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Impact of Energy Price Shocks on the Romanian Electricity Market: An Econometric Analysis Using Local Projections and Error-Correction Modelling

Mihai Frunză[1)] , Lucian Claudiu Anghel[2)]

Abstract:
This paper examines the transmission of external energy price shocks to the Romanian wholesale electricity market, with particular attention to natural gas (TTF) and crude oil (Brent) prices. Using monthly data for 2018–2025, the study combines Local Projections with an Error-Correction Model and formal cointegration tests to identify both short-run dynamics and long-run relationships. The results show a strong long-run association between electricity prices and TTF gas prices, consistent with merit-order pricing. The estimated long-run elasticity is 0.77, while the short-run pass-through is 0.44. Local Projections indicate a cumulative 12-month response of approximately 1.05, which is not statistically different from the ECM estimate. Structural break tests identify major disruptions during the 2022 energy crisis. Overall, the findings suggest that gas price shocks are a key driver of Romanian electricity prices and support policies focused on market monitoring, consumer protection, and energy-mix diversification
Keywords: *energy price transmission, electricity markets, natural gas prices, error correction model, local projections, Romania*

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Introduction

The European energy crisis of 2021–2022 represented an unprecedented shock to electricity markets across the continent, with wholesale prices reaching historical peaks and exposing the vulnerability of national electricity systems to external energy price fluctuations. Romania, as a member of the European Union's integrated energy market, experienced significant electricity price volatility during this period, with monthly average prices in the day-ahead market (measured in RON/MWh) increasing from approximately 250 RON/MWh in the pre-crisis period to over 2,400 RON/MWh at the peak of the crisis in August 2022 (OPCOM, monthly data, processed by the authors).

Understanding the transmission mechanism through which external energy shocks propagate into domestic electricity markets is crucial for policymakers designing effective price stabilization mechanisms, for market participants seeking to hedge against volatility, and for the broader academic literature on energy market integration.

The theoretical foundation for this transmission mechanism lies in the merit-order pricing model a market clearing mechanism whereby generators are dispatched in ascending order of their marginal costs, with the market price determined by the marginal cost of the last unit called to satisfy demand (Newbery, 2018). Given that gas-fired power plants frequently serve as the marginal generation source during periods of high demand, natural gas prices directly influence electricity prices through this mechanism. Romania, functioning as a price-taker in European gas markets (accounting for approximately 2% of EU consumption), cannot influence TTF prices but is exposed to their fluctuations.

This study contributes to the existing literature in several ways. Methodologically, we employ a dual approach combining Local Projections (Jordà, 2005: 161-182) with an Error Correction Model (Engle & Granger, 1987: 251-276), enabling robust estimation of both short-run dynamics and long-run equilibrium relationships. This comparative framework allows formal testing of whether the two methodological approaches yield consistent estimates. Empirically, our analysis covers the extended period from January 2018 to December 2025, encompassing the pre-crisis, crisis, and post-crisis phases, enabling identification of structural breaks and assessment of parameter stability. The paper proceeds with literature review, theoretical framework, data and methodology, empirical results, discussion, policy implications, and conclusions.

Literature Review

Theoretical Foundations: Merit-Order Pricing

The relationship between fuel input costs and electricity prices has been extensively studied in the energy economics literature. The foundational theoretical framework is the merit-order model, which describes how competitive electricity markets determine wholesale prices through the marginal cost of the price-setting generation unit (Newbery, 2018). Under this framework, generators are ranked by their short-run marginal costs, typically following the order: nuclear, hydroelectric, renewables, coal, natural gas, and oil-fired plants.

Empirical Evidence on Energy Price Transmission

A substantial body of empirical literature has examined the transmission of energy shocks to electricity markets. (Kilian,2009: 1053-1055) demonstrated the importance of distinguishing between different types of oil price shocks, noting that supply-driven and demand-driven shocks may have differential effects on downstream markets.

The cointegration and error correction framework, pioneered by (Engle & Granger,1987: 251-276), has been widely applied to study long-run relationships between

energy prices. The econometric foundations for unit root testing and cointegration analysis are thoroughly developed in (Hamilton,1994), whose comprehensive treatment of time series methods provides the theoretical basis for our stationarity and cointegration tests. (Stock & Watson,1993) contributed fundamental advances in testing for common stochastic trends in multivariate systems, while their subsequent work (Stock & Watson, 2001) on forecasting with many predictors informs modern approaches to macroeconomic time series analysis.

More recently, Local Projections (Jordà, 2005:161-182) have gained popularity as an alternative to VAR-based impulse response analysis, offering robustness to VAR misspecification and better performance in the presence of structural breaks.

The 2021–2022 European Energy Crisis

The European energy crisis of 2021–2022 has generated significant research interest. IEA(2023a). Gas Market Report, Q1-2023 documented the dramatic increase in TTF natural gas prices from approximately 20 EUR/MWh in early 2021 to nearly 340 EUR/MWh at the August 2022 peak. ACER, 2023 analyzed the impact on European wholesale electricity markets, finding substantial heterogeneity across member states depending on their energy mix, interconnection capacity, and policy responses. This study addresses existing gaps by comparing LP and ECM methodologies within a unified framework for Romania, covering the full crisis cycle.

Theoretical Framework

Merit-Order Pricing Mechanism

In competitive wholesale electricity markets, the *merit-order pricing model* governs price formation. Generators submit supply offers reflecting their short-run marginal costs, and the market operator dispatches capacity in ascending cost order until total generation equals demand. The clearing price is set by the marginal cost of the last unit dispatched.

For a market with generation portfolio $G = \{g_1, g_2, \ldots, g_n\}$ ordered by marginal cost $MC_1 < MC_2 < \ldots < MC_n$, and total demand D, the market clearing price is:

$$P^* = MC_m \quad \text{where} \quad \sum_{i=1}^{m-1} C\,ap_i < D \leq \sum_{i=1}^{m} C\,ap_i$$

Given that gas-fired combined cycle power plants frequently serve as the marginal generator, the clearing price often reflects gas generation costs:

$$P^*_{elec} = \frac{P_{gas}}{\eta_{gas}} + C_{O\&M} + C_{CO2} \cdot EF$$

where η_{gas} is the thermal efficiency of gas plants (typically 50–60% for modern CCGT units), $C_{O\&M}$ represents operation and maintenance costs, C_{CO2} is the carbon emission allowance price, and EF is the emission factor.

Factors Attenuating Theoretical Pass-Through

Several factors explain why empirical elasticity estimates fall below the theoretical benchmark implied by Equation 2:

1. **Energy Mix Diversification:** Romania's generation portfolio includes approximately 30% hydroelectric, 20% nuclear, and 15% renewables.
2. **Forward Contracting:** Approximately 60–70% of electricity is traded through bilateral contracts rather than spot exchanges.

3. **Regulatory Interventions:** During the 2022 crisis, Romanian authorities implemented price caps and compensation schemes.
4. **Market Coupling:** Cross-border electricity flows moderate local price volatility.

Mathematical Specification

Based on the theoretical framework, we specify the long-run equilibrium relationship in logarithmic form:

$$\log(P_{elec,t}^{RON/MWh}) = \alpha + \theta \cdot \log(P_{TTF,t}^{EUR/MWh}) + \beta \cdot \log(P_{BRENT,t}^{USD/bbl}) + \varepsilon_t$$

The coefficient θ represents the long-run elasticity of electricity prices with respect to TTF gas prices. Given the attenuating factors discussed above, we expect $\theta < 1/\eta_{gas}$.

Data and Methodology

Data Description

Our analysis utilizes monthly data spanning January 2018 to December 2025, comprising 96 observations.

Table 1. Descriptive statistics.

Descriptive Statistics

Variable	Unit	N	Mean	Std. Dev.	Min	Max
Electricity Price	RON/MWh	96	511.20	403.80	120.24	2,400.58
TTF Gas Price	EUR/MWh	96	42.33	42.22	4.39	239.91
BRENT Oil Price	USD/bbl	96	71.88	16.61	26.35	115.60
EUR/RON Exchange Rate	–	96	4.87	0.11	4.65	5.07
Consumption	MWh	96	6,531.60	614.80	5,427.94	7,860.11
Production	MWh	96	6,416.61	768.95	4,825.79	8,624.06

Sources: OPCOM (electricity prices), Investing.com (TTF, BRENT), Transelectrica (consumption/production), BNR (exchange rates).

Table 2. Electricity Price Statistics by Period

Period	Dates	N	Mean (RON/MWh)	Std. Dev.	Max
Pre-Crisis	2018:01–2021:09	45	248.68	105.66	662.15
Energy Crisis	2021:10–2022:12	15	1,264.68	446.62	2,400.58
Post-Crisis	2023:01–2025:12	36	525.40	128.93	836.09

Note: Crisis-period mean exceeds the pre-crisis mean by a factor of 5.1; post-crisis prices remain 111% above pre-crisis levels.

Stationarity Testing

We employ both the Augmented Dickey-Fuller (ADF) test and the KPSS test, following the standard procedures outlined in Hamilton (1994).

Table 3. Stationarity Test Results

Variable	ADF Stat.	ADF p	KPSS Stat.	KPSS CV 5%	Conclusion
$\log(P_{elec}^{RON/MWh})$	-1.925	0.320	0.838	0.463	I(1)
$\Delta\log(P_{elec}^{RON/MWh})$	-9.758	0.000	0.083	0.463	I(0)
$\log(P_{TTF}^{EUR/MWh})$	-1.880	0.342	0.598	0.463	I(1)
$\Delta\log(P_{TTF}^{EUR/MWh})$	-4.931	0.000	0.104	0.463	I(0)
$\log(P_{BRENT}^{USD/bbl})$	-2.399	0.142	0.423	0.463	I(1)
$\Delta\log(P_{BRENT}^{USD/bbl})$	-8.248	0.000	0.067	0.463	I(0)

Note: All price series are I(1), while first differences are I(0), motivating cointegration analysis.

Econometric Methodology

Error Correction Model (ECM)

Given cointegration, we estimate a two-step Error Correction Model following Engle & Granger (1987). The theoretical foundations for this approach, including the Granger representation theorem and asymptotic properties of the estimators, are developed in Hamilton (1994) and Stock & Watson (1993). The first step estimates the long-run equilibrium:

$$\log\left(P_{elec,t}^{RON/MWh}\right) = \alpha + \theta \cdot \log\left(P_{TTF,t}^{EUR/MWh}\right) + \varepsilon_t$$

The second step estimates the error correction dynamics:

$$\Delta\log\left(P_{elec,t}^{RON/MWh}\right) = c + \beta \cdot \Delta\log\left(P_{TTF,t}^{EUR/MWh}\right) + \gamma \cdot EC_{t-1} + \delta \cdot \Delta\log\left(P_{elec,t-1}^{RON/MWh}\right) + u_t$$

where EC_{t-1} is the lagged error correction term (deviation from long-run equilibrium). The key parameters are:

- θ: Long-run elasticity (equilibrium pass-through)
- β: Short-run elasticity (contemporaneous pass-through within one month)
- γ: Adjustment speed (rate of equilibrium reversion); for valid error correction, $\gamma < 0$

Important clarification on interpretation: The short-run coefficient β represents the contemporaneous elasticity: the percentage response of electricity prices to a 1% TTF shock within the same month. It does not represent the "proportion of total transmission completed," but rather the immediate price adjustment. Additional transmission occurs over subsequent months as the error correction mechanism operates.

Local Projections (LP)

Following (Jordà, 2005: 161-182), we estimate Local Projections with cumulative response specification:

$$y_{t+h} - y_{t-1} = \alpha_h + \beta_h \cdot shock_t + \gamma' X_t + \varepsilon_{t+h}$$

for horizons $h = 0,1,2,\ldots,12$, where $y_t = \log(P_{elec,t}^{RON/MWh})$, $shock_t = \Delta\log(P_{TTF,t}^{EUR/MWh})$, and X_t includes control variables.

