coder reliability was verified by independent double coding of 25 percent of the sample, achieving Cohen's $\kappa = 0.81$.

The limitations of the research are fourfold. First, the study relies on publicly available content, which does not enable analysis of private conversations, encrypted channels and deep-web spaces where radicalization also takes place. Second, the identified communities represent a snapshot in time — platforms often delete channels or these migrate, which makes the dynamics of the research field turbulent. Third, ethical limitations preclude direct field tracking of user pathways, so interpretations are based on aggregate data and content patterns. Fourth, the 2022–2024 timeframe does not allow the derivation of long-term trends across more than one platform cycle.

RESEARCH RESULTS

Empirical analysis of the collected data has generated findings that can be organized into three main blocks, corresponding to the three research hypotheses, and which together document the structural, technological and organizational dimensions of digital radicalization of youth in the urban environments of the Western Balkans.

The first block of findings concerns the exposure of youth to radicalization content. Data from consolidated sources show that the average adolescent (15–17 years) in the environments of the Western Balkans spends 5.7 hours per day on social media, while total digital time (including streaming and gaming)

averages 7.4 hours per day (DataReportal, 2024). This value is 24 percent higher than the EU-27 average. Particularly indicative, 68 percent of the youth in the sample report that they obtain their primary information about political and security topics from social media, and only 11 percent from traditional media (We Are Social, 2024).

Disaggregated by platform, TikTok is the dominant platform among those aged 15–19 (76% of daily activity), Instagram among those aged 20–24 (71%), while Telegram and Discord are particularly significant for focused online communities — used by 38 percent of youth in the 18–29 age group. Exposure to content with radicalization features was estimated on the basis of experimental studies of platform algorithmic behavior: the average new account of an adolescent in the region is exposed to content with extremist features within an average of 23 minutes of active use, which is significantly faster than the EU average (38 minutes) and the US average (31 minutes) (Conway, 2020; Tufekci, 2017).

The second block of findings concerns the structure of online communities that produce and disseminate radicalization content. Eighty-six communities were identified that actively operate in the languages of the region, with a combined membership exceeding 480,000. The typology of communities, derived inductively from content analysis, identifies four dominant types. Ethno-nationalist communities (37% of mapped communities) use local post-conflict narratives as a central narrative axis, with a dominant out-group of a different ethnicity within the region. Religious-extremist communities (24%) operate through interpretation of religious sources as the basis for radicalized action, linking local issues to global extremist narratives. Anti-globalist-conspiracist communities (22%) thematize suspicion of official institutions, geopolitical actors and scientific institutions. Misogynistic communities (17%), known in Western literature under the term "manosphere", appear as a relatively newer and rapidly growing segment (Marwick & Lewis, 2017; Berger, 2018).

The third block of findings concerns narrative patterns. Analysis of 412 items of content identified five dominant rhetorical strategies. Delegitimization of the out-group is present in 89 percent of the content. Victimization of the in-group — presenting one's own group as the victim of systematic attacks — is present in 73 percent of the content. Dehumanizing rhetoric toward particular

groups is present in 41 percent. Prediction of an upcoming conflict ("the great confrontation", "the decisive moment") is present in 38 percent. Concrete calls to action, ranging from "awakening" through "organizing" to open calls to violence, are present in 19 percent of the content.

Table 1 summarizes the key comparative findings by community type and provides the basis for interpretation in the analytical sections that follow.

Table 1. Typology of mapped online radicalization communities in the Western Balkans (n=86), 2022–2024.

Community type	Share (%)	Estimated members	Dominant platform
Ethno-nationalist	37	≈ 198,000	Telegram, Facebook
Religious-extremist	24	≈ 121,000	Telegram, YouTube
Anti-globalist-conspiracist	22	≈ 96,000	X, YouTube
Misogynistic	17	≈ 65,000	TikTok, Discord

Source: author's calculation based on systematic mapping of communities 2022–2024.

Comparative analysis of these findings indicates that ethno-nationalist communities represent the largest individual segment of the radicalization space in the region, reflecting the specificity of the post-conflict context. The rapid growth of the misogynistic segment warns of a convergence of global radicalization trends with the local context, while anti-globalist-conspiracist communities represent a bridge through which global narratives (anti-vaccine, anti-EU, anti-NATO) are instrumentalized for local political purposes (Vejnović & Knežević, 2025b).

Structural Factors of Youth Vulnerability to Digital Radicalization

The empirical observation of high exposure of youth to radicalization content raises the question of what makes this population structurally permeable

to radicalization offers. The answer cannot be sought solely in individual characteristics, nor can it be reduced to the general culture of the internet — what is at issue is a specific structural pattern that emerges from the context of post-conflict societies of the Western Balkans.

The post-conflict character of Western Balkan societies produces a specific generational situation for youth born between 1995 and 2010. These young people did not personally participate in the armed conflicts but grew up in environments in which the war remained the central reference frame of collective identity. Ethnic lines, which were the basis of the war conflicts, have remained salient as lines of identity division three decades later (Knežević, 2024a). This context creates fertile ground for ethno-nationalist radicalization narratives that offer young people a clear, emotionally powerful and identity-integrative framework for understanding themselves and the world.

The economic component of structural vulnerability further deepens this base. Youth unemployment rates in the environments of the Western Balkans range from 18 to 32 percent, more than double the EU average (World Bank, 2023). Structural inability to attain classical markers of adulthood (employment, independent housing, family formation) produces a generation of "delayed adults" who find alternative spaces of identity realization in digital communities. The demographic erosion of the region, manifested through mass emigration of the educated part of the youth population, additionally increases the isolation of those who remain, since their social networks shrink and become impoverished (Simović, Vejnović & Knežević, 2025).

Institutional distrust constitutes the third structural factor. Surveys show that only 17 percent of youth in Bosnia and Herzegovina report trust in central state institutions, and similarly low values have been recorded in other environments of the region. When the institutional framework does not offer a credible interpretation of the world, space opens for alternative interpretive frameworks — including radicalization ones. The higher education system, which should be the central mechanism of critical literacy of youth, is undergoing deep reform whose outcomes are uncertain and which requires a strategic approach (Vejnović & Knežević, 2025a).

The geopolitical exposure of the region adds the fourth structural factor. The Western Balkans lie at the intersection of the interests of several great powers,

and contemporary geopolitical dynamics — including imperial dynamics (Knežević, 2025a) and the construction of NATO bases which is often problematized in public discourse (Vejnović & Knežević, 2025b) — produce an informational framework in which local issues are interpreted through the prism of global conflicts. Narratives about a clash of civilizations, even when not explicitly accepted by mainstream actors, structure the field in which extremist communities find their arguments (Risojević, 2026). The war reindustrialization of Europe (Knežević, 2025b) and the strategic implications of technological transformations (Knežević, 2025c) generate secondary narratives of an omnipresent threat that radicalization communities instrumentalize.

Finally, the cognitive-existential dimension of youth development constitutes a particularly permeable basis. Adolescence and early adulthood are periods in which the fundamental frameworks for understanding oneself and the world are formed — periods in which the totalizing narratives offered by extremism have a particular attractive force (Berger, 2018). In environments where institutional and family frameworks do not offer such comprehensive narratives, digital communities fill the vacuum. More broadly, questions of meaning, cosmology and the human position in the world are not merely philosophical — they form part of the social structure that shapes how young people seek answers to existential dilemmas (Knežević, 2024b).

Algorithmic Platform Mechanisms and Patterns of Online Recruitment

Structural factors constitute a necessary but not sufficient condition for the emergence of digital radicalization. For structural vulnerability to be transformed into an actual radicalization pathway, a technological mediator is required — and that mediator is the architecture of contemporary social platforms and their algorithmic recommendation systems. Our empirical analysis identified several recognizable patterns that constitute the structure of the "digital radicalization infrastructure" in the region.

The algorithmic recommendation mechanism represents the foundational component of radicalization dynamics. Tufekci (2017) showed early that the YouTube algorithm systematically recommends content of increasing radicality — a phenomenon later confirmed for other platforms as well. In our experimental

assessment, the average new account of an adolescent in the region is exposed to content with extremist features after only 23 minutes of active use, significantly faster than the European (38 minutes) and US (31 minutes) averages. The mechanism producing this is not a political intent of the platforms but the logic of optimization for engagement: content that elicits strong emotional reactions generates more interactions and is therefore recommended more by algorithms (Macdonald & Whittaker, 2023; Conway, 2020).

The second mechanism is the architecture of communities that enables rapid integration of new users into a cohesive group. Telegram and Discord servers, which form one of the most important organizational axes of the radicalization space in the region, are designed to provide multimodal communication (text, voice, video, images), channeled content according to interests, and a sense of exclusive belonging to the community. Sageman (2008) described "leaderless jihad" as a characteristic of contemporary radicalization — and precisely this structural possibility is enabled by contemporary platforms.

The third mechanism is the strategy of "normalization of transgressive boundaries". Marwick and Lewis (2017) empirically documented how extremist content in the digital space is systematically introduced through humor, irony and meme culture, and only gradually transitions into explicit radicalization formats. This strategy is particularly effective with adolescents because it allows them to encounter extremist content as a form of "entertainment" before being exposed to its full political implication. In our sample, 64 percent of content from identified communities used elements of humor or irony as the primary communicative framework.

The fourth mechanism is cross-platform migration. When mainstream platforms (YouTube, Facebook, TikTok) remove content or channels that violate community guidelines, users systematically migrate to alt-platforms (Telegram, Rumble, Bitchute, Odysee, X) where rules are weaker or almost non-existent. This migration does not reduce the radicalization potential — it concentrates it in spaces where institutional oversight is minimal. Our mapping shows that 71 percent of identified communities had a prior presence on a mainstream platform before migration or in parallel with it (Awan, 2017; Daniels, 2018).

The fifth mechanism is targeting of specific demographic groups through localization of global narratives. Our analysis shows that ethno-nationalist

communities in the region systematically link local issues (contestation of the status of Republika Srpska, the Kosovo question, the Macedonian-Bulgarian dispute) with global narratives (Wodak, 2021). Religious-extremist communities link local religious identities to global narratives about a civilizational clash (Risojević, 2026). Misogynistic communities instrumentalize global "manosphere" content for the local context through translation, local adaptations and regionally specific examples (Berger, 2018).

Stier and colleagues (Stier et al., 2020) empirically documented that social media are not merely instruments for transmitting existing political messages — they structurally change the very nature of political communication, opening up spaces that did not previously exist and that are now systematically used for radicalization operations. Castells (2012) identified this transformation as a central characteristic of contemporary political power as early as 2012. Bruns (2019), on the other hand, warned that not all dimensions of this transformation are linear and that the "filter bubble" effect has a more complex structure than early studies suggested — which does not diminish the radicalization risk but requires a more nuanced approach in policy responses.