The cumulative specification implies that β_h represents the total cumulative response of log electricity prices to a 1% TTF shock at horizon h. Under convergence to the long-run equilibrium, we expect $\beta_h \to \theta$ as $h \to \infty$.
Standard errors are computed using HAC estimators with bandwidth $\max(h + 1{,}4)$ to account for serial correlation induced by the overlapping projection structure.

LP versus ECM Convergence

A key contribution of this study is the formal comparison of LP and ECM estimates. If both models are correctly specified, the LP cumulative response at long horizons should approach the ECM long-run elasticity. We test this formally:

$$z = \frac{\beta_{12} - \theta}{\sqrt{SE_{\beta_{12}}^2 + SE_{\theta}^2}}$$

Note that transitory deviations where $\beta_h > \theta$ at intermediate horizons before eventual convergence may occur due to overshooting, defined as a temporary price response exceeding the long-run equilibrium level. Such overshooting can reflect forward-looking pricing behavior, panic pricing during crises, or contract rollover effects.

Identification Strategy

Our identification strategy treats TTF price shocks as plausibly exogenous to Romanian electricity prices. This assumption is justified on several grounds:

1. **Economic Size:** Romania accounts for approximately 2% of EU natural gas consumption, making it a price-taker in the TTF market.
2. **Source of TTF Variation:** TTF price fluctuations were driven by global and European factors (Russian supply disruptions, LNG dynamics, geopolitical events) that do not originate from Romanian market conditions.
3. **Granger Causality Tests:** We formally test whether Romanian electricity prices Granger-cause TTF prices.
4. **Placebo Tests:** We test whether future TTF shocks (leads) predict current electricity price changes.

Important qualification: We characterize TTF exogeneity as plausible rather than definitively established. Potential confounders (common European demand shocks affecting both TTF and Romanian electricity) cannot be fully ruled out. The placebo tests reveal partial anticipation effects (see Section 5), which we interpret as a limitation rather than dismiss.

Rolling-Window Estimation

To assess parameter stability, we estimate rolling-window regressions with a 48-month window, following standard practices in the applied time series literature (Stock & Watson, 2001). The first window covers 2018:01–2021:12, producing the first estimate for 2022:01. This window length is chosen to ensure sufficient observations (48) for stable estimation while allowing detection of time-varying parameters. Subsequent windows advance by one month until the final window (2022:01–2025:12).

Empirical Results

Cointegration Testing

Engle-Granger Test

Table 4. Engle-Granger Cointegration Test

Relationship	Test Stat.	p-value	CV 1%	CV 5%
$\log(P_{elec}^{RON/MWh}) \sim \log(P_{TTF}^{EUR/MWh})$	-5.058	< 0.001	-4.015	-3.401

Note: Null hypothesis: no cointegration. Rejection confirms stable long-run equilibrium.

Johansen Test

Table 5. Johansen Cointegration Test (Trace Statistic)

Null: $r \leq$	Trace Statistic	CV 5%	Decision
0	33.77	29.80	Reject
1	12.31	15.49	Fail to Reject

Note: Results indicate exactly one cointegrating vector.

Both tests confirm cointegration between log electricity prices (RON/MWh) and log TTF prices (EUR/MWh), supporting the validity of the error correction framework.

Error Correction Model Estimates

Table 6. Error Correction Model Results

Panel A: Long-Run Equation	Coefficient	Std. Error	t-stat	p-value
Constant (α)	3.374	0.115	29.34	< 0.001
$\log(P_{TTF}^{EUR/MWh})$ (θ)	0.772	0.032	24.21	< 0.001
R^2	0.862			
Panel B:Short-Run Dynamics	-	-	-	-
Constant (c)	0.011	0.018	0.59	0.553
$\Delta\log(P_{TTF}^{EUR/MWh})$ (β)	0.444	0.100	4.45	< 0.001
EC_{t-1} (γ)	-0.412	0.128	-3.23	0.001
$\Delta\log(P_{BRENT}^{USD/bbl})$	0.034	0.129	0.26	0.792
$\Delta\log(P_{elec,t-1}^{RON/MWh})$	0.022	0.085	0.26	0.794
R^2	0.347	-	-	-
N	94	-	-	-

Note: HAC standard errors. Dependent variable in Panel B: $\Delta\log(P_{elec}^{RON/MWh})$.

Interpretation of ECM Results

Long-Run Elasticity ($\theta = 0.772$): A 1% increase in TTF natural gas prices is associated with a 0.77% increase in Romanian electricity prices in the long run. This elasticity falls below the theoretical merit-order benchmark of $1/\eta \approx 1.8$–2.5, reflecting Romania's diversified energy mix.

Short-Run Elasticity ($\beta = 0.444$): The contemporaneous pass-through of TTF shocks to electricity prices within the same month is 0.44%. Additional transmission occurs over subsequent months through the error correction mechanism.

Adjustment Speed ($\gamma = -0.412$): The negative and significant coefficient confirms validity of the ECM. Approximately 41% of deviations from equilibrium correct within one month. The implied half-life is:

$$t_{1/2} = \frac{\ln(0.5)}{\gamma} = \frac{-0.693}{-0.412} \approx 1.68 \text{ months}$$

BRENT Effect in ECM: The BRENT coefficient is statistically insignificant in the ECM short-run equation ($p = 0.792$), indicating that after controlling for TTF, oil prices do not provide additional contemporaneous explanatory power. This is consistent with gas-fired (not oil-fired) plants setting marginal electricity prices. However, LP estimates at longer horizons suggest potential indirect BRENT effects that warrant careful interpretation.

Local Projections Results

Table 7. Local Projections: Cumulative Response to 1% TTF Shock

Horizon h	β_h	Std. Error	t-stat	95% CI	p-value
0	0.433***	0.123	3.52	[0.19, 0.67]	< 0.001
1	0.795***	0.158	5.04	[0.49, 1.10]	< 0.001
2	0.764***	0.167	4.59	[0.44, 1.09]	< 0.001
3	0.864***	0.212	4.08	[0.45, 1.28]	< 0.001
6	0.960***	0.252	3.81	[0.47, 1.45]	< 0.001
9	0.786***	0.262	3.01	[0.27, 1.30]	0.003
12	1.050***	0.321	3.27	[0.42, 1.68]	0.001

Note: Cumulative response: $\log(P_{elec,t+h}^{RON/MWh}) - \log(P_{elec,t-1}^{RON/MWh})$ on $\Delta\log(P_{TTF,t}^{EUR/MWh})$. HAC standard errors. *** $p < 0.01$.

The immediate impact ($\beta_0 = 0.433$) is consistent with the ECM short-run elasticity ($\beta = 0.444$). The 12-month cumulative response ($\beta_{12} = 1.050$) exceeds the ECM long-run elasticity numerically, though the difference is not statistically significant.

LP versus ECM Comparison and Interpretation of Difference

Table 8. Comparison: Local Projections vs. Error Correction Model

Parameter	Estimate	Std. Error
ECM Long-Run Elasticity (θ)	0.772	0.032
LP 12-Month Response (β_{12})	1.050	0.321
Difference ($\beta_{12} - \theta$)	0.278	0.322
z-statistic	0.862	-
p-value	0.389	-

Note: The difference is not statistically significant at conventional levels, supporting methodological consistency.

The difference between β_{12} and θ is not statistically significant ($p = 0.389$), supporting methodological consistency. However, the point estimate $\beta_{12}/\theta = 1.36$ suggests moderate overshooting—the cumulative response temporarily exceeds the long-run equilibrium before eventual reversion.

Economic interpretation of overshooting: Several mechanisms may explain this pattern:

1. **Forward-looking pricing:** During crisis periods, market participants may anticipate further price increases and adjust prices more aggressively than warranted by contemporaneous fundamentals.

2. **Panic pricing and risk premia:** Uncertainty during the crisis may have induced risk premia in electricity pricing.
3. **Contract rollover effects:** As existing hedges expire and are replaced at higher prices, the full impact of gas price increases may be delayed and then realized abruptly.
4. **Methodological considerations:** LP estimates at longer horizons have wider confidence intervals; the apparent overshooting may partially reflect sampling variability rather than a genuine economic phenomenon.

Given the wide confidence interval on β_{12} ([0.42, 1.68]), we cannot definitively conclude whether true overshooting occurs or whether the LP estimate is simply a noisy measure of the long-run elasticity.

BRENT Effects: Reconciling ECM and LP Results

The ECM finds BRENT statistically insignificant in the short-run equation, while LP estimates for BRENT show coefficients that become significant at longer horizons. This apparent contradiction warrants explanation:

1. **Different specifications:** The ECM short-run equation conditions on the error correction term (incorporating TTF effects), while LP estimates are cumulative responses to BRENT shocks.
2. **Collinearity:** TTF and BRENT are highly correlated ($\rho = 0.79$), making it difficult to separate their independent effects.
3. **Indirect transmission:** BRENT may affect electricity prices indirectly through its correlation with TTF rather than through direct merit-order effects.
4. **Crisis-period amplification:** The significant BRENT LP coefficients at longer horizons may be driven by crisis-period observations when all energy prices moved together.

We conclude that TTF is the primary driver of Romanian electricity prices (consistent with merit-order theory), while BRENT effects are largely indirect and should be interpreted cautiously given collinearity concerns.

Structural Break Analysis

Table 9. Chow Test for Structural Breaks

Break Date	F-statistic	p-value	Decision
January 2022	33.07	< 0.001	Structural break
June 2022	25.35	< 0.001	Structural break

Note: Both break points confirm the crisis as a major structural change.

Robustness Checks

Granger Causality Tests

Table 10. Granger Causality Tests

Hypothesis	F-stat	p-value	Lag	Decision
TTF → Electricity	10.83	< 0.001	2	Causes***
Electricity → TTF	1.44	0.243	2	Does not cause
BRENT → Electricity	4.98	0.028	1	Causes**
Electricity → BRENT	1.27	0.286	2	Does not cause

Note: Unidirectional causality from TTF to electricity supports the exogeneity assumption. *** $p < 0.01$, ** $p < 0.05$.

Placebo Tests

Table 11. Placebo Tests: Future TTF Leads

Lead Variable	β	t-stat	p-value	Interpretation
$\Delta\log(P_{TTF,t+1})$	0.186	2.64	0.008	Significant (violation)
$\Delta\log(P_{TTF,t+2})$	0.087	0.83	0.406	Insignificant (valid)
$\Delta\log(P_{TTF,t+3})$	0.154	1.60	0.109	Insignificant (valid)

Note: Lead 1 is statistically significant, suggesting partial anticipation effects. This represents a limitation of the identification strategy (Section 7).

The significant one-month lead ($p = 0.008$) indicates that current electricity prices partially incorporate expectations of next month's TTF movements. This finding does not invalidate our analysis but suggests that the strict exogeneity assumption is an approximation. Possible explanations include:

- Forward-looking pricing based on TTF futures curves
- Common anticipatory factors affecting both markets
- Partial endogeneity or reverse feedback

We discuss this as a limitation in Section 7.

Rolling-Window Estimation

Table 12. Rolling-Window Elasticity Summary (48-Month Windows)

Statistic	Value
Mean β across windows	0.400
Standard deviation	0.062
Coefficient of variation (CV)	15.5%
Minimum	0.246 (2022:03)
Maximum	0.566 (2025:12)
Number of windows	48

Note: CV $< 50\%$ indicates relatively stable parameters outside crisis intervals. Minimum during 2022:03 may reflect price cap effects.

Diagnostic Tests

Table 13. ECM Diagnostic Tests

Test	Statistic	p-value	Conclusion
Jarque-Bera (normality)	0.74	0.690	Normality OK
Ljung-Box Q(5) (autocorrelation)	1.27	0.938	No autocorrelation
Breusch-Pagan (heteroskedasticity)	5.01	0.286	Homoskedasticity OK

Note: All tests support model validity.

Discussion

This study provides comprehensive evidence on TTF-to-electricity price transmission in Romania. The main findings include: (1) robust cointegration between log electricity and log TTF prices confirmed by Engle-Granger and Johansen tests ($p < 0.001$); (2) a long-run elasticity of 0.77, indicating substantial but attenuated pass-through consistent with Romania's diversified energy mix; (3) rapid adjustment with a half-life of 1.7 months; (4) LP-ECM consistency, with the difference between LP 12-month response (1.05) and ECM long-run elasticity (0.77) not statistically significant ($p

= 0.39$); and (5) structural breaks during the 2021–2022 crisis, though the transmission mechanism remained relatively stable (CV = 15.5%).

Our estimated elasticity aligns with European literature, where gas-electricity elasticities range between 0.5–1.0 (Newbery, 2018). The significant one-month lead in placebo tests ($p = 0.008$) indicates partial anticipation effects, suggesting that strict TTF exogeneity is an approximation rather than definitively established.

Policy Implications

The strong predictive relationship between TTF and Romanian electricity prices suggests that gas price monitoring can serve as an effective early warning system. The 1.7-month half-life provides a preparation window before full price transmission. A 10% TTF increase signals an approximately 7.7% eventual electricity price increase.

Several policy instruments could moderate volatility: Contracts for Difference (CfDs) providing price certainty, strategic gas reserves for counter-cyclical release, and temporary price caps with producer compensation. Long-term vulnerability reduction requires renewable expansion, nuclear capacity maintenance, and storage development.

For consumer protection, social tariffs indexed to moving averages and automatic household support when wholesale prices exceed thresholds (e.g., 500 RON/MWh) are recommended.

Conclusion

This study has provided a comprehensive analysis of how external energy price shocks transmit into the Romanian electricity market. Using monthly data from January 2018 to December 2025 and combining Local Projections with Error Correction Model methodologies, we document a robust long-run equilibrium relationship between natural gas prices (TTF, EUR/MWh) and electricity prices (RON/MWh), with a long-run elasticity of approximately 0.77 and rapid adjustment dynamics (half-life of 1.7 months).

The dual methodological approach yields consistent estimates, with the difference between LP 12-month response and ECM long-run elasticity not statistically significant ($p = 0.39$). This enhances confidence in our findings while acknowledging that the numerical difference may reflect overshooting during crisis periods. Robustness checks—including structural break detection, rolling-window estimation, and placebo tests—support the validity of our specifications while revealing partial anticipation effects that qualify the strict exogeneity assumption.

From a policy perspective, our findings highlight the importance of early warning systems based on gas price monitoring, the potential for various price stabilization instruments, and the long-term benefits of energy mix diversification.

Several avenues for future research merit attention: higher-frequency data analysis, extension to other regional markets, investigation of asymmetric effects using NARDL specifications, and formal instrumental variable approaches to address remaining identification concerns.

Authors' Contributions:

The authors contributed equally to this work.

References:

European Union Agency for the Cooperation of Energy Regulators. (2023). *ACER Market Monitoring Report 2023 – Electricity and Gas Wholesale Markets*. ACER Publications, Ljubljana: ACER.

Engle, R.F., & Granger, C.W.J. (1987). Co-integration and error correction: Representation, estimation, and testing. *Econometrica*, 55(2), 251-276.

Hamilton, J.D. (1994). *Time Series Analysis*. Princeton University Press, Princeton, NJ.

International Energy Agency. (2023a). *Gas Market Report, Q1-2023* and *Electricity Market Report 2023*. IEA Publications, Paris.

International Energy Agency. (2023b). *Electricity Market Report 2023*. IEA Publications, Paris.

Jordà, Ò. (2005). Estimation and inference of impulse responses by local projections. *American Economic Review*, 95(1), 161-182.

Kilian, L. (2009). Not all oil price shocks are alike: Disentangling demand and supply shocks in the crude oil market. *American Economic Review*, 99(3), 1053-1069.

Newbery, D. (2018). Evaluating the case for supporting renewable electricity. *Energy Policy*, 120, 684-696.

Stock, J.H., & Watson, M.W. (1993). A simple estimator of cointegrating vectors in higher order integrated systems. *Econometrica*, 61(4), 783-820.

Stock, J.H., & Watson, M.W. (2001). Vector autoregressions. *Journal of Economic Perspectives*, 15(4), 101-115.

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ORIGINAL PAPER

From PISA to Prosperity: How Education Quality Is Associated with Economic Development in the EU (2018, 2022)

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Abstract:
This paper provides a descriptive benchmark on the association between learning quality and economic development in the European Union. Using two reference points, 2018 and 2022, it links PISA performance (PISA_mean, defined as the average of national mean scores in mathematics, reading, and science) to real GDP per capita (chain-linked volumes, base year 2015). The institutional frame is the EU-27, while the effective sample size varies by year due to PISA coverage, and the paper reports year-specific N transparently. Cross-sectional comparisons indicate a positive association between PISA_mean and GDP per capita in both 2018 and 2022, although the relationship is not tight. By contrast, changes over 2018-2022 show weak co-movement between ΔPISA_mean and Δln(GDP per capita), supporting cautious interpretation of short-run dynamics in a period marked by major educational and economic disruptions. A brief regional contrast (CEE versus the rest of the EU) points to persistent average gaps in prosperity accompanied by lower average learning outcomes, alongside substantial heterogeneity within groups. The results are presented as comparative benchmarks and starting points for deeper, covariate-rich analysis, suggesting that convergence debates have solid reasons to incorporate learning quality explicitly.

Keywords: *PISA, education quality, real GDP per capita, EU-27, convergence.*

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1. Introduction

Educational outcomes and economic performance are often discussed separately in EU policy debates (Olimid & Olimid, 2025), yet they are linked by a shared concern: the capacity of member states to sustain productivity growth and convergence in living standards (Mitu & Stanciu, 2023). Large-scale learning assessments have made it possible to compare skills across countries with a degree of consistency that was difficult to achieve with older attainment-based measures. In parallel, macroeconomic statistics provide robust benchmarks of income levels that remain central in convergence analysis. Bringing these two lenses together, even in a compact descriptive framework, can clarify whether differences in skills and differences in prosperity point in the same direction across the Union.

The present study examines this alignment using a two-point comparison anchored in internationally comparable learning outcomes and harmonized national income statistics. The analysis relies on PISA-based performance as an empirical proxy for cognitive skills and uses real GDP per capita, expressed in chain-linked volumes with a common base year, as the indicator of economic development. The education indicator is operationalized as PISA_mean, a summary indicator of PISA performance, so that the cross-country comparison is not driven by a single domain. The two reference years are chosen to capture a meaningful shift in the European environment: one observation precedes the period of major disruption to schooling, while the other reflects the first subsequent measurement of learning outcomes at scale (OECD, 2023). While the institutional frame is the EU-27, the effective sample size may vary by year because the composite requires complete domain scores; the paper reports year-specific N transparently and does not impute missing PISA values. This setup supports a focused question: how strongly do skill differences correspond to income differences within the EU, and do short-run movements in measured learning outcomes map onto short-run movements in income levels?

The conceptual rationale draws on the human-capital channel in growth theory, which treats skills as a productive asset that supports technology absorption, innovation, and the efficiency of resource use (Lucas, 1988; Romer, 1990). Contemporary research has sharpened this rationale by emphasizing learning quality rather than schooling duration, and by arguing that achievement-based indicators can be more informative for long-run economic potential than traditional quantity measures. Recent EU-oriented contributions further suggest that learning outcomes may not follow a uniform convergence path across member states, which makes comparative benchmarking of learning quality particularly relevant for a union concerned with cohesion (Glawe & Mendez, 2023). Evidence that system-level effectiveness differs across countries also motivates attention to outcomes rather than inputs alone (Dincă et al., 2021).

Two features of the analysis are worth stating upfront. First, the empirical exercise is intended to be interpretable and replicable with a limited number of indicators. This choice prioritises transparency over model complexity, and it is meant to provide a baseline that can be extended in later work. Second, the article does not treat the observed relationships as causal. Cross-country comparisons are exposed to multiple confounders, and education and macroeconomic indicators operate on different time scales. The paper therefore uses the evidence to structure interpretation and policy discussion, not to claim that one variable mechanically generates the other.

The remainder of the paper proceeds as follows. Section 2 positions the study within recent research on learning quality and economic performance. Section 3 describes data sources, variable construction, and the descriptive strategy. Section 4 presents the cross-sectional patterns in each reference year, a comparison of changes across the two points, and a brief regional contrast. Section 5 discusses interpretation and policy implications in light of country heterogeneity. Section 6 concludes with limitations and key takeaways.

2. Conceptual framework and relevant literature

A standard starting point in growth economics is that persistent income differences across countries reflect more than short-run fluctuations in capital accumulation. In endogenous-growth frameworks, human capital and innovation are treated as internal drivers of long-run development: skill formation raises the productivity of workers directly and supports the creation, diffusion, and effective use of new technologies (Lucas, 1988; Romer, 1990). In this conceptual lens, education matters economically because it builds capabilities that translate into higher productivity, better technology adoption, and stronger innovative potential over time, not merely because it increases time spent in formal schooling.

Within this broad view, the empirical literature has progressively shifted from "education quantity" to "education quality". In recent research, "education" is increasingly treated not as a simple quantity of schooling, but as a multidimensional form of human capital whose economic relevance depends on what learners actually know and can do. While years of schooling and attainment remain useful descriptors of educational expansion, they are imperfect proxies for the skills that shape productivity, and cross-country differences in learning outcomes are often persistent. A growing strand of European-focused work therefore separates schooling from learning and explicitly models heterogeneity across countries and "clubs" in the quality dimension of human capital (Glawe & Mendez, 2023).

Within this perspective, cognitive skills measured through large-scale assessments are widely used as operational proxies for education quality. In the EU context, PISA is particularly influential because it offers comparable cross-country measures of student performance and distributions of achievement. The PISA 2022 cycle, for example, places learning outcomes and equity at the center of cross-country comparisons and provides an updated benchmark for post-pandemic educational performance (OECD, 2023). In this paper, education quality is operationalised as PISA_mean. This choice aligns with the idea that "quality" is multidimensional, while keeping the indicator transparent enough to support replication in a compact descriptive design.

Recent empirical work has continued to reinforce the relevance of the "quality" channel, while also refining it. For the European Union specifically, Hanushek and Woessmann (2020) quantify the macroeconomic stakes of meeting EU education goals and show that improvements in achievement (as captured by PISA points) have large projected long-run effects on GDP. At the same time, newer studies emphasize that average achievement is not the whole story. Learning inequality can shape the aggregate payoff to education by limiting how broadly cognitive skills are distributed in the population. Evidence using global learning data suggests that reducing inequality in learning outcomes can matter for economic development alongside raising mean scores (Piao, 2024). For the present article, this insight is most useful as context: the analysis

relies on national means and therefore cannot test how within-country dispersion or equity-related distributional patterns mediate the education–income relationship.

Another important refinement is that education quality is increasingly discussed alongside institutional capacity and policy implementation constraints. EU member states may converge in schooling attainment yet diverge in learning outcomes, generating "learning clubs" rather than uniform convergence. For Europe, the club-convergence approach highlights how learning outcomes can follow different trajectories even under shared policy frameworks, implying that regional and institutional spillovers, and not only funding levels, can influence long-run patterns (Glawe & Mendez, 2023). Complementary EU-focused evidence from efficiency analysis also points to cross-country differences in how educational inputs translate into outputs, consistent with the idea that institutions and policy design shape the productivity of education spending (Dincă et al. 2021). This institutional lens motivates a cautious interpretation of cross-sectional associations: observed alignment between skills and income may reflect both human-capital mechanisms and differences in governance, policy execution, and economic structure.