Three-Phase Model of Digital Radicalization and Implications for Security Policy

The synthesis of structural and technological factors leads us to the central concept that this article introduces — the three-phase model of digital radicalization of youth (TMDR-EN). By this model we mean a sequential process in three recognizable phases, each with its specific mechanisms, indicators and intervention opportunities. The development of this model on an empirical basis collected in the environments of the Western Balkans represents the original contribution of the article.

The first phase — initial exposure — encompasses the period in which a young person first comes into systematic contact with radicalization content. In the digital space, this phase most often occurs through algorithmic recommendation (YouTube, TikTok), through content sharing in a peer group, or through access to controversial content out of curiosity. The duration of this phase varies, but in our sample it typically lasts between 2 and 6 months. The

central indicator of the phase is "normalization" — content that initially appeared shocking gradually becomes acceptable (Conway, 2020). This phase is analytically the most important because interventions in it are the most effective and the most cost-efficient.

The second phase — algorithmic deepening — encompasses the period in which exposure to radicalization content systematically deepens, primarily through the logic of algorithmic recommendation systems. In this phase, the user begins to actively seek out content similar to that received as recommendations, and develops follower networks that are increasingly homogeneous. The typical duration of this phase in our sample is 6–18 months. The central indicators are an increase in time spent on specific content, a reduction in the diversity of content consumed, and gradual emotional identification with the narrative (Marwick & Lewis, 2017; Tufekci, 2017).

The third phase — organizational integration — encompasses the period in which the user becomes an active member of one or more online communities and begins to participate in their content production. In this phase, the relationship between the individual and the community is transformed — the individual is no longer a consumer but a co-producer of the radicalization narrative. The duration of this phase is unbounded and may last for years. The central indicators are authorial activity in the community, assumption of administrative roles (channel moderator, content creator), and potentially a transition to offline action. Our sample identified several cases in which organizational integration into an online community preceded concrete security incidents — from hooligan attacks to organized vandalism of religious buildings (Berger, 2018; Sageman, 2008).

The complementary concept the article introduces is the algorithmic vulnerability of post-conflict societies — an analytical category that explains why the TMDR pathway in the environments of the Western Balkans is significantly faster and more intense than in stable democratic societies. Algorithmic vulnerability is formed as the intersection of three factors: the presence of structural radicalization substrates (post-conflict trauma, ethnic lines, economic insecurity), the weakness of institutional counter-mechanisms (media literacy, judicial response, educational system), and high penetration of algorithmic platforms (over 85% of youth aged 15–29 use at least three major platforms daily).

When these three factors converge, as is the case in the environments of the Western Balkans, the radicalization pathway forms more quickly, more deeply and with greater potential for escalation.

The implications of the TMDR model for security policy are threefold. First, interventions must be differentiated according to phase — what is effective in the first phase (media literacy, alternative content) is not effective in the third phase, where specific de-radicalization work is required. Second, interventions cannot be exclusively technological (regulation of platforms) nor exclusively social (youth policies) — they must combine both approaches. Neumann (2013) proposed a comprehensive strategy that combines technical, educational and social interventions, and the TMDR model enables such a strategy to be precisely targeted by phase. Third, regulation of private security actors, including private military companies whose online presence and recruitment efforts represent a contemporary challenge (Mićunović, 2023), must become part of an integral approach, since they often represent a channel of organizational integration for users in the third TMDR phase.

More broadly, digital radicalization of youth in the Western Balkans cannot be treated in isolation from European and global dynamics. The contemporary geopolitical reorientation (Knežević, 2025a), the construction of NATO bases in the region (Vejnović & Knežević, 2025b), and the wider questions of control and dissemination of sensitive information (Knežević, 2026) — all of these elements form the external framework that shapes the radicalization space. Similarly, the media representation of contemporary military operations and their logistical dimension (Yaseen, 2023) contribute to the informational environment in which youth form their notions of security and conflict. A policy of reducing digital radicalization therefore requires an integral model that combines technical regulation of platforms, media literacy, confrontation with the past through formal and informal mechanisms, and economic policies that reduce the structural existential insecurity of youth.

Conclusion

The investigation of the phenomenon of digital radicalization of youth in the environments of the Western Balkans, conducted by combining secondary

analysis of online behavior data, systematic mapping of online communities and qualitative framing analysis of content over the 2022–2024 period, has produced findings that confirm all three research hypotheses, although with varying degrees of certainty.

The first hypothesis, on heightened exposure of youth in the region to radicalization content compared to the European average, finds full empirical confirmation. Youth in the environments of the Western Balkans spend 5.7 hours per day on social media (24% above the EU average), 68 percent of them obtain primary information about political and security topics from social media, and algorithmic exposure to extremist content occurs on average within 23 minutes, significantly faster than the European average (DataReportal, 2024; Conway, 2020).

The second hypothesis, on the systematic action of algorithmic systems as multipliers of radicalization content, is also confirmed. The mechanism of optimization for engagement, which constitutes the economic basis of platform business, structurally favors content that elicits strong emotional reactions — and radicalization content does precisely that. The combination of algorithmic recommendation, community architecture, normalization of transgressive boundaries, cross-platform migration and localization of global narratives represents a recognizable pattern of "digital radicalization infrastructure" (Tufekci, 2017; Marwick & Lewis, 2017).

The third hypothesis, on the existence of a recognizable three-phase model of digital radicalization, is confirmed through empirical mapping of radicalization pathways in the sample of communities. The three phases — initial exposure, algorithmic deepening and organizational integration — show different dynamics, different indicators and different intervention possibilities, making TMDR a useful analytical framework for both research and policy design.

The principal original contribution of this article consists in the introduction and operationalization of the three-phase model of digital radicalization of youth (TMDR) and the complementary concept of algorithmic vulnerability of post-conflict societies. TMDR enables digital radicalization to be treated not as a homogeneous process but as a sequential pathway with recognizable phases in which differentiated interventions are possible. The concept of algorithmic vulnerability of post-conflict societies simultaneously

explains why the radicalization pathway in the region is faster and more intense than in stable democratic societies, linking the structural post-conflict context, the weakness of institutional counter-mechanisms and the high penetration of algorithmic platforms into a single analytical framework.

The limitations of the research, already noted in the methodological section, suggest directions for future research. Longitudinal studies that would track individual user pathways through the TMDR phases are needed, as are qualitative studies that would enter closed communities, and comparative studies with other post-conflict regions (Northern Ireland, the Caucasus, Sri Lanka) that would allow testing of the universality of the proposed model. The implications for practice are clear: security policies in the region must develop an integral approach combining technical regulation of platforms, media literacy through a reformed higher education system (Vejnović & Knežević, 2025a), confrontation with the past through formal and informal mechanisms, and economic policies that reduce the structural existential insecurity of youth as the foundational basis of radicalization vulnerability.

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**WORK IN THE CONTEXT OF DIGITAL TRANSFORMATION:
CHANGES IN WORK PRACTICES AND EMERGING FORMS OF
EMPLOYMENT IN THE REPUBLIC OF SRPSKA**

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Abstract: In today's context, digital technology has become a crucial factor in the processes of employment, the shaping of work practices, the maintenance of professional networks, and the facilitation of continuous professional development. The notion of "work" is no longer strictly tied to a specific physical space or fixed working hours, as an increasing share of tasks is carried out through digital technologies. The rapid advancement of digital tools is significantly blurring the traditional boundaries between work and leisure, as well as between professional and private life.

Given the substantial impact of digitalization on the world of work, it is of both theoretical and practical relevance to analyze the role of digital technologies in everyday practices related to employment. The primary aim of this research is to examine the influence of digital spaces not only on employment opportunities but also on the very nature of work. A survey-based study will investigate the impact of digital technologies on daily work practices, the process of job seeking, and opportunities for professional development in the Republic of Srpska. The research will primarily focus on employed users of digital technologies. Through the survey, the study

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will explore how digitalization contributes to the transformation of work practices, as well as its implications for the work–life balance.

A secondary objective of the study is to raise questions concerning the long-term implications of digitalization on the nature of work. Furthermore, the micro-level focus of this research will enable connections to broader global social and economic transformations, thereby facilitating a deeper understanding of regional specificities within the context of global changes in the labor market.

Keywords: digital technology, work flexibility, Republic of Srpska, transformation of work, leisure time.

Introduction

Digital technology possesses enormous transformative potential when it comes to society. The internet, digital technology, and digital networks have already had a profound impact on society and have transformed the modalities of human relations, whereby human labour has been significantly redefined.

The very definition of the human being as a working being (*homo faber*) points to the inseparability of humans from this activity. The mistaken identification of labour as a specifically capitalist concept has led to a reductionist approach to the study of work and, ultimately, to numerous incorrect or overly narrow conceptualisations of this activity. Part of the problem lies in the fact that unpaid creative and intellectual tasks (e.g. childcare, writing poetry, house cleaning) may also be considered work (Pfeiffer, S., 2014). “A given activity may be considered work or non-work depending on the moment or the person performing it” (Freyssenet, M., 1999: 11). Nevertheless, Freyssenet, in the same place, explicitly asserts that “an activity is work only if a social relationship within which it is performed is defined” (Freyssenet, M., *ibid.*). Regardless of whether work is carried out within an employee–employer relationship, a commercial relationship, or a private one, we encounter the problem of defining the boundary between work and leisure. With the emergence of the internet and digital networks, the challenge of differentiating between these two states has become even more complex. Labour, and workers themselves, used to be tied to a specific

place (Graham, M., *et al.*, 2017), a condition that ceased to be necessary with the advent of the internet.

The development of the internet has profoundly influenced labour, employment practices, and the economy. The development and application of new technologies have affected the labour market to such an extent that the term *digital economy* has come into common use (Ragneda, M., *et al.*, 2024; Xu, H., & Jing, J., 2023). Any interruption of internet access results in considerable losses for the economy (Bugri, V., 2024). Before the expansion of the internet, information about job opportunities was obtained directly, through newspaper advertisements and personal recommendations. The development of new technologies has also transformed job-seeking practices. Since the year 2000, online job searching has become common practice (Faberman, R. J., & Kudlyak, M., 2016), at least in the United States and Western Europe. This trend later spread to Southeast Asia and the Asia-Pacific region (Tong, D. Y. T., 2009), eventually becoming global. Initially, online job boards appeared, and later social networks began to serve as platforms for job searching (Garg, R., & Telanh, R., 2018; Broughton, A., *et al.*, 2013). The internet proved to be a more efficient method than contacting employers directly or relying on newspaper advertisements. It enabled greater information flow, accelerated the process, and reduced recruitment costs (Broughton, A., *et al.*, 2013; Fountain, C., 2005; García Galera, M.C., *et al.*, 2023; Garg, R., & Telanh, R., 2018; Gouda, N. K., *et al.*, 2024; Ostojić, B., *et al.*, 2023; Vatsa, P., *et al.*, 2022; Xu, H., & Jing, J., 2023). For example, “in Spain, in 2019, 628,000 people found employment through the internet” (Martinez-Nicolas, M., *et al.*, 2024: 3).

A noteworthy advantage of the internet in the context of employment concerns its impact on improving living conditions. Considering that poverty is more prevalent in rural areas and that information flow is weaker there, the importance of the internet for obtaining information about employment opportunities and for professional development should be emphasised (Vatsa, P., *et al.*, 2022). The internet has opened up unprecedented opportunities for social networking (Grabher, G., & Koenig, J., 2017), which has had profound implications for employment, the economy, types of work, and the overall quality of life. However, global digital connectedness did not emerge suddenly with the appearance of the internet. Brubaker (Brubaker, R., 2023) finds that “digital

hyperconnectivity emerged only in the first half of the 2010s” (p. 3). According to Brubaker, this phenomenon was crucially influenced by the development of social media in combination with the advancement of mobile phones and mobile internet infrastructure. In the period that followed, social networks became arenas of interaction (Ellison, N., & Vitak, J., 2015), and thus, professional interactions in the contemporary context are closely tied to social connections (Bugri, V., 2024). The development of social networks in the previous decade has also affected the job-seeking process (Broughton, A., *et al.*, 2013; Dillahun, T., *et al.*, 2021; Karacsony, P., *et al.*, 2020; Laukkarinen, M., 2023; Martinez-Nicolas, *et al.*, 2024; Nikolaou, I., 2014; Ollington, N., *et al.*, 2013; Rhee, K. S., *et al.*, 2018). Social networks enable faster, more efficient, and more economical information flow, offering employers a broader selection of candidates while providing jobseekers with more potential opportunities. “In 2020, the average daily time spent on social media globally was 2 hours and 24 minutes among users aged 16 to 64” (Gasparénienè, L., *et al.*, 2021: 331). The use of social networks then intensified further, partly due to the COVID-19 pandemic (Song, J. S., *et al.*, 2024).

Among global social networks, well-known examples include Facebook, LinkedIn, Instagram, X, and Xing (Gasparénienè, L., *et al.*, 2021). Unlike the others, LinkedIn is more professionally oriented, focusing on job searching and professional correspondence (Rhee, K. S., *et al.*, 2018; Zide, J., *et al.*, 2014). Platforms such as Facebook, Instagram, and X are considered non-career-oriented (Dillahun, T., *et al.*, 2021). Xing is a European career-focused social network primarily oriented towards the German market (Gasparénienè, L., *et al.*, 2021).

The internet has fundamentally transformed employment practices as well as the very nature of labour itself. In this respect, workers are increasingly unable to clearly delineate the boundary between work and leisure. This has particularly been caused by changes in the nature of work itself, which, in the contemporary context, is ever more closely linked to digital technologies.

Given the aforementioned changes in the nature of work, employment practices, and the use of leisure time, the need for empirical research examining how digital transformation affects individuals’ work practices becomes evident. Accordingly, it is important to understand how and to what extent people use digital technologies, how much these technologies influence their professional lives, how significant they are for employment, and how they affect the relationship

between work and leisure. The need to research work practices and new forms of employment in the context of digital transformation is even more pronounced in the context of the Republic of Srpska, i.e. Bosnia and Herzegovina. For this reason, a survey was conducted in the Republic of Srpska, primarily focused on employed individuals. Although there is a large body of research on the digital transformation of labour, empirical data from the Republic of Srpska and Bosnia and Herzegovina remain scarce. The research included three dimensions: digital habits and work platforms; the impact of digital transformation on work and leisure time; and perspectives on digital change and employment. The study focuses on how digital technologies influence work, employment, and professional development in the context of the Republic of Srpska.

Research Objective

The study of labour in the context of digital transformation in the Republic of Srpska aims to provide feedback on the use of digital technologies and networks for the purposes of employment, professional development, and work. In addition, the objective is to gain insight into the impact of digital technologies—particularly social networks—on the relationship between leisure time and work. As modern technologies increasingly become an integral part of everyday life, one of the many questions concerning the social implications of this phenomenon relates to changes in the nature of work. Online employment portals and social networks play an increasingly important role in the recruitment process (Karacsony *et al.*, 2020). Research such as that conducted by Mowbray and Hall (2020) in Scotland shows that social networks such as Facebook, X, and LinkedIn are becoming ever more popular sources of information about employment opportunities. In this context, it is important to examine the use of different channels for obtaining job-related information, as this area has not yet been researched in the Republic of Srpska.

The primary objective of the study is to determine, through a quantitative approach, the extent to which digital technologies are used in the Republic of Srpska to obtain information about employment opportunities, as well as their effectiveness in facilitating employment. Respondents' attitudes regarding employers' use of digital platforms in the Republic of Srpska will provide valuable insight into the current prevalence and application of digital technologies for employment purposes. The secondary objective of the research relates to the social implications of digital transformation, that is, the application of technology

within work processes and recruitment practices. The study will identify challenges associated with the use of digital job platforms and assess the respondents' digital skills.

The research will make it possible to assess how global changes in the sphere of labour are manifested within the Republic of Srpska. The results will provide essential information on the digital transformation of work, serving as a valuable basis for further and more detailed analyses.

Methods

The study involved 161 respondents. Participants were recruited using convenience and snowball sampling methods. All respondents were adults residing in the Republic of Srpska. Most of them were from the north-eastern part of the Republic of Srpska. The vast majority of respondents were employed (89.4%). The sample was stratified according to gender, age, and level of education. Women constituted the majority of the sample (60.9%). The most represented age group comprised respondents aged 36–45 (32.7%), followed by those aged 26–35 (28.4%) and 46–60 (21.6%). Respondents aged 18–25 (13.6%) and over 60 (3.7%) were considerably fewer. In terms of education, most respondents held a university degree (58.4%), followed by those with a master's or doctoral degree (13.6%), a secondary school diploma (23%), a higher school qualification (3.1%), and primary education (1.9%).

Correlations were observed between education and age, as well as between age and employment status. Younger respondents (18–25 years) were employed at a lower rate compared to other age categories. Respondents aged 36–45 and 46–60 most frequently held a university degree. Regarding gender structure, women exhibited a higher level of education than men, as well as a slightly higher employment rate. A correlation was also noted between education and employment status. The highest employment rate was recorded among respondents with higher school qualifications (100%), followed by those with a university degree. The sample can therefore be considered representative of the employed and highly educated population of the Republic of Srpska.

The survey was distributed digitally via a Google Form, yielding 141 respondents. This sample was supplemented through field surveying. Data collection took place between 24 May and 6 August 2025. The distribution of the

survey through Google Forms was used not only as a more economical method in terms of time and resources but also as a means of collecting data on respondents' willingness to engage with a digital questionnaire format. The survey, accompanied by a brief message requesting its publication, was sent to all news portals in the Republic of Srpska as well as to 61 municipal administrations. Of all the portals contacted, three published the survey: *Dobojski.info*, *Info Birač*, and *Zvornički.ba*. Among the municipalities, only the municipal administration of Vukosavlje responded to the invitation. This method of distribution provided additional insight into the (un)willingness of institutions to correspond via digital channels, i.e. by electronic mail.

The questionnaire, designed specifically for the purposes of this research, included questions aimed at collecting demographic information about the respondents, data on their digital habits, attitudes towards changes in employment, and perceptions of the role of digital technologies and platforms in work and recruitment processes. The questionnaire was an original instrument, aligned with the objectives of the study. Participation was voluntary and anonymous. In designing the questionnaire, attention was paid to ensuring that the responses would offer insights into digital employment practices, potentially useful to employers as well as institutions involved in job advertising. Completing the survey took approximately five minutes. The questionnaire comprised nineteen questions divided into four thematic sections. It included a combination of closed, semi-open, and open-ended questions. Most of the questions were closed-ended, allowing respondents to select one of the predefined options. This combination of question types enabled both descriptive and interpretative analysis of the results, as well as an understanding of the qualitative dimension of respondents' answers.

The survey results were analysed using quantitative methods. Descriptive and comparative statistics were applied. Descriptive statistics were used to analyse the frequencies and percentage distributions of responses. This analysis provided insight into the prevalence of responses within the overall sample and the dominant behavioural patterns among respondents. Comparative analysis identified differences in platform usage patterns. Data were compared by gender, age group, and level of education, with differences between groups expressed as percentage deviations from the total sample. Thematic analysis was applied to responses to open-ended questions. The qualitative approach to analysing open-

ended responses served to identify key themes and to understand attitudes related to the use of digital tools for job searching. No statistical software or standardised scales were used for analysis; instead, Microsoft Excel and Word were employed.

RESEARCH RESULTS

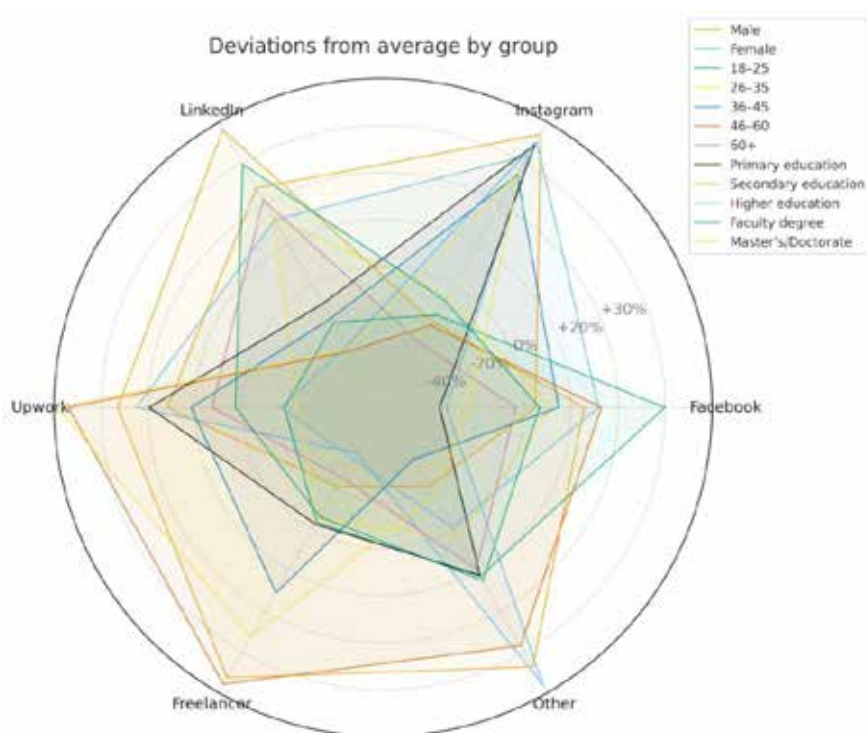
Of the total number of participants (161), the majority were women (60.9%), and the most represented age group was between 36 and 45 years (32.7%). Most respondents held a university degree (58.4%) and were employed (89.4%). In terms of educational level, respondents also included those with a master's or doctoral degree (13.6%), secondary education (23%), higher education (3.1%), and primary education (1.9%). In addition to employed individuals, the sample included unemployed persons (6.8%), students (3.1%), and pensioners (0.6%). The age categories represented in the study further comprised respondents aged 26–35 (28.4%), 46–60 (21.6%), 18–25 (13.6%), and 60+ (3.7%). The research primarily focused on the economically active population. Employed respondents with a university degree predominated among the participants.