Post-2020 literature also reflects structural changes in the skill content of human capital. Two developments are frequently emphasized. First, the diffusion of digital technologies and the organization of work increase the economic relevance of combinations of cognitive and socio-emotional skills. A systematic review on "Education 4.0" within competence frameworks illustrates how digital and innovation-related competencies are increasingly embedded in educational agendas (Akimov et al., 2023). Second, labour-market research framed around "Industry 5.0" underlines that soft skills remain economically valuable even as technology intensity rises, suggesting that education quality cannot be reduced to test scores alone, even if test scores remain a practical macro proxy (Poláková et al., 2023). In a related vein, higher education is discussed as part of national competitiveness strategies in the post-pandemic environment, reinforcing the idea that education systems interact with broader development models rather than functioning in isolation (Arredondo-Trapero et al., 2024). For this study, these strands reinforce a boundary condition: PISA-based measures are informative for benchmarking cognitive skills, but they capture only one component of a broader, evolving skill set.

Against this background, a practical empirical strategy for an EU-27 article in 2026 is to focus on a small set of clearly interpretable indicators and a limited number of comparison points, instead of attempting a full panel model with many controls. Two reference years are especially informative: 2018 (the last pre-pandemic PISA cycle with broadly comparable results) and 2022 (the first post-pandemic cycle). This pairing supports a compact, policy-relevant narrative: (i) where EU countries stood before the shock, (ii) where they are after it, and (iii) how the relative positions and dispersion changed. Because GDP per capita remains a standard proxy for economic performance, the core descriptive question can be framed as whether countries with higher education quality in these two years tend to exhibit higher income levels, and whether shifts in learning outcomes between 2018 and 2022 align with relative income dynamics over the same period.

Finally, the measurement problem deserves brief but explicit handling. Although PISA is triennial, recent work has experimented with constructing annual measures of education quality by combining mixed-frequency learning assessments with annual macro data, which shows that researchers are actively trying to reduce the temporal mismatch between education metrics and economic indicators (Musibau et al., 2024). For the present

article, however, the two-point comparison (2018 vs. 2022) is methodologically coherent and transparent: it uses observed PISA outcomes, avoids strong interpolation assumptions, and directly targets the most policy-salient interval for benchmarking pre- and post-disruption learning performance.

3. Data and method

3.1. Data sources and coverage

The empirical analysis uses two harmonised sources to build a compact EU-27 comparison for *2018* and *2022*. The 2018 and 2022 cycles are chosen because they provide two comparable reference points, with 2018 as the last pre-pandemic benchmark and 2022 as the first post-pandemic cycle.

Education outcomes are taken from PISA national mean scores (PISA_mean) in *mathematics, reading*, and *science*, using the OECD International Data Explorer export underlying this paper (OECD, 2019, 2023).

Economic development is measured using real GDP per capita from Eurostat (2026), dataset *"tipsna40"*, reported as *chain-linked volumes (2015), euro per capita*. This indicator captures income levels net of inflation effects and is suitable for cross-country comparison when applied consistently.

The unit of analysis is the member state of the European Union. The paper keeps "EU-27" as the institutional frame, but it reports the *effective sample size (N)* used in each result because coverage differs by year in the working PISA extract:

- ***2018 cross-section: N = 26.*** In the export used here, Spain's 2018 reading mean is not available, so the composite PISA_mean cannot be constructed for Spain in 2018 (OECD, 2019).
- ***2022 cross-section: N = 26.*** Luxembourg did not participate in PISA 2022, so no 2022 PISA domain means exist for constructing the composite (Ministry of Education, Children and Youth, Luxembourg, 2023).
- ***Changes 2018-2022 (balanced sample): N = 25,*** restricted to countries with complete information in both years.

This treatment is deliberate: the paper does not impute missing PISA values, to avoid adding modelling assumptions in a descriptive design (OECD, 2019, 2023).

3.2. Variable construction

Education quality (PISA_mean). For each country $i$and year $t \in \{2018,2022\}$, the composite indicator is defined as the simple average of the three PISA domain means:

$$\text{PISA\_mean}_{i,t} = \frac{\text{PISA\_math}_{i,t} + \text{PISA\_read}_{i,t} + \text{PISA\_sci}_{i,t}}{3}$$

All three components are measured in PISA scale points (OECD, 2019, 2023). If any domain mean is missing for a country-year, $\text{PISA\_mean}_{i,t}$ is treated as missing for that observation.

Economic development (GDPpc_real). Let $\text{GDPpc\_real}_{i,t}$ denote real GDP per capita from Eurostat *"tipsna40"*, expressed as chain-linked volumes (2015), euro per capita (Eurostat, 2026). *"Chain-linked volumes"* refer to a standard real-measure construction based on annual chain-linking, aimed at removing price effects in volume comparisons (Eurostat, 2025).

Log transform. Figures and country tables report GDP per capita in levels for readability. For correlations and regression benchmarks, the paper also uses the natural logarithm:

$$\ln(\text{GDPpc\_real}_{i,t})$$

which reduces scale effects from very high-income observations and supports proportional interpretation.

3.3. Empirical strategy and reported statistics

The design is deliberately *descriptive*. The goal is to benchmark how strongly learning outcomes align with living-standard differences across EU member states, not to estimate causal effects. The empirical outputs therefore consist of:

Cross-sectional association (2018; 2022). For each year, Section 4 reports:

- a scatterplot of $\text{PISA\_mean}_{i,t}$ against $\text{GDPpc\_real}_{i,t}$ (Figures 1-2);
- the Pearson correlation between $\text{PISA\_mean}_{i,t}$ and $\ln(\text{GDPpc\_real}_{i,t})$;
- and a bivariate OLS benchmark:

$$\ln(\text{GDPpc\_real}_{i,t}) = \alpha_t + \beta_t \cdot \text{PISA\_mean}_{i,t} + \varepsilon_{i,t}$$

Here, α_t is the intercept, β_t is the fitted slope, and $\varepsilon_{i,t}$ is the residual. The slope β_t summarises the average change in $\ln(\text{GDPpc})$ associated with a one-point difference in PISA_mean. As a local approximation, $100 \cdot \beta_t$ can be read as an approximate percent difference in GDP per capita per one PISA point, used strictly for description.

Goodness-of-fit (R^2). R^2 is not part of the regression equation. It is a separate output of the OLS fit:

$$R_t^2 = 1 - \frac{\sum_i \hat{\varepsilon}_{i,t}^2}{\sum_i \left(\ln(\text{GDPpc\_real}_{i,t}) - \ln(\overline{\text{GDPpc\_real}}_t)\right)^2}$$

and indicates the share of cross-country variation in $\ln(\text{GDPpc})$ captured by the linear benchmark.

Changes between 2018 and 2022. For countries observed in both years (balanced sample), the paper constructs:

$$\Delta\text{PISA\_mean}_i = \text{PISA\_mean}_{i,2022} - \text{PISA\_mean}_{i,2018}$$

$$\Delta\ln(\text{GDPpc\_real})_i = \ln(\text{GDPpc\_real}_{i,2022}) - \ln(\text{GDPpc\_real}_{i,2018})$$

and examines their association in Figure 3, complemented by correlation and an OLS benchmark analogous to the cross-sectional specification.

Regional contrast (CEE vs rest of EU). The paper reports a compact group comparison (Table 4) between Central and Eastern European member states and the rest of the EU, using the balanced sample and presenting group means for 2018, 2022, and the 2018-2022 changes.

3.4. Interpretation rules and limitations of inference

All relationships are interpreted as associations. Cross-country comparisons are vulnerable to reverse causality (higher income enabling better schooling conditions) and omitted variables (institutions, sectoral structure, innovation intensity, demographic structure). In addition, using real GDP per capita in euro (chain-linked volumes) is transparent and consistent across time, but it is not a full welfare metric and does not correct for cross-country price-level differences (Eurostat, n.d., 2025).

4. Results

4.1. Cross-sectional association in 2018

To anchor the analysis, this subsection first examines the 2018 cross-sectional pattern between *PISA_mean* and *real GDP per capita* across the EU country.

Figure 1 plots the 2018 EU cross-section (N=26) relating education outcomes to economic development, with education proxied by *PISA_mean* (average of mathematics, reading, and science mean scores) and development measured by *real GDP per capita* (Eurostat tipsna40, chain-linked volumes, reference year 2015).

The pattern is broadly upward sloping: countries with higher PISA_mean tend to have higher real GDP per capita, but dispersion is substantial. A compact descriptive summary is given by:

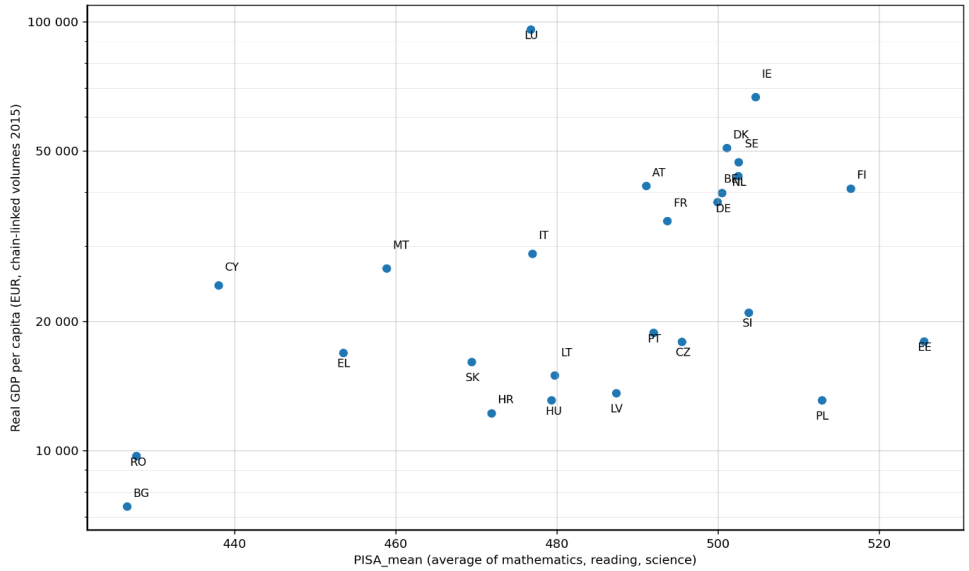
- the *Pearson correlation* between PISA_mean and ln(GDPpc): $r \approx 0.466$ (N=26);
- a simple bivariate OLS benchmark:

$$\ln(GDPpc_i) = \alpha + \beta \cdot PISA\_mean_i + \varepsilon_i$$

estimated on the same cross-section, where $\ln(\cdot)$is the natural logarithm. In 2018, the fitted slope is $\beta \approx 0.0113$, with $R^2 \approx 0.217$. Here, R^2 is not part of the regression equation; it is a separate statistic reported from the estimated model and indicates the share of cross-country variation in $\ln(GDPpc)$captured by this linear fit.

For interpretation, $\beta$is read as the average difference in $\ln(GDPpc)$associated with a one-point difference in PISA_mean. As a local approximation, $100 \cdot \beta$can be read as an approximate percent difference in GDP per capita per one PISA point, but this is used strictly as a readable summary of the scatterplot, not as a causal estimate.

Figure 1. *EU cross-section: PISA_mean and real GDPpc (2018)*



Note: y-axis in log scale for readability.
Source: authors' compilation based on OECD (2019) PISA and Eurostat tipsna40.

Table 1. Cross-sectional dataset (2018)

Country	Code	Math	Reading	Science	PISA_mean	GDPpc_real (EUR, 2015)	lnGDPpc
Austria	AT	498.9	484.4	489.8	491.0	41430	10.632
Belgium	BE	508.1	492.9	498.8	499.9	38040	10.546
Bulgaria	BG	436.0	419.8	424.1	426.7	7410	8.911
Croatia	HR	464.2	479.0	472.4	471.9	12230	9.412
Cyprus	CY	450.7	424.4	439.0	438.0	24300	10.098
Czechia	CZ	499.5	490.2	496.8	495.5	17960	9.796
Denmark	DK	509.4	501.1	492.6	501.1	50830	10.836
Estonia	EE	523.4	523.0	530.1	525.5	17990	9.798
Finland	FI	507.3	520.1	521.9	516.4	40860	10.618
France	FR	495.4	492.6	493.0	493.7	34320	10.443
Germany	DE	500.0	498.3	503.0	500.4	39930	10.595
Greece	EL	451.4	457.4	451.6	453.5	16920	9.736
Hungary	HU	481.1	476.0	480.9	479.3	13100	9.480
Ireland	IE	499.6	518.1	496.1	504.6	66830	11.110
Italy	IT	486.6	476.3	468.0	477.0	28810	10.268
Latvia	LV	496.1	478.7	487.3	487.4	13630	9.520
Lithuania	LT	481.2	475.9	482.1	479.7	14970	9.614
Luxembourg	LU	483.4	470.0	476.8	476.7	96110	11.473
Malta	MT	471.7	448.2	456.6	458.8	26600	10.189
Netherlands	NL	519.2	484.8	503.4	502.5	43680	10.685
Poland	PL	515.6	511.9	511.0	512.8	13120	9.482
Portugal	PT	492.5	491.8	491.7	492.0	18830	9.843
Romania	RO	429.9	427.7	425.8	427.8	9720	9.182
Slovakia	SK	486.2	458.0	464.0	469.4	16110	9.687

Slovenia	SI	508.9	495.3	507.0	503.7	21010	9.953
Sweden	SE	502.4	505.8	499.4	502.5	47080	10.760

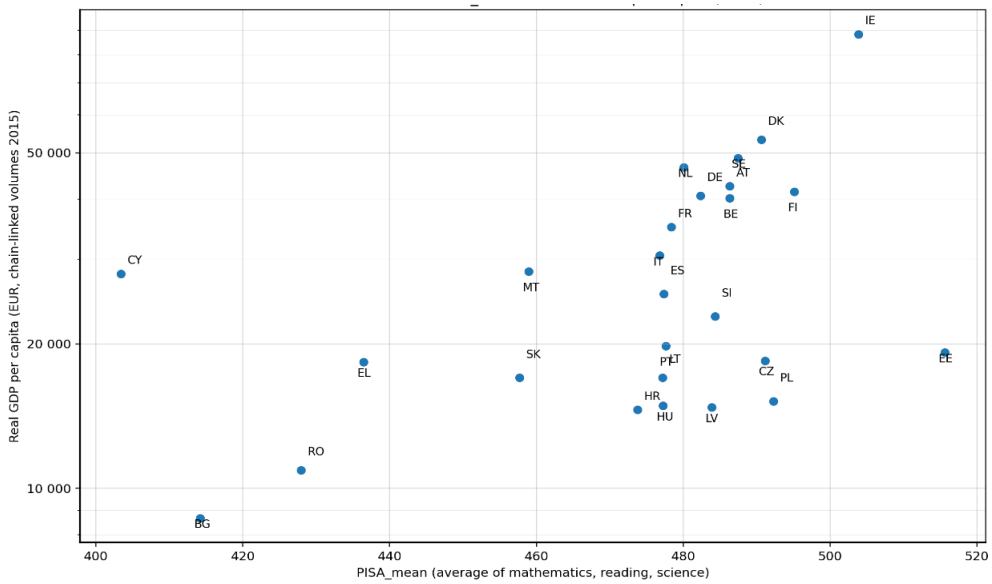
Source: OECD PISA 2018 (International Data Explorer export) and Eurostat tipsna40; authors' calculations.

Table 1 provides the underlying country-level values for 2018 used in Figure 1 and in the descriptive statistics (PISA domain scores, PISA_mean, GDPpc, lnGDPpc).

4.2. Cross-sectional association in 2022

Figure 2 replicates the same cross-sectional comparison for 2022 (N=26). Luxembourg is excluded because it did not participate in PISA 2022.

Figure 2. *EU cross-section: PISA_mean and real GDPpc (2022)*



Note: y-axis in log scale for readability.

Source: authors' compilation based on OECD (2023) PISA and Eurostat tipsna40.

The association remains positive and similarly loose:

- Pearson correlation between PISA_mean and ln(GDPpc): $r \approx 0.456$ (N=26);
- OLS benchmark:

$$\ln(GDPpc_i) = \alpha + \beta \cdot PISA\_mean_i + \varepsilon_i$$

with $\beta \approx 0.0096$ and $R^2 \approx 0.208$.

Table 2. Cross-sectional dataset (2022)

Country	Code	Math	Reading	Science	PISA_mean	GDPpc_real (EUR, 2015)	lnGDPpc
Austria	AT	487.3	480.4	491.3	486.3	42610	10.660
Belgium	BE	489.5	478.9	490.6	486.3	40190	10.601
Bulgaria	BG	417.3	404.3	421.0	414.2	8660	9.066
Croatia	HR	463.1	475.5	482.7	473.8	14580	9.587
Cyprus	CY	418.3	381.1	410.9	403.4	27990	10.240
Czechia	CZ	487.0	488.6	497.7	491.1	18450	9.823
Denmark	DK	489.3	488.8	493.8	490.6	53290	10.884
Estonia	EE	509.9	511.0	525.8	515.6	19190	9.862
Finland	FI	484.1	490.2	511.0	495.1	41470	10.633
France	FR	473.9	473.9	487.2	478.3	35030	10.464
Germany	DE	474.8	479.8	492.4	482.3	40710	10.614
Greece	EL	430.1	438.4	440.8	436.5	18310	9.815
Hungary	HU	472.8	473.0	485.9	477.2	14860	9.606
Ireland	IE	491.6	516.0	503.8	503.8	88360	11.389
Italy	IT	471.3	481.6	477.5	476.8	30550	10.327
Latvia	LV	483.2	474.6	493.8	483.9	14750	9.599
Lithuania	LT	475.1	471.8	484.5	477.1	17010	9.742
Malta	MT	466.0	445.3	465.6	459.0	28280	10.250
Netherlands	NL	492.7	459.2	488.3	480.1	46670	10.751
Poland	PL	489.0	488.7	499.2	492.3	15190	9.628
Portugal	PT	471.9	476.6	484.4	477.6	19800	9.893
Romania	RO	427.8	428.5	427.5	427.9	10910	9.297
Slovakia	SK	464.0	446.9	462.3	457.7	17000	9.741
Slovenia	SI	484.5	468.5	500.0	484.3	22810	10.035
Spain	ES	473.1	474.3	484.5	477.3	25420	10.143
Sweden	SE	481.8	487.0	493.5	487.4	48780	10.795

Source: OECD PISA 2022 (International Data Explorer export) and Eurostat tipsna40; authors' calculations

4.3. Changes between 2018 and 2022

To evaluate whether short-run changes in learning outcomes co-move with short-run changes in income, the analysis uses the balanced sample with complete information in both 2018 and 2022 (N=25) and computes:

$$\Delta PISA\_mean_i = PISA\_mean_{i,2022} - PISA\_mean_{i,2018}$$

$$\Delta \ln (GDPpc_i) = \ln (GDPpc_{i,2022}) - \ln (GDPpc_{i,2018})$$

Figure 3 plots $\Delta PISA_mean$against $\Delta \ln (GDPpc)$. The relationship is weak:

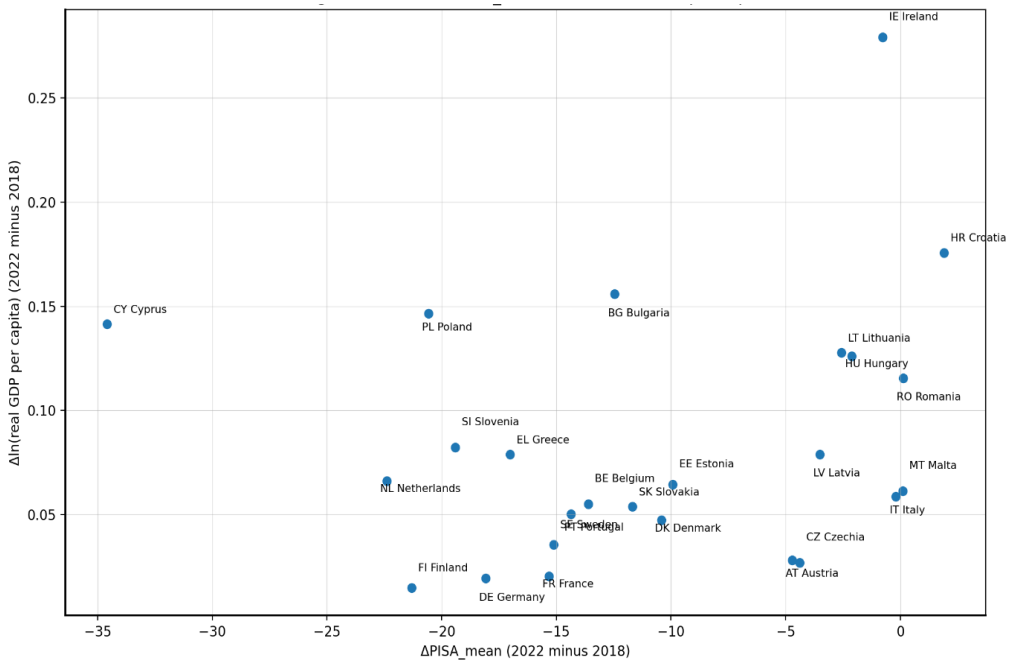
- Pearson correlation: $r \approx 0.219$ (N=25);
- OLS benchmark:

$$\Delta \ln (GDPpc_i) = \alpha + \beta \cdot \Delta PISA\_mean_i + \varepsilon_i$$

with $\beta \approx 0.00148$ and $R^2 \approx 0.048$.

This result is consistent with a cautious reading: over 2018-2022 (a short interval that includes the pandemic shock), learning outcomes and income levels need not adjust at the same speed, and any association between their short-run changes should be interpreted conservatively.

Figure 3. *Changes between 2018 and 2022: ΔPISA_mean and Δln(real GDPpc)*



Source: OECD PISA (IDE export) and Eurostat tipsna40; own calculations.

Table 3. Changes between 2018 and 2022 (balanced sample, N=25)

Country	Code	PISA_mean_2018	PISA_mean_2022	ΔPISA_mean	GDPpc_2018	GDPpc_2022	ΔlnGDPpc
Austria	AT	491.0	486.3	-4.7	41430	42610	0.028
Belgium	BE	499.9	486.3	-13.6	38040	40190	0.055
Bulgaria	BG	426.7	414.2	-12.5	7410	8660	0.156
Croatia	HR	471.9	473.8	1.9	12230	14580	0.176
Cyprus	CY	438.0	403.4	-34.6	24300	27990	0.141
Czechia	CZ	495.5	491.1	-4.4	17960	18450	0.027
Denmark	DK	501.1	490.6	-10.4	50830	53290	0.047
Estonia	EE	525.5	515.6	-9.9	17990	19190	0.065
Finland	FI	516.4	495.1	-21.3	40860	41470	0.015
France	FR	493.7	478.3	-15.3	34320	35030	0.020
Germany	DE	500.4	482.3	-18.1	39930	40710	0.019
Greece	EL	453.5	436.5	-17.0	16920	18310	0.079
Hungary	HU	479.3	477.2	-2.1	13100	14860	0.126
Ireland	IE	504.6	503.8	-0.8	66830	88360	0.279
Italy	IT	477.0	476.8	-0.2	28810	30550	0.059
Latvia	LV	487.4	483.9	-3.5	13630	14750	0.079

Lithuania	LT	479.7	477.1	-2.6	14970	17010	0.128
Malta	MT	458.8	459.0	0.1	26600	28280	0.061
Netherlands	NL	502.5	480.1	-22.4	43680	46670	0.066
Poland	PL	512.8	492.3	-20.6	13120	15190	0.146
Portugal	PT	492.0	477.6	-14.4	18830	19800	0.050
Romania	RO	427.8	427.9	0.1	9720	10910	0.115
Slovakia	SK	469.4	457.7	-11.7	16110	17000	0.054
Slovenia	SI	503.7	484.3	-19.4	21010	22810	0.082
Sweden	SE	502.5	487.4	-15.1	47080	48780	0.035

Source: OECD PISA 2018 and 2022 (International Data Explorer exports) and Eurostat tipsna40; authors' calculations.