Digital Habits and Work Platforms

In the section of the questionnaire relating to digital habits and work platforms, five questions were posed. The first question was: Which digital platforms do you use for employment or professional networking purposes? This was a semi-open question. Respondents were offered five predefined options (LinkedIn, Facebook, Instagram, Freelancer, Upwork) and an additional "Other" category, where they could specify a different platform. Multiple selections were allowed.

Facebook was the most frequently used digital platform (42.1%), followed by Instagram (34.9%), LinkedIn (13%), Upwork (1.9%), Freelancer (0.4%), and "Other" (7.7%), where the most frequently mentioned options were Google, TikTok, and Mojposao.ba. The dominance of social networks indicates that professional networking and job searching largely occur through informal social channels. LinkedIn, as the leading professional network globally, was used by only 13% of respondents, which potentially suggests that this platform is not yet sufficiently integrated into everyday employment practices in the local context.

Men used Facebook and Instagram for employment and networking purposes slightly more (41.94%) than women (33.67%). The use of LinkedIn was somewhat more prevalent among women (11.22%) compared to men (4.84%). Facebook was most commonly used by older respondents (46+), although it was present across all age categories. Instagram was most popular among younger users (18–35), while LinkedIn was primarily used by respondents aged 26–45. The use of LinkedIn and specialised professional platforms increased with higher levels of education. Social networks represented the dominant source of job-related information across all educational levels, though this trend was more pronounced among respondents with lower educational attainment. The percentage distribution of these results is shown in Graph 1, which presents the deviations of specific categories in relation to the overall results.



Graph 1: Use of digital platforms for employment or professional networking

The largest proportion of respondents (41%) believe that digital changes will bring more job opportunities in the Republic of Srpska. A somewhat smaller

share (26.1%) think that digitalisation will lead to a reduction in traditional jobs, while 20.5% of respondents do not believe it will have a significant impact on employment. The responses potentially indicate an awareness of labour market transformation and suggest that respondents recognise the likelihood of a future shift towards more flexible, digitally mediated forms of work. Conversely, a considerable number of respondents who expressed scepticism or indecision may indicate either a lack of information or scepticism towards the integration of work into the digital sphere.

A slightly higher percentage of women (37.76%) expect more job opportunities through digital platforms, while a larger share of men (22.22%) anticipate a decline in traditional jobs but an increase in new forms of employment. Higher educational levels are associated with greater optimism regarding forthcoming changes in employment and work structures. Regarding attitudes across different age groups, all categories expressed a significant degree of optimism about digital platforms. The youngest respondents (18–25 years, 45.45%) and those over sixty (60%) were the most likely to believe that digitalisation would create more employment opportunities.

For professional development, the largest number of respondents stated that they use digital platforms daily (35.4%), followed by those who use them rarely (23.6%), several times per month (20.5%), or several times per week (19.3%). The results indicate intensive use of digital platforms for career advancement and professional development. However, a substantial portion of participants reported using them rarely or only a few times per month, which may suggest that part of the population remains insufficiently engaged in this process. Across the total sample, gender-based differences were minimal. Continuous or occasional use of digital platforms was recorded in all age groups, except among respondents aged 60+, although due to the small number of participants in this category, these findings can only tentatively suggest a trend. The results point to a possible pattern of more regular and diversified use of digital platforms among those with higher levels of education, whereas respondents with lower educational attainment tend to use them less frequently or only occasionally for professional purposes.

Of the total sample, 47 respondents (29.2%) had previously worked remotely. These results may indicate that remote work is not yet a widespread

form of employment. The fact that more respondents reported having worked remotely in the past than are currently doing so may suggest that such work tends to be temporary or associated with low and unsustainable income levels. The large proportion of respondents who have never worked remotely may also reflect a lack of opportunities. A somewhat higher percentage of women (31.6%) than men (25.4%) reported having worked remotely in the past, while the percentage of men currently working remotely (11.1%) was higher than that of women (1%). The prevalence of remote work experience increased with respondents' educational levels. These results suggest that remote work may represent an emerging trend in the Republic of Srpska.

The subsequent closed-ended question concerning the frequency of work via digital platforms was related to the previous one. This question referred only to participants who stated that they had worked or were currently working remotely. The largest number of such respondents reported working from digital platforms occasionally. Those who were available daily were likely professionally tied to online work or engaged in jobs oriented towards digital channels. The fact that none of the respondents reported never having worked remotely confirms the validity of the participants' responses and the sample itself. These results may indicate that digital work does not yet represent a reliable or permanent form of employment.

The Impact of Digital Transformation on Work and Leisure Time

In the section of the questionnaire concerning the impact of digital transformation on work and leisure, four questions were posed. The first was: How do digital technologies affect the balance between working time and leisure time? The results show that the majority of respondents (54.7%) are sometimes available for work outside of regular working hours. A smaller proportion (29.2%) are constantly available for work, while 16.1% stated that they never work outside regular hours. The findings reveal that more than half of the respondents use digital channels for work, though they are not under constant pressure to do so beyond official working time. It thus appears that digital technologies have a considerable influence on the balance between work and leisure. Fewer than one

in five respondents reported having clearly defined boundaries between their professional and private lives.

Among participants aged 18–26, the highest proportion (40.91%) reported never working outside working hours. With increasing age, the tendency to remain available for work rises. This is likely related to the fact that a number of younger respondents are still studying and some do not yet have steady income. Regarding digital skills, most respondents assessed their abilities as either good or average (74.5%). A slightly higher percentage of women (38.8%) rated their skills as good compared to men (30.2%). Women were also more likely than men to rate their skills as poor or very poor, whereas men more frequently assessed their digital skills as average. Differences by educational level were minimal. Younger respondents (aged 18–35) considered their digital skills to be good or very good more often than older participants.

On the question concerning the impact of digital technologies on work productivity, four possible responses were offered. The majority of respondents believed that digital technologies increase their productivity (78.3%)—26.1% substantially, and 52.2% moderately. The findings indicate a prevailing perception of digital technologies as useful tools that facilitate productivity gains. It can be inferred that the use of digital technologies eases the completion of many work-related tasks. Respondents with higher levels of education expressed more positive perceptions of the impact of digital technologies on productivity. Most participants with only primary education stated that digital technologies have no impact on productivity, while those with secondary education displayed mixed opinions. Respondents with a university degree were predominantly positive (56% moderate, 29% substantial effect), while among those with a master's or doctoral degree, the share of positive perceptions reached 91% (64% moderate, 27% substantial).



Graph 2: Attitudes towards the impact of digital technology on work productivity

In response to the question regarding the main challenges respondents face when using digital platforms for work purposes, five possible answers were offered. The question was semi-open, allowing for multiple selections. The largest share of respondents identified information overload (39.7%) as a key challenge. A significant proportion also pointed to the lack of clear boundaries between work and private life (31.2%), limited connection with colleagues (14.8%), and insufficient technical skills (12.7%) as difficulties encountered in using digital platforms. The results suggest that, alongside the previously noted erosion of boundaries between professional and personal life, information saturation on digital platforms represents one of the primary challenges associated with digital work.

Perspective on digital change and employment

The first question in this section asked: Do you think employers in the Republic of Srpska sufficiently recognise and use digital technologies in the recruitment process and in attracting the workforce? A clear majority of respondents (47.2%) believe that employers in the Republic of Srpska partially use digital technologies in the processes of recruitment and dissemination of job information. A smaller proportion (32.9%) are of the opinion that employers largely do not use digital technologies. Only 7.5% of the sample stated that employers make extensive use of modern technologies, while 12.4% reported

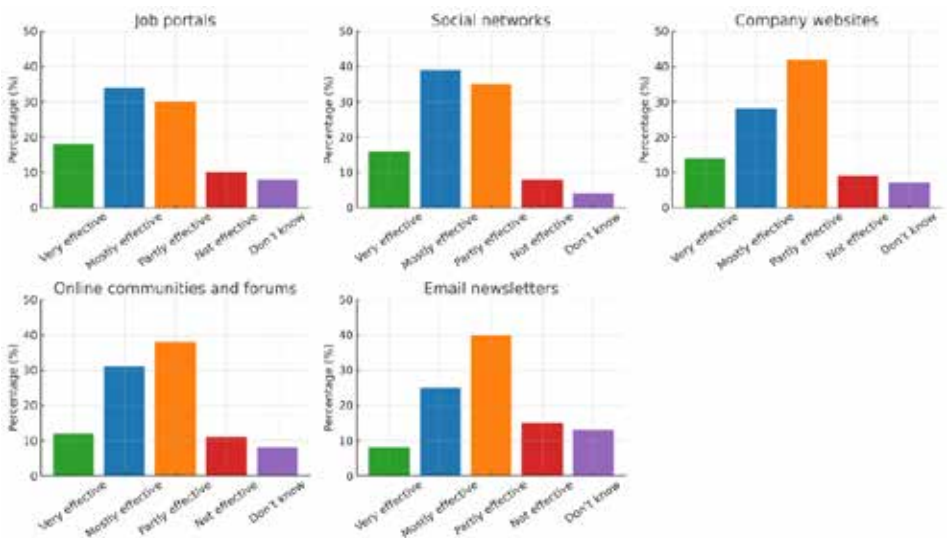
being unsure. These findings indicate that while respondents acknowledge the presence of digital tools in employers' recruitment practices, they also perceive that these technologies are not being used to their full potential.

In the subsequent question, which focused on the impact of digital channels on access to job information, the largest proportion of respondents (42.2%) believed that digital channels make a partial contribution in this regard. These results potentially point to limited visibility, accessibility, and relevance of job-related information on digital platforms in the Republic of Srpska. When assessing the effectiveness of various digital channels in job advertising and candidate attraction, respondents tended to favour platforms not primarily designed for job searching. Job portals were generally recognised as an effective channel; however, the considerable percentage of participants who rated them as partially effective suggests a degree of reservation regarding their overall efficiency. Social media networks were predominantly perceived as effective, while company websites were rated similarly to social networks. Online communities and forums were mainly viewed as partially (37.5%) or mostly effective (31.3%). Email communication was assessed as partially effective (40%) and mostly effective (23.8%).