Table 3 reports, by country, the 2018 and 2022 levels and the derived changes ($\Delta PISA\_mean$, $\Delta \ln(GDPpc)$) used in Figure 3.

4.4. Brief regional contrast

A compact regional contrast is reported between Central and Eastern European (CEE) member states (BG, HR, CZ, EE, HU, LV, LT, PL, RO, SK, SI - *Bulgaria, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia*) and the rest of the EU, using the balanced sample (N=25). Table 4 shows group means for 2018 and 2022 and mean changes over 2018-2022.

Two patterns are visible in this descriptive benchmark:

- In both years, the CEE group records lower average GDP per capita than the rest of the EU, alongside slightly lower average PISA_mean.
- Between 2018 and 2022, average $\Delta PISA_mean$is negative in both groups, while average $\Delta \ln(GDPpc)$remains positive, illustrating that income growth over this short window can coexist with declines in measured learning outcomes.

Table 4. Regional contrast (CEE vs rest of EU, balanced sample)

Group	N	PISA_mean_2018	PISA_mean_2022	ΔPISA_mean	GDPpc_2018	GDPpc_2022	ΔlnGDPpc
CEE	11	480.0	472.3	-7.7	14295	15765	0.105
Rest of EU	14	488.0	474.5	-13.4	37033	40146	0.068

Source: OECD PISA 2018 and 2022 (International Data Explorer exports) and Eurostat tipsna40; authors' calculations.

5. Discussion and policy implications

This paper provides a descriptive benchmark on how learning outcomes and income levels align across EU member states, using a composite indicator of education performance (PISA_mean) and real GDP per capita for 2018 and 2022. Three results matter for interpretation.

First, the cross-sectional evidence in both reference years suggests a positive association between learning outcomes and living standards: countries with higher PISA_mean tend to display higher real GDP per capita. At the same time, the relationship is not tight. Dispersion across member states is substantial, indicating that learning outcomes and income levels do not map one-to-one. From our perspective, the main value of these cross-sectional patterns is that they provide a readable benchmark for where

countries stand in a joint skills and prosperity space, not evidence of a causal effect running from schooling to income. Reverse causality and omitted factors such as institutions, innovation capacity, labour-market structure, demographic composition, and inequality remain plausible.

Second, the change comparison over 2018-2022 points to weak co-movement between short-run changes in measured learning outcomes and short-run changes in income. This contrast between "levels" and "changes" is substantively plausible. Learning outcomes and macroeconomic indicators operate on different time scales, and the 2018-2022 window is short and includes major disruption. In addition, measured changes in PISA performance can reflect both real shifts in skills and features of the assessment and schooling environment during the period. From this perspective, weak short-run alignment should not be read as refuting longer-run human-capital mechanisms. Rather, it highlights the limits of short-horizon inference and the risk of expecting rapid macroeconomic responses to changes in measured learning outcomes.

Third, the regional contrast (CEE versus the rest of the EU) is best interpreted as a compact summary of a persistent development gap rather than as a ranking exercise. Average differences in prosperity are, on the whole, accompanied by average differences in learning outcomes, yet heterogeneity within both groups remains substantial. From our perspective, this heterogeneity matters for policy: group labels are less informative than the joint country profile of learning outcomes and development levels, and one-size-fits-all prescriptions are unlikely to be efficient.

Policy implications follow directly from these points and should be framed as priorities compatible with descriptive evidence:

- ***Protect and restore foundational skills as a near-term objective.*** The evidence is consistent with learning recovery being a first-order priority. The most defensible implication is not that education reforms generate immediate macro payoffs, but that skills are a component of long-run productivity potential. Policies that target foundational competencies (reading, numeracy, scientific reasoning) are therefore justified even when income indicators do not respond quickly;
- ***Focus on distribution, not only averages.*** National means are informative for benchmarking, but they mask within-country dispersion. From a policy perspective, raising average performance can be pursued through broad improvements, targeted support to low-performing students, or both. Given fiscal constraints, interventions with credible evidence on cost-effectiveness, such as early remediation, structured tutoring, and curriculum adjustments aligned with core competencies, deserve priority. A practical objective is to reduce the mass of low performance while sustaining pathways for high achievement;
- ***Treat education policy and growth policy as complements with different time horizons.*** The weak short-run alignment in changes reinforces that policymakers should not expect rapid macroeconomic returns from education reforms. Education policy is better understood as a medium- to long-run investment, while short-run income dynamics are shaped by cyclical conditions, external demand, energy prices, and sectoral composition. Coordination remains useful, but evaluation horizons should be realistic;
- ***Strengthen monitoring and comparability.*** Because results depend on consistent measurement, routine monitoring of learning outcomes and transparent documentation of data coverage condition what can be inferred and compared.

At minimum, policy reporting should distinguish clearly between level comparisons and change comparisons, document missing observations and participation issues, and avoid overinterpreting small differences as meaningful movements;

- ***Interpret regional gaps as signals for prioritisation, not labels.*** The CEE and non-CEE contrast can support prioritisation in cohesion discussions: countries that underperform on both dimensions may warrant concentrated support for teacher development, school leadership, and equity-oriented funding, while countries with comparatively strong learning outcomes relative to income may benefit from policies that convert skills into productivity, such as innovation diffusion and stronger school-to-work transitions.

Overall, the evidence supports a cautious but practical message. Cross-country differences in measured learning outcomes align with differences in living standards, yet short-run changes do not move tightly together. From our perspective, policy discussion should therefore avoid simplistic expectations of immediate macroeconomic returns and instead emphasise learning recovery, equity, and institutional capacity for sustained improvement, alongside growth policies that enable skills to translate into productivity.

6. Limitations and conclusions

6.1. Limitations

This paper is intentionally descriptive and several limitations follow directly from that choice.

First, all reported relationships should be read as associations. From our perspective, reverse causality is plausible, higher income can finance better schooling inputs, while omitted factors such as institutional quality, innovation capacity, labour-market structure, demographic composition, and social inequality may jointly shape both learning outcomes and GDP per capita. The bivariate benchmarks (correlations and OLS slopes) are therefore summaries of cross-country patterns, not evidence of causal effects.

Second, measurement and coverage issues matter. The PISA composite used here, $PISA\_mean$, averages domain-specific national mean scores, which improves comparability across domains but remains a limited proxy for "education quality". It does not capture non-cognitive skills, curriculum breadth, early childhood conditions, or within-country dispersion. Moreover, in the working extract used for this paper, Spain is missing the 2018 reading mean and Luxembourg has no 2022 PISA data due to non-participation, which implies year-specific cross-sections (N=26 in 2018 and 2022) and a smaller balanced panel for changes (N=25). In our view, reporting these sample sizes transparently is preferable to imputing missing PISA values, but it constrains comparability in the change analysis.

Third, the short horizon is a substantive limitation. The 2018-2022 interval includes the pandemic period and major shocks, while learning outcomes and macroeconomic variables typically adjust on different time scales. From this perspective, weak co-movement between $\Delta PISA_mean$and $\Delta \ln (GDPpc)$over 2018-2022 should not be overinterpreted, either as confirmation or refutation of longer-run human-capital mechanisms. Finally, real GDP per capita in chain-linked volumes is suitable for real comparisons over time, but it is not a full welfare measure and it does not correct for cross-country price-level differences.

6.2. Conclusions

The paper provides a compact EU benchmark linking learning outcomes and economic development in two reference years, 2018 and 2022, and examines how changes in measured learning relate to changes in income over the same interval.

In our opinion, the most robust message is the cross-sectional one: in both years, higher PISA_mean tends to coincide with higher real GDP per capita, although the relationship is far from tight and substantial heterogeneity remains across member states. This pattern is consistent with the idea that skills and prosperity are connected, but, from our perspective, the evidence presented here supports a careful interpretation limited to association.

The second message concerns dynamics. Using the balanced sample, the association between short-run changes in learning and short-run changes in income over 2018-2022 is weak. From this perspective, education systems and economies should not be expected to move in lockstep over short intervals, especially around large shocks. A plausible reading is that skills may matter for long-run productivity potential even when short-run income dynamics are driven by cyclical and structural factors.

Finally, the regional contrast reinforces that the EU contains persistent development gaps, but also meaningful within-group variation. From our perspective, this is a practical reminder that policy discussions should avoid one-size-fits-all expectations. The descriptive evidence is most useful as a transparent starting point: it highlights where learning outcomes and income levels align or diverge, and it motivates deeper, covariate-rich work on the institutional and socio-economic channels that connect education to prosperity.

Authors' Contributions:

The authors contributed equally to this work.

References:

Akimov, N., Kurmanov, N., Uskelenova, A., Aidargaliyeva, N., Mukhiyayeva, D., Rakhimova, S., Raimbekov, B., & Utegenova, Z. (2023). Components of education 4.0 in open innovation competence frameworks: Systematic review. *Journal of Open Innovation: Technology, Market, and Complexity, 9*(2), 100037. https://doi.org/10.1016/j.joitmc.2023.100037

Arredondo-Trapero, F. G., Guerra-Leal, E. M., Kim, J., & Vázquez-Parra, J. C. (2024). Competitiveness, quality education and universities: The shift to the post-pandemic world. *Journal of Applied Research in Higher Education, 16*(5), 2140–2154. doi:10.1108/JARHE-08-2023-0376 https://doi.org/10.1108/JARHE-08-2023-0376

Dincă, M. S., Dincă, G., Andronic, M. L., & Pasztori, A. M. (2021). Assessment of the European Union's educational efficiency. *Sustainability, 13*(6), 3116. https://doi.org/10.3390/su13063116

Eurostat. (2026). *Real GDP per capita (tipsna40)*. Eurostat Data Browser. https://doi.org/10.2908/TIPSNA40

Eurostat. (n.d.). *Short-term business statistics and (annual) chain linking*. Statistics Explained. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Short-term_business_statistics_and_(annual)_chain_linking

Eurostat. (2025). *Resource productivity statistics*. Statistics Explained. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Resource_productivity_statistics

Eurostat. (2025.). *National accounts and GDP.* Statistics Explained. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=National_accounts_and_GDP

Glawe, L., & Mendez, C. (2023). Schooling ain't learning in Europe: A club convergence perspective. *Comparative Economic Studies, 65*, 324–361. https://doi.org/10.1057/s41294-022-00194-3

Hanushek, E. A., & Woessmann, L. (2020). A quantitative look at the economic impact of the European Union's educational goals. *Education Economics, 28*(3), 225–244. https://doi.org/10.1080/09645292.2020.1719980

Lucas, R. E., Jr. (1988). On the mechanics of economic development. *Journal of Monetary Economics, 22*(1), 3–42. https://doi.org/10.1016/0304-3932(88)90168-7

Ministry of Education, Children and Youth, Luxembourg. (2023). *Programme for International Student Assessment (PISA).* https://men.public.lu/en/systeme-educatif/pilotage-monitoring/etudes-internationales/programme-international-pisa.html

Mitu, N. E., & Stanciu, C. V. (2023). Public Sector Performance and Public Sector Efficiency: An Analysis for CEE Countries. *Eastern European Economics*, *61*(6), 700–722. https://doi.org/10.1080/00128775.2023.2223581

Musibau, H., Vespignani, J., & Yanotti, M. B. (2024). *Education quality and economic growth: A new international measure of quality of education* (MPRA Paper No. 122859). Munich Personal RePEc Archive. https://mpra.ub.uni-muenchen.de/122859/

OECD (2019), *PISA 2018 Results (Volume I and Volume II): What Students Know and Can Do*, and *Where all students can succeed* PISA, OECD Publishing, Paris, https://doi.org/10.1787/5f07c754-en and https://doi.org/10.1787/b5fd1b8f-en.