Respondents' attitudes towards the efficiency of digital recruitment channels varied across age groups. The most distinctive generational differences are summarised below. The 18–25 age group expressed the most positive views on the effectiveness of social networks (62%), with the highest proportion within this group (28.57%) rating them as very effective. The 26–35 age group was the most critical of email communication and online communities/forums, while expressing the most positive views of job portals. Respondents aged 46–60 showed the greatest confidence in company websites; however, compared to other groups, they were more sceptical about the effectiveness of social media and job portals.

Regarding educational attainment, a positive correlation was observed between education level and favourable perceptions of job portal efficiency. Participants with higher education or university degrees were more likely to assess job portals as mostly or very effective compared to other educational groups, whereas those with secondary education tended to view them as ineffective or expressed uncertainty. Social networks were most positively evaluated by respondents with

secondary or higher vocational education. Gender differences were also notable. Women were more likely than men to rate portals and other digital channels as effective, particularly in the case of job portals and company websites. Specifically, 63.3% of women viewed job portals as mostly or very effective, compared to 33.9% of men.



Graph 3: Evaluation of digital channels in job advertising

Participants were next asked whether they considered digital platforms to be an effective means of connecting with employers and finding employment. Four-fifths of the respondents answered affirmatively (80.1%), 16.8% were undecided, and only 3.1% responded negatively. Hence, the majority of respondents believe that digital platforms possess significant potential for facilitating more efficient and faster job searches. This result clearly indicates that the importance of digital platforms in the recruitment process is widely recognised among the surveyed population. The highest level of agreement was recorded among highly educated respondents, particularly those with a master's or doctoral degree (86.4%) and those with a university degree (83%). Optimism declined proportionally with lower levels of education.

The final question was open-ended, asking participants to indicate what changes they would like to see implemented on digital platforms for work and employment. Based on their responses, several areas for improvement were identified. Respondents suggested enhancing the quality and clarity of information and platform design—including clearer and more precise job descriptions, better search organisation, and the development of dedicated mobile applications. The need for greater transparency and easier access to information was also emphasised—specifically, improving the transparency of job advertisements and simplifying access to relevant and reliable information. Additionally, digital literacy was highlighted as a key area for improvement. Respondents also mentioned the importance of security and platform accountability, enhancing communication channels between candidates and employers, legal protection of workers' rights, transparency of working conditions on digital platforms, and increasing the number and diversity of job postings.

Discussion

In a 2009 study on the motivations for using social networks, only 10% of users cited access to information as a motivation, while around 70% mentioned socialisation, maintaining and establishing contacts, and similar reasons (Brantzeg & Hein, 2009, pp. 148–150). Although the primary motivation for using social networks has not historically been directly linked to employment or job seeking, the past decade has demonstrated their substantial positive influence in this area. Traditional job-search methods have increasingly shifted to the online sphere (Karaoglu *et al.*, 2022). Social networks such as Facebook and X can be used for posting recommendations and job advertisements (Koch *et al.*, 2018), as can Instagram. Social media platforms and online job portals have become nearly indispensable recruitment tools, to the extent that digital illiteracy or lack of internet access now represent serious barriers to employment (Martínez-Nicolás *et al.*, 2024). Research findings across different contexts indicate difficulty in determining whether job portals, professional (career-oriented) networks, or social (non-career-oriented) platforms are used more frequently in the job search process, as results vary by study. Some studies have found that company websites

and job portals are the most commonly used channels (e.g., Dillahun *et al.*, 2021), while others point to a greater prevalence of social networks (e.g., Al-Amin *et al.*, 2019; Nikolaou, 2014). These discrepancies highlight the relevance of local context in shaping both the perceived effectiveness and the actual use of digital channels in recruitment.

The findings of the present study reveal that social networks are the most frequently used channels for job searching and accessing employment information. Career-oriented platforms such as LinkedIn are used to a significantly lesser extent, while the number of freelance platform users remains negligible. The transformation of work has led to the emergence of flexible, temporary, and project-based forms of employment. These findings may indicate the modest presence of the digital economy in the Republic of Srpska. The study established that respondents possess an awareness of the relevance and implications of digital change in the labour market. Among the main challenges identified by users of digital platforms were information overload and the absence of clear boundaries between professional and personal life (Berkelaar & Buzzanell, 2015; Martínez-Nicolás *et al.*, 2024). These challenges were confirmed as the most prevalent in the present research. Reliance on social networks as a source of professional information and development can, among other things, lead to distraction, privacy concerns, and information saturation (Agbasiere, 2025). Given that the majority of respondents—particularly highly educated and younger participants—use social networks for professional purposes, the balance between the positive and negative consequences of such practices remains an open question. This study showed that although the use of digital recruitment channels is widespread, it is not yet intensive. A large proportion of respondents have never worked remotely, while only a small fraction are currently engaged in remote work. At the same time, most respondents expressed confidence in their digital skills, which may indicate that a certain level of digital competence exists within the broader population.

The sociodemographic differences identified in this research partially confirm global trends in the use of digital technologies. It was shown that younger age groups are more likely to use digital platforms for professional development, whereas such use is less common among older participants. The results correspond with those of previous studies (Chang *et al.*, 2015; Ma & Wang, 2020;

Pénard *et al.*, 2015), which established a negative correlation between age and internet usage. Furthermore, education was found to be associated with digital skills, which aligns with the findings of Ji (2015) and Green and colleagues (2012). More highly educated respondents expressed greater readiness for professional development through digital channels and made use of a wider variety of digital tools when searching for employment.

Regarding the use of digital technologies by employers in the Republic of Srpska, most respondents believe that such technologies are only partially employed. Although digital tools are present and used by employers to disseminate job information, they do not appear to be systematically integrated. Participants largely assessed the impact of digital channels in the recruitment process as positive, though they emphasised that job information on such channels remains insufficiently visible and accessible. When evaluating the efficiency of different channels, respondents rated social networks and job portals as the most effective. The findings indicate that platforms combining informational and interactive functions are the preferred choice among job seekers. Respondents predominantly regarded digital platforms as a good means of connecting with employers and finding employment, which suggests that digital channels are recognised as an important instrument in the recruitment process. However, it is important to note that digital platforms are not equally accepted across different sociodemographic groups.

Overall, the findings suggest that digital technologies are perceived as a significant tool in recruitment processes, although this practice in the Republic of Srpska remains developmental. The importance of digital channels for information dissemination is evident, albeit inconsistent. Digital job searching is characterised by a certain lack of focus, given its orientation towards non-career platforms. The results also highlight a limited level of digital literacy among the sample, which may plausibly extend to the broader population of the Republic of Srpska. It can further be concluded that digital platforms are used primarily for information purposes rather than for direct job applications. Hence, most respondents do not view digital channels as a primary recruitment mechanism, but rather as a complementary source of information. The application of digital technologies was also found to affect both work and leisure. The boundary between professional and private life is becoming increasingly fluid, as a

significant proportion of respondents reported remaining available for work outside regular working hours. Nevertheless, only a small number of participants had experience with remote work, indicating that digital and hybrid modes of employment remain marginal compared to traditional work arrangements. The digital transformation of labour in the Republic of Srpska is part of a broader global process. The results suggest that this transformation has already begun, yet it is progressing slowly and remains insufficiently institutionalised and socially recognised.

Conclusion

Initially, the internet functioned merely as an auxiliary tool for recruitment (Bartram, 2000), but over time it has become indispensable to the job-search process. The present study demonstrates that digital channels have become an essential factor in recruitment in the Republic of Srpska. The results show that social networks—primarily Facebook and Instagram—are the most frequently used digital platforms for job searching. Informal, socially oriented networks dominate over formal, career-oriented ones in the recruitment process. This may be partially related to the concept of “relational reconnection” (Ramirez *et al.*, 2017), whereby social networks are used to maintain, renew, and establish contacts that indirectly provide access to job information. This practice has been recognised globally: social network users often expand their social connections to achieve employment and career advancement (Sharone, 2014). Indeed, such aspirations have become one of the key motivations for social media use (Stopfer & Gosling, 2013). The research also found that highly educated respondents use digital channels to a greater extent than those with lower education levels, and that differences are also present across age and gender.

The findings indicate that remote and hybrid forms of work have not yet become widespread in the Republic of Srpska. Most respondents who had previously worked remotely are no longer doing so, suggesting that such work tends to take the form of temporary or freelance engagements. This points to an important distinction that should be considered in future research on the transformation of work and job-seeking processes. Peters (2001) differentiates between active and passive job seekers; it appears that for most employees, remote

work represented a supplementary engagement, an aspect worth exploring in subsequent studies. An important observation also emerged during survey distribution: of 61 municipal administrations contacted, only one responded to email correspondence, while among all job portals in the Republic of Srpska, only one replied. Two portals published the research request and cooperated without replying directly. This may indicate a low level of institutional and media openness to collaboration and digital correspondence more generally.

Digital technologies have introduced new challenges to employment and labour, such as information overload and the absence of clear boundaries between work and leisure (Fountain, 2005; Frey & Osborne, 2017), findings that were confirmed in this study. Nevertheless, respondents recognise the significance and contemporaneity of these changes and largely agree that digital platforms are important in modern recruitment processes. There is also a prevailing view that digital technologies should be applied more extensively within the local context. Employers in the Republic of Srpska have begun to recognise and use digital channels for attracting candidates. However, the findings suggest that such use remains partial and that digital tools are not yet fully integrated into recruitment systems. Overall, the results indicate that labour transformation in the Republic of Srpska is underway and that employment digitalisation is in a developmental phase. The findings of this study raise further questions and provide a foundation for future research into remote work, digital recruitment platforms, employer presence on digital channels, digital literacy, and related topics in the local context.

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THE JUSTIFICATION FOR APPLYING TRAVIS HIRSCHI'S SELF-CONTROL THEORY IN CRIME PREVENTION

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Abstract: Through a comparative analysis of surveys conducted in the area of the city of Banja Luka in two time periods (2012 and 2025), on a sample of three reference groups, we examined the significance of the concept of self-control theory for understanding criminal behavior, and thus the potential justification for applying this theory in crime prevention. According to the perceptions of the surveyed groups, increasing priority is being given to informal control over the formal system of control, thereby indirectly indicating its more significant influence on the development of self-control in early childhood. Since Hirschi's self-control theory itself emphasizes parenting as the exclusive cause of individual differences and the formation of low self-control, it appears that the concept of self-control also possesses its own heuristic value and the possibility of practical application in crime prevention, functioning precisely as an informal mechanism of crime control. By strengthening parenting, as well as other social bonds that shape our individual behavior at an early age, through an improved process of

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systemic socialization, a preventive effect on the formation of low self-control would be achieved, and the need for intervention by the police and other agents of formal crime control would be reduced.

Keywords: self-control theory, socialization, crime prevention.

Introduction

The question of the etiology of criminal and delinquent behavior has always attracted the attention of both the broader public and the scholarly community. In the search for an answer to this question, a wide range of criminological theories has emerged, seeking to explain the causes of such behavior and to provide guidance for appropriate action. These numerous theories have been classified into groups: classical theories, positivist theories, theories of social reaction, newer criminological theories, and theories within criminology understood in a broader sense (Ignjatović, 2009:555). Although common sense often interprets theory as “everything that is the opposite of practice”, changes in science frequently arise from scientific theories and only rarely from empirical observation of reality alone. Since the purpose of science is to “serve that magnificent phenomenon called life”, the possibility of its practical application and realization in real life and practice may be considered its greatest achievement. Thus, theory must not be an end in itself; it should serve as a sound guide for state and social responses to criminal behavior. Its value is confirmed only when it can be empirically tested and verified. A useful illustration is Kurt Lewin’s well-known dictum: “Nothing is so practical as a good theory.” When a theory is firm and well founded, it is not abstract; rather, it provides a strong basis for understanding and solving real, practical problems and leads to effective action in practice, thereby linking theory and practice. Kurt Lewin (1890–1947) was a German-American psychologist considered the founder of social psychology. His psychological field theory explains human behavior as the product of an individual “life space” (person + environment).

Despite the abundance of theories, there is still no definitive answer regarding the causes of crime in the form of a general theory. Different theories approach the phenomenon from different perspectives and often offer different solutions; consequently, they have very different implications when applied to

communities and practice in the fight against crime. Researchers have become aware that explaining criminal behavior is far more complicated than previously thought, and they are often required to choose among competing theories (Burke, 2025).

Early criminological theories found the answer to the question of how crime emerges predominantly in the personality of the offender, whereas it is now known that the generators of crime are highly multilayered and also lie in society (Cajner Mraović, 2009b). The path from the grand theories of the twentieth century, which did not succeed in explaining crime in its entirety, “leads to an integrative approach, which today has primary importance in criminology and, judging by all indications, is the only approach with a future” (Simeunović-Patić, 2013:93–106). One such integrative model is represented by control theories, including self-control theory, which claims the opposite of earlier theories. In other words, these theories use ideas from previous theories to prove their own position and argue that factors of “constraint” and “control”, and not only the personality of the offender, can prevent a person from committing a criminal offense, and that crime is the result of a failure of personal and social control.

One of the functions of scientific theories is the prediction of phenomena and laws that are potentially contained within the theory (Šešić, 1998:291–292). Theory is therefore not only a goal, but also a means of science: it is not only a system of knowledge, but also a means of acquiring new knowledge and of developing successful practice based on it. The fact that criminal and delinquent behavior produces numerous harmful consequences for society—material damage, physical injuries, social consequences and practical problems, as well as psychological reactions in the form of a subjective feeling of anxiety and fear of victimization, while also weakening trust in existing forms of social protection—has led scientific and professional discourse in criminal law to revolve for a long time around one central question: how can the occurrence of crime, and thus the consequences it produces, be reduced? There have, of course, been programs attempting to prevent criminal and delinquent behavior. However, most of them have not been grounded in theoretical understandings of what actually causes criminal and delinquent behavior. For example, D.A.R.E. (Drug Abuse Resistance Education) was not based on a clear understanding of risk factors for

drug use, but on the assumption that providing information about the dangers of drug use and asking minors to sign a pledge not to use drugs would reduce this form of delinquency. D.A.R.E. was an ambitious attempt at preventing substance abuse, but it faced criticism because of insufficiently proven effectiveness, although it continues to exist in many forms and communities; in preventive terms, it has been assessed as ineffective in deterring young people from drug use (Birkeland et al., 2005, cited in Nofziger and Rosen, 2017).

A preventive orientation, as a higher level of the fight against crime, requires that the causes of criminal behavior be scientifically investigated and explained, and that, as such, they serve as the foundation for framework strategies against particular forms of crime, from which action plans and laws may subsequently be adopted. A scientific approach necessarily implies a scientific theory as an explanation of the causes of criminal behavior and as a condition of research. This paper examines one theory—the basic premises of Gottfredson and Hirschi’s self-control theory—and considers how it may contribute to improving crime prevention. It is a relatively new criminological theory within the group of social control theories. Over time, it has become highly influential and is considered one of the three dominant theories of crime.

It is important to consider the possibility and justification of applying the insights of this theory for practical purposes, above all in early intervention and in limiting criminogenic potential, bearing in mind the substantial material and non-material consequences of criminal behavior. Even a modest reduction in criminal activity can generate economic benefits that significantly exceed the damage caused by criminal behavior (Komlenović and Rajić, 2023:313–329). In addition to material costs, non-material costs should also be considered when assessing the cost of crime to society, that is, as “all costs that would not have arisen had the punishable act not been committed” (Anderson, 2012:5).

Key Premises of Hirschi’s Self-Control Theory

Dissatisfied with the explanation offered by social control theory—that delinquency occurs when the bond between the individual and society is weakened or broken—Travis Hirschi moved from social control theory to self-control theory and, together with Michael Gottfredson, published *A General*

Theory of Crime in 1990. Referring to the National Longitudinal Study of Youth, conducted on a sample of 1,144 children aged 12 to 13, they went a step further and showed that self-control theory explains delinquent behavior better than social control theory. Whereas Hirschi's earlier control theory (*Causes of Delinquency*, 1969) emphasized indirect control, Gottfredson and Hirschi (1990, 1993) gave primacy to direct control. They introduced self-control theory, that is, low self-control as a source of criminality. They define it as a stable personality trait that develops in early childhood and can be formed only in the first eight to ten years of life through the process of socialization with parents or guardians. They argue that it is almost entirely determined by parents, that it remains a lasting personality structure throughout adulthood, and that the quality of children's later interpersonal relationships, with both peers and other significant persons, depends on the relationship they have with their parents (Gottfredson and Hirschi, 1990:97–105).

They advocate the view that an individual is inclined to commit punishable acts because such acts bring pleasure and satisfaction: material gain, sexual gratification, excitement itself, and the like. A lack of self-control emerges when deviant behavior is not stopped over a certain period of time. Parents must be effective in cultivating self-control: the ability to restrain an individual's innate inclination toward quick and easy satisfaction of desires. A person must learn to think in the long term and to respect the interests of others. Gottfredson and Hirschi are not entirely clear about what kind of upbringing is required in order to be "effective" (Gottfredson and Hirschi, 1990:97–105). Nevertheless, during upbringing, self-control—or its absence—is formed by the age of eight, and a person who is only eight years old should already be subject to control in order to refrain from committing crime. This theory suggests that persons who experienced inadequate parenting before the age of ten develop less self-control than persons of approximately the same age who were raised with better parenting (Gottfredson, 2017).

Because the period up to the age of ten, to which self-control theory refers, includes not only parents, whom this theory identifies as the key factor in low self-control, but also other agents of socialization—peers, school, and the community—their role in the formation of self-control should not be neglected. If low self-control is not prevented through adequate socialization during this

key period, deviant behavior will result. The weaker the self-control, the more intense the manifestation of violent criminal behavior (Özbay and Köksoy, 2009:145–167).

Gottfredson and Hirschi understand crime broadly, not only as offenses prescribed by law, but also as other behaviors in which the interests of others are not respected (“careless, reckless, negligent, hazardous”, and the like). For Hirschi and Gottfredson, if a person has low self-control and engages in such behaviors, one is dealing with a criminogenic personality, and if such persons have the opportunity, they will also engage in more serious criminal behaviors. They propose “self-control” as a general concept around which all known facts about crime can be connected, and argue that every unlawful activity is the manifestation of one basic cause: “low self-control”, which can explain all forms of crime (George B. Vold et al., 1998). According to them, “this explanation is general and encompasses all crime; other explanations are not needed” (Flere, 2004:3).

Despite the fact that the authors of self-control theory themselves later denied some of their earlier positions and objections—the main objection being that there was no operational definition of self-control and that the theory was tautological—this theory has received considerable empirical support and stands at the very top in terms of its influence on criminological science (Pratt and Cullen, 2000:931–955). It appears justified and, on the basis of weak self-control, it is possible to explain various forms of criminal behavior. Bearing this in mind, self-control theory is a theory of choice, not a deterministic theory.

Characteristics of Persons with Low Self-Control

According to Gottfredson and Hirschi, persons with strong self-control are optimally adapted to the environment in which they live, achieve better results, and have a higher quality of life, whereas persons who lack self-control exhibit difficulties in socialization and social life: they strive for immediate gratification, such as smoking, drinking, drug use, illicit sex, and drunk driving. They are also insensitive, prone to risky behavior, insensitive to the needs of others, impulsive, characterized by a low threshold of tolerance for frustration, and persistent in such behavior regardless of its consequences. In this context,

they are more inclined to commit criminal offenses and other forms of deviant behavior. Low self-control also includes low physical and academic skills, egocentrism, indifference to the suffering of others, and minimal tolerance of frustration. By contrast, persons with high self-control are less likely ever to engage in criminal acts during their lives, because they are aware of the consequences that may follow if they commit criminal offenses (Gottfredson and Hirschi, 1990:89).

While the authors of self-control theory focused on its influence on criminal behavior, other authors have studied the concept of self-control in other aspects of human functioning. On the basis of a series of studies conducted by Tangney and associates (Tangney, Baumeister, and Boone, 2004:271–324), it was established that:

- weaker self-control may be both a cause and a consequence of certain psychological difficulties. Low self-control is one of the indicators of various mental disorders according to current international classifications, but it is also a consequence of a reduced capacity to control impulses, emotions, and behavior. The capacity for self-control is connected with the quality of interpersonal relationships;
- with regard to moral behavior, persons with a reduced capacity for self-control are unable to control their behavior and do not feel shame or guilt for their inappropriate conduct.

All these aspects of self-control may be connected with the manifestation of various forms of violent and therefore criminal behavior.

Agents of Social Control Influencing the Formation of Self-Control

Family

A general theory of crime argues that the level of self-control is determined in early childhood—when all children are, in a sense, in a state of low self-control—and then stabilizes between the ages of eight and ten. The family is therefore a logical place toward which efforts to develop this trait should be directed (Gottfredson and Hirschi, 1990:97).

The family is the first social environment with which a child comes into contact after birth, and it is the setting in which primary socialization takes place. Within the family, parents and guardians teach “social roles”: what is right and what is not, how to behave toward others, educational choices, religious beliefs, and much else. The family is therefore crucial for instilling self-control.