OECD (2023), *PISA 2022 Results (Volume I): The State of Learning and Equity in Education*, PISA, OECD Publishing, Paris, https://doi.org/10.1787/53f23881-en.

Olimid, D.A., Olimid, A.P. (2025). Computational Methods to Social and Public Perceptions: Focus on Digital Governance, Sustainable Development and International Security. *Revista de Ştiinţe Politice. Revue des Sciences Politiques*, no. 87, pp. 122-133. https://cis01.ucv.ro/revistadestiintepolitice/files/numarul87_2025/9.pdf

Piao, X. (2024). Learning quality, its inequality and sustainable development: Evidence from global learning data. *Discover Sustainability, 5*, Article 169. https://doi.org/10.1007/s43621-024-00359-3

Poláková, M., Horváthová Suleimanová, J., Madzík, P., Copuš, L., Molnárová, I., & Polednová, J. (2023). Soft skills and their importance in the labour market under the conditions of Industry 5.0. *Heliyon, 9*(8), e18670. https://doi.org/10.1016/j.heliyon.2023.e18670

Romer, P. M. (1990). Endogenous technological change. *Journal of Political Economy, 98*(5, Part 2), S71–S102. https://doi.org/10.1086/261725

From PISA to Prosperity: How Education Quality Is Associated with Economic Development in the EU (2018, 2022)

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ORIGINAL PAPER

Infrastructure Integration and Energy Security Governance: Observing Romania's Role in Regional Natural Gas Transport Systems

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Abstract:
Energy infrastructure has become a principal element for contemporary governance, influencing not only market efficiency, but also national security, regional stability, and state decisions regarding foreign policy. In Europe's tensed geopolitical environment, natural gas transport systems represent long-term advantages whose political relevance goes beyond their technical purpose. This article analyzes how integration into international and regional gas transport infrastructures contributes to national and energy security, describing infrastructure connectivity as a form of governance strategy. This is done by introducing a new indicator named GTII (Gas Transport Infrastructure Integration) which will examine the degree to which states are involved in operational gas transmission systems. The indicator reveals integration as a dimension of security, explaining how diversification of partners and routing optionality can reduce exposure regarding disruptions, political pressure, or technical failure. This study will focus on Romania's participation in two major regional and international gas transport systems: the BRUA pipeline and the Trans-Balkan gas corridor. Despite their differences regarding historical origins and technical designs, both systems improve Romania's access to different supply routes and integrate the country within wider regional governance frameworks. The results reveal that Romania's integration into different operational pipeline systems reduces vulnerability to one route dependency, enhances crisis response capacity, and grows its relevance in the regional energy landscape. By applying GTII, the article assigns Romania a high level of infrastructural integration, validating the hypothesis that involvement in multiple gas transport pipelines can generate positive effects for national security. In doing so, it highlights the everlasting political importance of energy infrastructure that influences the security governance in Europe.

Keywords: *energy security; infrastructure governance; natural gas transport; national security; diversification; regional integration.*

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Infrastructure Integration and Energy Security Governance: Observing Romania's Role in Regional Natural Gas Transport Systems

Introduction and context

In the past couple of years, energy security has resurfaced as a main concern of political sciences, public policies, and governance studies. The disruption of supply chains, geopolitical conflicts affecting the transit routes, and the increased competition for valuable resources have revealed the importance of energy infrastructure to national security and diplomatic power. As an example, the Ukraine war, which now is supposed to enter its fourth year, and the resulting energy crisis across Europe have forced countries to rethink not just where their energy comes from, but how that energy shapes their political independence. By diversifying gas imports, countries like Romania have become more involved in regional energy security initiatives. Beyond market efficiency or technical performance, the gas transport systems have become instruments of power, cooperation, and political advantage within the regional and international dimensions.

The development of new alliances, such as the 2025 Iran-Russia partnership made in order to resist the Western sanctions (APP News, 2025) offers a very important lesson for states like Romania: if you rely on a dominant energy supplier, you can become a source of political constraints. This was simply demonstrated in Belarus, which depended on Russia for over 90% of its oil and gas in the early 2000s (Kardaś & Kłysiński, 2017). So, when Gazprom cut supplies in 2004 (Konończuk, 2007: p. 3) and shut the Druzhba pipeline in 2007 (Reuters, 2008) Belarus was forced to give up the control of its energy infrastructure, fact which limited its policy autonomy. The same patterns can be noticed everywhere: Lithuania faced an extended oil cutoff after a refinery sale to Poland (JamesTown Foudnation, 2006), Ukraine suffered gas disruptions which affected the whole Europe (de Long & et Al., 2010: pp. 511-338), and Georgia and Armenia experienced unexplained pipeline failures because of different political tensions (NY Times, 2006).

All these cases prove how energy dependence and no room for optionality can create serious vulnerabilities which allow suppliers to use the infrastructure as a geopolitical tool. This is why the governance of natural gas infrastructure points to different dynamics regarding the rule of law, regional integration, and institutional coordination. Long-term investments in pipelines, compressor stations, and transmission corridors can create durable partnerships among states, can shape political behavior, and can create strategic choices over decades. Therefore, infrastructural integration can be seen not only as an engineering product, but also as a governance strategy meant to reduce exposure to threats and improve the security through route diversification and cooperation.

This article introduces The Gas Transport Infrastructure Indicator (GTII) in order to observe the infrastructural integration as a dimension of national and energy security. By analyzing this integration, a new tool meant for comparative political analysis has been discovered. The central focus is Romania because of its geographical position and the infrastructural evolution, which is a great case for examining how the involvement into multiple gas transport systems can influence security, governance ability, and regional influence.

Methodology: The building of The Gas Transport Infrastructure Indicator

The Gas Transport Infrastructure Indicator represents integration into international and regional gas transport systems. It observes how much a country is merged into international and regional gas pipeline systems to which it is connected. The

indicator only targets the energy systems, which are operational transmission systems; it does not consider the individual interconnectors, which represent the technical elements of the larger pipeline systems. Moreover, the pipeline projects that remain at the planning stage and corridor concepts composed of multiple systems will not be included.

Joining different international and regional gas transport systems lowers exposure by increasing access to other supply routes and transmission systems. Countries integrated in various pipeline systems are less vulnerable to single-route disruptions, political pressure or supply interruptions caused by technical failures or geopolitical conflicts. Gas transporting infrastructure systems require big investments and are designed to function for a long time. Therefore, such an integration creates long-lasting ties, secures energy access over time, and develops a state's ability to deal with external threats. All being said, the hypothesis is constructed on this foundation:

Hypothesis = Greater integration into international and regional gas transport infrastructure strengthens a country's access to diversified gas supplies and reduces exposure to external disruptions, thereby improving national security.

Therefore:

higher integration into international and regional gas infrastructure ⇒ better diversification and optionality of supply routes ⇒ stronger national and energy security.

Likewise, absent or limited integration into international gas transport systems grows supply insecurity, dependence, and isolation, which represents a threat to national and energy security.

The indicator is built on the following formula:

$$\mathbf{I}_{c} = \{0; 1; 2; \ldots\},$$

Where:

- *0, if country (c) is not connected to any international or regional gas pipeline;*
- *1, if country (c) is connected to one international or regional gas pipeline;*
- *2, if country (c) is connected to two or more international or regional gas pipelines,*

And *(c)* $\in \{Romania\}$

Interpretation:

- *Value 0 – exclusion, marginality, no integration*
- *Value 1 – most common level of integration*
- *Value 2 – high level of integration, the state has a central role*

Natural gas transport infrastructure is delicate and corridor based. It is characterized by high irreversible costs and long operational duration, as they are built in such way to last and remain functional for several decades and they usually continue to operate very well beyond their initial design life through maintenance and modernization. Therefore, the number of international and regional pipeline systems to which a country is connected represents the portrait of its structural integration within the bigger gas transport networks.

For many countries, the usual value for this indicator is 1. This means that these states are integrated in a single major international pipeline system, either as an importer, exporter, or transit state. However, a value of 2 represents a higher level of integration, which reveals that the country is participating in multiple pipeline systems and has a more significant position within the regional gas transport structures. On the other hand, a value of 0 signals the absence of physical integration into international and regional gas transport systems. Thus, Indicator GTII expresses a different dimension of national and energy security: connecting to different gas transport infrastructures can enable diversification and long-term supply stability.

Romania is a suitable state for observing its integration into international and regional gas transport systems because of its geographic position at the crossway of Central, Eastern, and South-Eastern Europe, plus because of its features as a small-medium energy state. Not having the capacity to influence regional markets on its own, Romania's national and energy security relies on its ability to insert itself within larger regional transmission infrastructures that can eliminate exposure to supply breakdowns, external constraint and geopolitical tensions. As Romania is both a gas producer and a transit state, it is incorporated in transnational transport infrastructures that connect regional markets and allow access to various supply routes.

Case study: Romania's Integration into Regional Gas Transport Systems

Energy infrastructure plays a dual role in today's governance. On one hand, it supports economic prosperity and market functionality; on the other hand, it represents an important advantage that shapes national security and offers foreign policy options. Gas transport systems are characterized by high capital intensity, durability, and corridor-based structures which introduce political relations into physical structures, which construct the concept of energy security. This term has been mentioned more and more in the security and political studies as an important element of state power and governance. From this perspective, taking part in multiple international and regional gas transport systems can reduce dependencies on single corridors and suppliers. This diversification grows optionality, limits exposure to political pressure, and improves the capacity of states to respond and act fast to any technical failures or geopolitical cutoffs.

Using the same logic, isolation, or low integration will only grow the vulnerabilities, reinforce dependency, and reduce the state's autonomy. Therefore, over the past two decades, the energy security has become very involved in the international security research, where scholars have also been supporting this connection between supply vulnerability and national stability, geopolitical power and regional order (Novikau, 2023: pp. 35-37). This evolution captures a great transformation in understanding the energy systems: they are now also political structures who can influence a state's behavior, alliance patterns, and crisis responses. However, more research on gas transit security argues that hydrocarbons can be valuable only through secure transportation, which highlights how important the pipelines are (Ediger, Bowler et Al., 2020: pp. 88-91). They are networks that can be described as the connection of geography, power, and governance, which can reveal a state's predisposition to political pressure and supply disruptions in time. In order to fight this inclination, policy research notes that access to different routes and supplies increases optionality, which helps the state fight against the hostile pressures, technical failures, and disruptions (Pascual & Zambetakis, 2016: pp. 9-17). Through this literature, the premise that infrastructural integration should be seen as a measurable tool of national and energy security is validated. Therefore, the

use of this article's indicator GTII can capture how physical pipeline connectivity contributes to governance power and regional stability.

Applying GTII to Romania provides an evaluation of how infrastructural integration contributes to a powerful structure by reducing dependence on single corridors and improving access to other supply routes.

The following part will focus on Romania's participation in operational international and regional gas pipeline systems and observes the effects of this integration for diversification, power, and long-term supply security.

Fig. 1. Map showing Romania's integration into international and regional natural gas transport systems

Source: European Network of Transmission System Operators for Gas and Gas Infrastructure Europe (2025) „System Capacity Map", annotated by author.
Note: Original map sourced from ENTSOG-GIE (2025). The BRUA (red) and Trans-Balkan (green) gas pipeline systems are highlighted by the author. Only operational, international, and regional gas pipeline systems are considered. Projects, corridor concepts, and bilateral interconnectors are excluded.

The presented map shows Romania's integration into international and regional natural gas transport systems. Looking only at the functioning gas transport infrastructure, Romania is connected to two different gas pipeline systems: the BRUA pipeline and the Trans-Balkan one. They are separate with different geographic purposes and security functions, introducing Romania within the regional and international gas transport networks.