The basic argument concerning how self-control develops, as explained by Gottfredson and Hirschi, has been examined in numerous studies. Decades of research on parenting and delinquent behavior have shown that the type of parenting affects the likelihood that a child will commit criminal offenses in the future. The dominant findings of studies indicate that parenting practices involving appropriate supervision and discipline significantly increase self-control. The best parenting style for improving self-control in children is one in which parents are affectionate toward their children, but also have high expectations and clear demands. Prosocial attachment is also important, because children may fear disappointing their family. As an example, Diana Baumrind’s finding is cited: “authoritative parents who are highly responsive and demanding toward their child are best for child development. These parents have a stronger bond with their child, who needs support and control. This type of parenting is positively associated with social adjustment and negatively associated with misconduct and delinquency” (Baumrind, 1971:4).

Ineffective parenting practices are therefore the main factor determining the level of self-control. In order to create an adequate level of self-control, parents must: (1) monitor the child’s behavior; (2) recognize deviant behavior when it occurs; and (3) punish such behavior (Gottfredson and Hirschi, 1990:97).

The influence of several other family-related parameters on the formation of self-control in children is also considered, such as the following (Nofziger and Rosen, 2017):

- supervision of children—what they do when they are at home and when they are outside the immediate direct control of parents—has been shown to increase self-control;
- single parenthood has been found to be more likely to influence children’s deviance;

- family size, where a larger number of children results in greater delinquency;
- children are much more likely to engage in deviant behaviors if they have criminal parents;
- punishment practices, some of which are too harsh while others are too permissive.

Despite attempts to demonstrate the importance of the role of parenting in the development of self-control, more recent research argues that there is a need to consider other social influences as well, and that the role of the school in particular should be considered (Cullen et al., 2008:61–74).

School

In the view of Gottfredson and Hirschi, when parents fail to raise their child successfully, the school has the authority and the means to assist in the child's socialization. Schools monitor children's behavior, can easily recognize inappropriate behavior, and have mechanisms of punishment. However, it is likely that a child who has been unsuccessfully socialized by parents will not like school because of the restrictions within institutions, so proper socialization remains difficult. The influence of the school in determining the level of self-control is not as great as that of parenting practices, and parents should cooperate with teachers and other school representatives in order for the school to be more effective in forming a child's self-control. Regardless of whether the child is socialized through parents or through school, this must be achieved before the age of eight. After that age, the level of self-control rooted in the child will remain stable throughout life (Hirschi and Gottfredson, 1983:552–584). The effects of school are more significant for children from higher-risk families. More specifically, "school-based social efforts to increase self-control are successful only when the family has failed in its adequate socialization" (Turner, Piquero, and Pratt, 2005:327–339).

A program that targets both families and schools may be the most successful in creating high self-control by helping young people who may not receive adequate socialization in one of these environments. Because of the existing knowledge concerning the key role of parents and schools, and the

importance of the development of early self-control for long-term effects on behavior, family and school are logical places for the implementation of prevention programs aimed at increasing self-control.

Community

The community and neighborhood in which a person lives can influence the rate of delinquency. For example, suppose a person lives in a community in which everyone knows one another; such a prosocial bond may help prevent the commission of crime. Committing a criminal offense may mean disappointing or harming people from the community. Someone who is closely connected to their community would suffer more because of the commission of a crime than someone who feels no attachment to their community (Hirschi, 1969).

Media

Today, people are influenced by a multitude of information from various media: the Internet, mobile applications, television, radio, and others. It is especially important to understand the influence of media on children at the earliest age and on the formation of their attitudes. Media are developing very rapidly, so children become susceptible to them in the first years of life. In contemporary society, each new generation of children grows up in an environment increasingly rich in new media and media content. Accordingly, the influence on children changes, or more precisely, the perception of that influence changes (Ilišin, Bobinac-Marinović, and Radin, 2001:11). By shaping consciousness and social reality, media often violate the basic postulates of journalism and lead far more frequently to the formation of poor and unhealthy values than to positive children's habits and behaviors, especially when violent content is involved (Sefo, 2022:80).

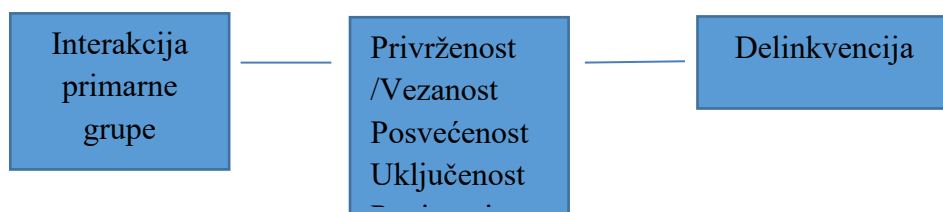
The way in which the media portray crime influences public opinion—attitudes toward crime and whether someone would engage in criminal activities or not—which is particularly important when children are concerned. In this sense, it is important to consider the possibility of preventive media

influence on the formation of attitudes at the earliest age, especially with regard to any form of violent behavior.

Social Bonds and Delinquency

From the perspective of social control, deviance may arise from the failure to establish social bonds or from the subsequent weakening of those bonds with society. Travis Hirschi identified four bonds that influence the attachment an individual feels toward society: attachment, commitment, involvement, and belief (Siegel, 2007). He treated each of these elements of the social bond as equally important in terms of its influence on delinquency, which is also important to consider in the context of self-control theory.

Model formulated by Hirschi: social control theory in Causes of Delinquency.



Attachment

Hirschi identified attachment as the first and central social bond and as a persistent factor of possible deviance. This principle concerns our emotional bonds with others. Hirschi argued that strong, positive attachment to family, friends and teachers, or even to religious institutions, encourages us to comply with community norms. It is not merely fear of disappointing others, but also the valuing of their opinions and beliefs. The stronger the attachment, the more likely it is that we will follow the path of social conformity.

Children's emotional bonds with parents were weaker among offenders. From this we may conclude that attachment to family plays an important role in the socialization of children, as well as in maintaining their later conformity

toward others in society. These correlations are, of course, evidence of the importance of parental supervision.

Attachment to school is also an established predictor of delinquency. Children strive to be accepted by people who play a valuable role in their lives. Attachment is prosocial in its role of preventing people from committing crime. If a potential offender cares about no one, it is more likely that they will commit crime.

Commitment

Here Hirschi refers to a focus on conventional activities and goals. People must be engaged in whatever work they undertake. The more we commit ourselves to or invest in our education, career, or personal goals, the greater the stakes in maintaining socially acceptable behavior and the less likely we are to become involved in crime. This commitment acts as a deterrent to deviance because the potential cost of such behavior could jeopardize our hard-earned achievements.

On the other hand, when people commit themselves to nothing, they take greater risks and engage in criminal activities because they do not have much to lose. Engagement can be observed, for example, in a teenager who works hard in high school with the desire to be admitted to a prestigious university, bearing in mind the ultimate goal of a successful academic career. Researchers have found that students' grade point average explains why intelligence test scores correlate with delinquency (Schreck and Hirschi, 2009:305–311).

Participation/Involvement

This principle refers to our participation in traditional, socially approved activities, such as reading, playing sports, listening to music, watching television, and doing household chores, which occupy our time and energy and leave less room for deviant behavior. Among most of those who are involved in family or social activities, there is little or no room for crime, and, as Hirschi rightly pointed out: "A person may be simply too busy with routine matters and have no time to engage in abnormal behavior." The more engaged we are, the

less likely we are to go astray. Conversely, those who spend less time performing conventional activities may experience detachment from society and therefore have a greater chance of committing crime.

Belief

Beliefs are the values and ethical standards shared by a particular group of people. People who share values and beliefs respect the law and respect others. By contrast, those who are raised without any values and beliefs are more prone to unlawful behavior. If an individual believes in respecting social norms and rules, then it is less likely that they will commit acts that violate those rules. Classical theories of social control argue that the undesirable consequences of crime, including shame, social disapproval, or social dissociation, prevent most individuals from experiencing the consequences that result from wrongdoing. Hirschi actually argued that delinquents recognize that their deviant behavior is wrong.

Together, these four principles explain why most individuals choose to follow social rules. They are not merely external constraints; rather, they are internalized in our psyche and influence our everyday decisions and behaviors. From this, Travis Hirschi developed his social bond theory, which argued that the strength of a person's social bonds determines the likelihood of whether they will commit crime. From there, self-control theory was subsequently born, focusing particularly on the role of parenting in the development of self-control and, potentially, in reducing the likelihood of committing criminal offenses.

Reconciling the two Control Theories

Because social control theories are relatively newer criminological theories, they are more susceptible to criticism and re-examination. Thus, in his evaluation of social control theories, Akers observes that Gottfredson and Hirschi in 1990 did not clarify the relationship of self-control to Hirschi's 1969 social bond theory. The question arises whether Hirschi's 1969 position is compatible with Gottfredson and Hirschi's 1990 position, which gives rise to the essential question that is also crucial for explaining self-control in relation to the

topic of this paper: how does control of oneself relate to control through bonds with other people? It proves pragmatic to reconcile these two theories, as Marcus Felson did. Starting from Gottfredson and Hirschi (1990) and moving backwards, Felson sought to extract the best of Hirschi (1969) and combine it with the best of Gottfredson and Hirschi (1990), offering a good theory that would overcome generalized understandings of self-control and provide something qualitatively new regarding self-control. Accordingly, he divided self-control into segments (Muratbegović, 2004:112).

Dividing the Phenomenon of Self-Control into Segments

It is impossible to divide the population clearly into offenders and exemplary citizens. Marcus Felson proposes the use of an ordinary variable with five segments in order to present individuals concisely according to their level of self-control:

Level of self-control	Usual reaction to control by others
STRONGEST: 1	The person scarcely needs to be admonished.
2	Responds to anyone nearby.
3	Responds to particular people nearby.
4	Responds to immediate coercion.
WEAKEST: 5	Ignores immediate coercion.

This scale makes self-control theory somewhat simpler and easier to apply. The model connects two analytically distinct concepts: self-control and reaction to others. Those with more self-control may respond better to the influences exercised by others, whose proximity therefore becomes more relevant.

Segment 1 includes those with the strongest self-control, those who usually obey the rules of society with little or no admonition by others.

Segment 2 includes people who usually respond to informal social control exercised by almost anyone nearby.

Segment 3 includes people who do not have sufficiently high self-control to be easily influenced by the simple proximity of strangers. They usually respond well to immediate social influences from people whom they personally know. Hirschi's 1969 concept of social control fits best with members of Segment 3.

Segment 4 includes those who usually have enough self-control to respond to immediate coercion. Some young people obey the law only when police officers who can apply coercion are present and watching them.

Segment 5 lacks even that small amount of self-control. These are people who attack those stronger than themselves, strike police officers, and can hardly function in society, even as criminals. Members of Segment 5 probably end up in some institution for a large part of their lives, in one way or another.

Marcus Felson treated each individual as if they were located at a single point on the scale of self-control. However, each of the listed segments contains significant variations in reality; each individual varies considerably in self-control from hour to hour and from day to day. Alcohol and other intoxicants may temporarily move someone down the scale. Marcus Felson does not believe that a large percentage of the population belongs either to Segment 1 or Segment 5; rather, most of the population can be categorized into Segments 2, 3, and 4. Accordingly, he rotated and redrew the segment lines. Through Segment 3, this five-point scale combines Hirschi's 1969 control theory and the 1990 general theory of crime, closely connecting self-control with social interaction. Most of the population needs admonitions from others and then reacts to those admonitions. In this way, the segmentation of self-control proves to have its own heuristic value.

INTERPRETATION OF THE RESEARCH

The research was conducted in two time periods: Time 1, in 2012, and Time 2, in 2025. Following the model of an earlier study conducted in 2012 on a sample of three representative groups (Gudelj, 2012), we again examined the level of citizens' self-control and, through a comparative presentation, determined possible changes in respondents' perceptions concerning the level of self-control and its influence on criminal behavior between these two time

periods. In both time periods, the survey was conducted on a total sample of 75 respondents in the area of the city of Banja Luka: 30 respondents were students of the Faculty of Security, 25 were police officers, and 20 were citizens. The level of self-control of potential offenders was examined in relation to the dependent variable—the opportunity to commit a criminal offense—and in view of the degree of social control. The examination was conducted in July 2025 in the area of the city of Banja Luka. The results obtained through this survey are compared with the results of a survey conducted 13 years earlier, in 2012, for the purposes of empirical research in a graduate thesis on the same sample and in the same area (Gudelj, 2012).

The comparative indicators serve to re-examine the possibility and justification of the practical application of self-control theory in crime prevention by influencing the factors identified by the author of the theory as key. A limitation of the research is the relatively small sample of respondents. However, we were limited by the previous research and by the limited scope of this paper, which should be taken into account in future studies.

Analysis of the Results Obtained

The data obtained through the survey were processed using the method of statistical analysis and linked to the aim set for this research: to determine the influence of an individual's level of self-control on the decision to commit a criminal offense in view of the factors of social control.

The answers were graded on the basis of questions built around five levels of self-control:

1. I level: the respondent's assessment that a person would not commit a criminal offense, when the opportunity arises, if that person knows that no one is observing them; this concerns the most moral persons.
2. II level: a person would not commit a criminal offense when the opportunity arises if they see that there are other persons nearby whom they do not know.
3. III level: a person would not commit a criminal offense when the opportunity arises if they see that there are other persons nearby whom they know.

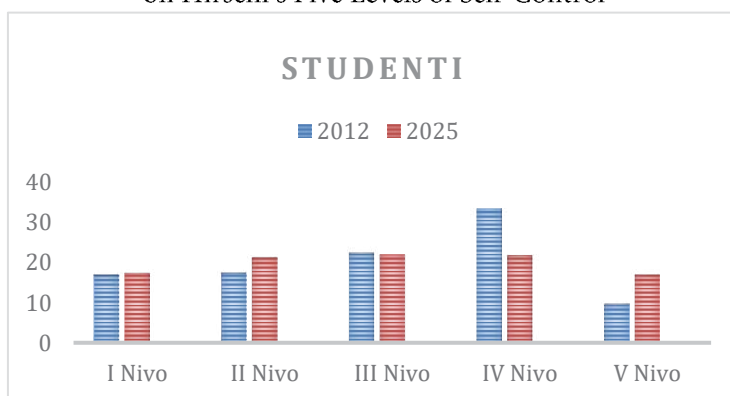
4. IV level: a person would not commit a criminal offense when a police officer is nearby.
5. V level: a person would commit a criminal offense even when the police intervene to prevent them from committing it; this concerns aggressive persons with a very low level of self-control who often come into conflict with the police.
- 6.

Students of the Faculty of Security and Protection

Table 1. Student responses to questions based on Hirschi's five levels of self-control – comparative overview

Year / Level of self-control	2012	2025	Difference in attitudes 2025/2012
I level	17.00%	17.4%	+0.4%
II level	17.50%	21.29%	+3.79%
III level	22.40%	22.00%	-0.40%
IV level	33.40%	21.81%	-11.59%
V level	9.7%	17.5%	+7.8%

Figure 1. Comparative Presentation of Students' Responses to Questions Based on Hirschi's Five Levels of Self-Control



From the presented indicators and the comparative overview, it is noticeable that the student respondents gave almost identical answers regarding Level I (personal self-control) and Level III (known persons) of self-control. Regarding Level II (an unknown person), in the repeated research the surveyed students considered the presence of another person whom they did not know as a reason for abandoning criminal behavior in a somewhat higher percentage (+3.79%).

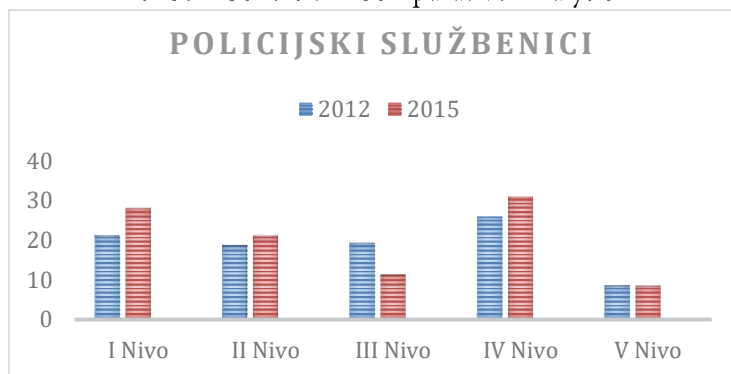
A significant change appears in students' attitudes regarding the presence of the police as a formal agent of control. A considerably smaller number of respondents "recognized" the factor of the mere presence of a police officer nearby (-11.59%) in a situation in which persons have the opportunity to commit a criminal offense. At the same time, in a significant percentage (+7.8%), they expressed the view that a person who had decided to commit a criminal offense would abandon their intention even if the police intervened and prevented them from doing so.

Police Officers

Table 2. Police Officer responses to questions based on Hirschi's five levels of self-control – comparative overview

Year / Level of self-control	2012	2025	Difference in attitudes 2025/2012
I level	26.16%	28%	+1.84%
II level	18.80%	21.25%	+2.45%
III level	19.36%	11.33%	-8.03%
IV level	25.94%	30.92%	+4.98%
V level	8.58%	8.5%	-0.08%

Figure 2. Police Officers' Responses to Questions Based on Hirschi's Five Levels of Self-Control: A Comparative Analysis



The presented indicators show that the largest number of police officer respondents, in an even higher percentage than before (+4.98%), confirmed the view from the previous research that a person will not commit a criminal offense if a police officer is nearby. An insignificant difference was shown in relation to the previous attitude regarding Level V (police intervention), amounting to -0.08%.

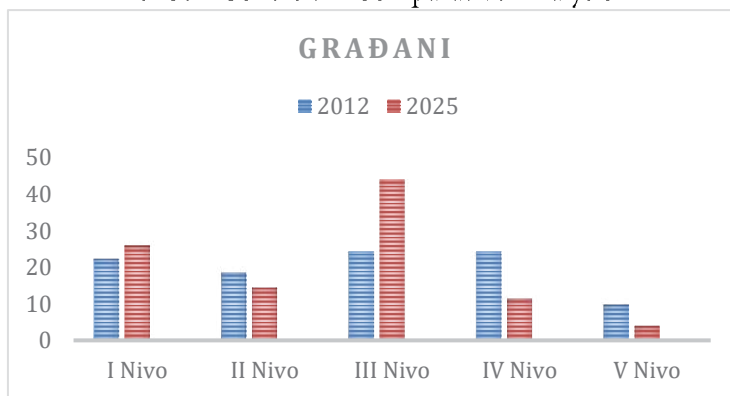
A more significant difference in the attitudes of this group of respondents was shown regarding Level III, the presence of known persons (-8.03%), while a more positive attitude was expressed regarding Level II, the presence of unknown persons nearby (+2.45%). They also expressed, in a somewhat greater number (+1.84%), the view that individual self-control is stronger.

Citizens

Table 3. Citizen responses to questions based on Hirschi's five levels of self-control – comparative overview

Year / Level of self-control	2012	2025	Difference in attitudes 2025/2012
I level	22.35%	26%	+3.65%
II level	18.60%	14.55%	-4.05%
III level	24.30%	44.02%	+19.72%
IV level	24.32%	11.43%	-12.89%
V level	9.92%	4%	-5.92%

Figure 3. Citizens' Responses to Questions Based on Hirschi's Five Levels of Self-Control: A Comparative Analysis



In response to the question posed to citizen respondents in relation to Hirschi's five levels of self-control, the greatest differences in attitudes are observed regarding Levels III and IV of self-control. A significant departure from the earlier research was expressed regarding Level III—the presence of persons whom the individual knows as a significant factor in abandoning the commission of a criminal offense (+19.72%). At the same time, compared with the earlier research, citizens expressed less trust (-12.89%) in the presence of the police in the immediate vicinity of a person who intends to commit a criminal offense. Citizens also expressed less trust (-5.92%) in police intervention itself as a factor deterring the commission of a criminal offense. Compared with the earlier research, citizens opted in a somewhat greater number (+3.65%) for Level I (self-control within the individual). Regarding Level II (the presence of an unknown person), citizens selected this factor less frequently (-4.05%) than in the previous research.

Discussion

Anonymous questionnaires collected data on the perceptions of relevant groups concerning the self-control of individuals in view of the type of social control. The results show that the degree of an individual's self-control is significantly influenced by factors of social control. According to the survey

results, students and citizens stated that they attach greater importance to informal agents of control—the presence of known and unknown persons—than to the presence of the police as a formal agent of control, even in the case of police intervention. Only the surveyed police officers attached greater importance to the presence of the police and to police intervention as factors deterring the commission of criminal offenses. These results suggest general support for self-control theory in the sense of preventive influence on the key factors in the formation of self-control identified by this theory: primarily parents, but also other factors of social control, such as school, media, and community, which are important agents of children's socialization at the earliest age, up to the age of ten.

Conclusion

On the basis of the research results, we have reached the conclusion that, according to the perceptions of the surveyed groups, greater importance is attached to the system of informal control than to the formal system of crime control, and thus greater trust is placed in the possibility of timely prevention of low self-control as a significant criminogenic predisposition at the earliest age, before criminal behavior manifests itself and before formal mechanisms of society become involved. It follows clearly that societies should focus their fight against crime not on the existing criminal-law, punitive practice—after the act has already occurred and its consequences have manifested themselves—but on social agents of control directed toward the development of self-control in early childhood, above all in the domain of improving parenting during the phase of the child's primary socialization. It therefore appears that theoretical elaboration and understanding of the formation of self-control, in the manner emphasized by the author of self-control theory, may be useful in crime prevention as a more advanced and less costly way of countering this negative social phenomenon. It is in the best interest of society to invest in children while they are small, when the possibilities for developing self-control are greatest.

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