The BRUA pipeline system was initially planned as a multi-state transmission project bringing together Bulgaria, Romania, Hungary and Austria, with the main purpose of improving gas connectivity between Southern-Eastern and Central Europe and allowing access to diversified supply sources, including the Black Sea region: „proposed project on the Romanian territory would allow access to the future major gas infrastructure projects such as TAP, gas sources from Central European gas hubs and potential gas transportation from Black Sea deposits" (European Bank for Reconstruction and Development, n.d.). In its complete design, BRUA was described as „part of the European Commission's Projects of Common Interest, with approximate total length of 1,318km" (European Bank for Reconstruction and Development, n.d.) and was supposed to link Romania's transport infrastructure to the Central European gas hub at Baumgarten in Austria, therefore increasing Romania's influence as a key transit within the bigger European gas transport framework. However, even though Austria is part of the integral BRUA concept, the project so far is functioning only along the Bulgaria-Romania-Hungary line, as the extension to Austria has not been implemented yet and the Romania-Hungary path is not working at full capacity as the Phase II is not completed. Despite these, the operational configuration is still enough to categorize BRUA in this study as a regional gas pipeline system which integrates Romania within its regional gas networks.

Observing BRUA on Romanian territory, it mostly relies on the already existing national gas transporting infrastructure operated by Transgaz and it is complemented by specific upgrades and compressor installations developed under the BRUA project framework. Therefore, the operational BRUA pipeline enters in Romania from Ruse, Bulgaria at the Giurgiu interconnection point, then crosses the southern and central transmission bases through the Bucharest transmission hub and continues towards the Podișor main compression hub to Recaș, which is the junction node. From there, gas goes to the western transmission corridor to Horia, where Romania interconnects with Hungary at Csanádpalota. In this way, Romania is able to participate in the transnational gas flows with both Bulgaria and Hungary.

The whole BRUA project included different development phases at both national and regional level: „development on the territory of Romania of the National Gas Transmission System along the corridor Bulgaria-Romania-Hungary-Austria (BRUA Phase 1 and 2) and Enhancement of the bidirectional gas transmission corridor Bulgaria-Romania-Hungary-Austria (BRUA Phase 3) and the Development on the territory of Romania of the Southern Gas Transmission Corridor for taking over gas from the Black Sea shore (Black Sea-Podișor)" (Three Seas Project, n.d.). Of all these three phases, only Phase I have been achieved, and it is now fully operational. This phase focused on three compression stations, such as SC Podișor, SC Bibești, and SC Jupa, where „each hub is being equipped with two compression units (one in operation and one on standby), capable of ensuring bidirectional gas flow" (SC Natural Net SRL, Transgaz S.A., European Investment Bank et Al., 2021: p. 21) and the construction of Podișor-Recaș pipeline of 479km. Since Romania already had the Ruse-Giurgiu interconnector for Bulgaria and the Horia-Csanádpalota for Hungary, with the achievement of the Phase I BRUA pipeline and upgrades, the state can now support gas flows from both Bulgaria and Hungary into Romania, as well as from Romania toward its neighboring markets.

The Podișor-Recaș pipeline is an important, multi-facility transmission line of 479km. The three main compression hubs (circles) „with an installed power between 9 and 13.8 MW" (Three Seas Project, n.d.) can be observed: GCS Podișor, which is the principal injection and system center station. It receives gas from Bulgaria through the

Giurgiu interconnector and helps with the initial compression to launch the gas into the transmission system, GCS Bibești is the middle line compression hub, and it is specially placed to boost gas pressure after the initial approximate 200km segment, making sure that there is sufficient pressure for the remaining path to Recaș. Its location around Hurezani means that it has multiple purposes: besides repressuring gas from Podișor, it can also inject locally produced gas from the Hurezani fields into the national transmission system. The last one is the GCS Jupa and it is the second regulating hub for the final leg. Since it is located right before the terminus, it makes sure that gas arrives at Recaș with the correct pressure and volume for further distribution. Intermediate facilities are indicated as squares (Zătreni and Pui). However, Hurezani is also categorized as a facility since „The water requirements to Bibesti GCS will be satisfied though the connection to the existing water supply network from Hurezani and will be used for firefighting, hygiene and consumption" (Evans, 2017). The Zătreni storage site is mostly attributed to LOT 1 and 2 regarding construction, maintenance and modernization. Same chores for the Pui one, but it corresponds to LOT 3. The terminus or junction point is Recaș (the triangle), and it represents the point where the gas is measured and distributed to the next operatora for transit into Hungary, Csanádpalota. However, the absence of Phase II capacity developments restrains the scale of these flows.

Phase II was basically designed to increase the transport capacity towards Hungary and beyond, allowing large-volume exports, including potential gas coming from the Black Sea. This consisted of building a new Recaș-Horia pipeline of approximately 50 km and the expansion of the already mentioned three compression stations by installing an extra compression unit in each station, plus the modernization of the gas station GM Horia, according to sources (SC Natural Net SRL, Transgaz S.A., European Investment Bank et Al., 2021). However, in 2019 it was announced that this phase has been postponed because of „the negative results from the economic capacity test held by Transgaz and their Hungarian partner FGSZ" (Bulgartransgaz EAD Management Board Meeting Report, 2019). The results showed „the fact that none of the companies who took part in the exploration and production activities in the Black Sea (OMV Petrom, Exxon Mobil, Lukoil, BSOG) have officially said that they will start with the production" (Bulgartransgaz EAD Management Board Meeting Report, 2019). Therefore, this constrained Romania's ability to be a high-volume regional supplier, even though physical and technical bidirectionality exists. That's why nowadays BRUA works more as an enhancement for optionality and security, rather than a full-scale export route.

Phase III of the project is more about improving Romania's national transmission capacity and integrating offshore production into the BRUA system by enhancing „the Romanian transmission system between Onesti- Isaccea and reverse flow at Isaccea, [...] the Romanian transmission system between Onesti- Nadlac" (Three Seas Project, n.d.) and extending the „Romanian transmission system for taking over gas from Black Sea shore" (Three Seas Project, n.d.). The Onești-Isaccea corridor already exists, that is why the official documents clearly mention that the Phase III of BRUA „does not involve the construction of new pipelines, as it is an interconnection project" (Transgaz S.A., European Investment Bank, et Al., 2021: p. 24). Instead, Phase III and other related projects are focused on working upgrades, including technical modifications that would enable West to East gas flows which would allow Romania to export gas further to Ukraine, to balance regional insufficiency, and to redirect Black Sea resources to east. One of these modifications is mentioned by official sources to be „the rehabilitation of the DN 800 pipeline from Onești to Cosmești" ((Transgaz S.A., European Investment Bank,

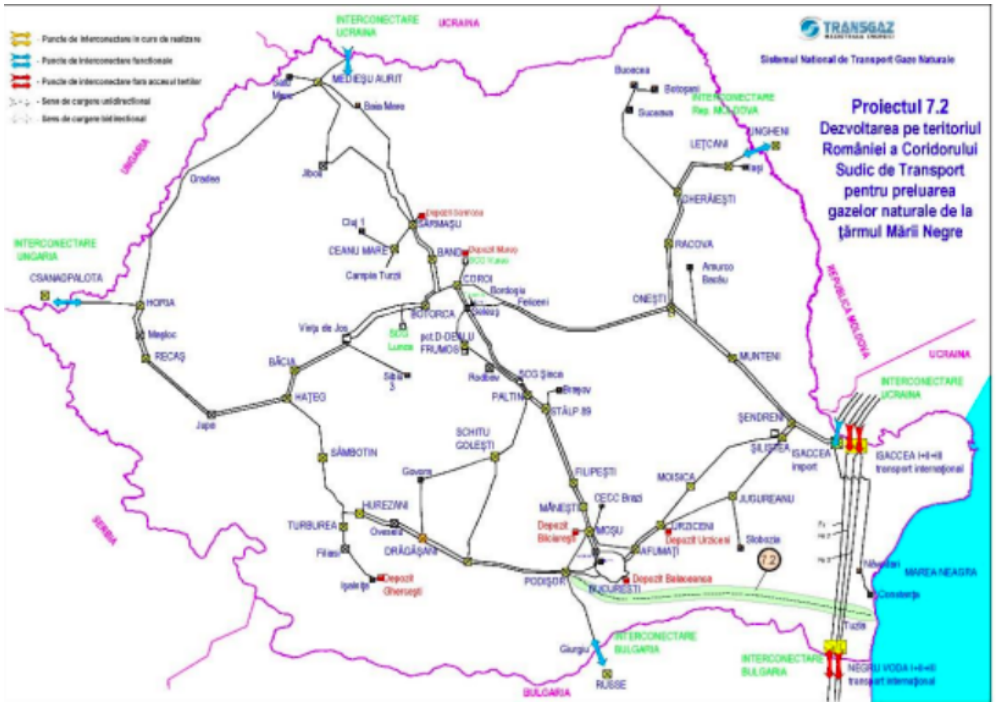
et Al., 2021: p. 24). Mainly, the purpose is to connect the markets of Bulgaria, Romania, and Ukraine and to introduce the eventual natural gas discovered in the Black Sea deeper into the Romanian transport system.

In order to take the gas and transport it from the Black Sea, the Phase III would introduce a new pipeline that will connect the Black Sea shore to Podișor which will allow to move the resources directly to the BRUA corridor: „The pipeline with a total length of approximately 308,2 km, is a telescopic pipeline made up of two sections and designed to transmit gas at a pressure of 63 bar. The two pipeline sections are:

• Section I, Black Sea shore – Amzacea, with a length of 32,5 km, will have a diameter of Ø 48" (Dn1200);

• Section II, Amzacea – Podișor, with a length of 275,7 km, will have a diameter of Ø 40" (Dn1000)" (European Network of Transmission System Operators for Gas, 2019: p. 257).

Fig. 2. Project Map: Tuzla-Podișor Offshore Gas Pipeline



Source: Original map from Transgaz PDSNT 2021-2030, SC Natural Net SRL, Pronatura Foundation and European Investment Bank
Note: The Tuzla-Podișor pipeline is highlighted with the color green.

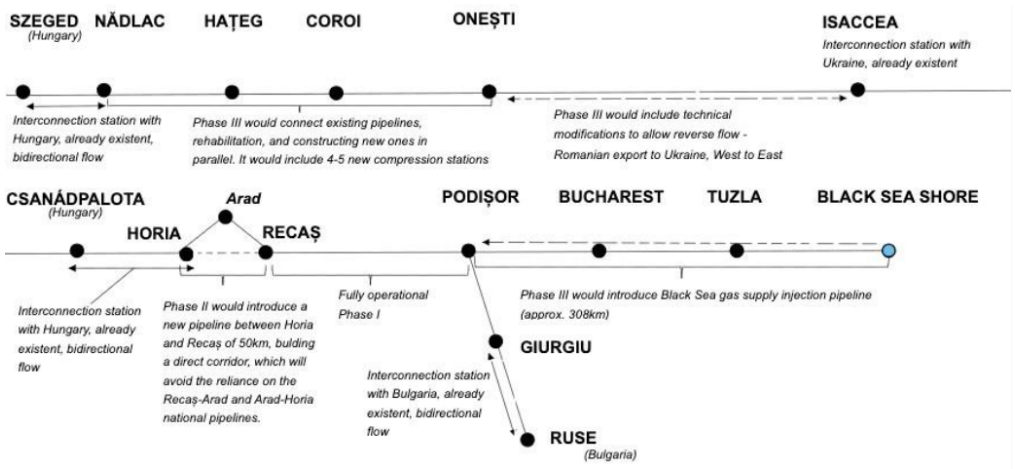
The central construction idea of BRUA Phase III depends on the main corridor plan of Onești-Coroi-Hațeg-Nădlac. The specialists note that it plans to expand the transport capacity on this already existent corridor which „functions at technical parameters that are inadequate for a mainline artery" (Transgaz S.A., European

Investment Bank et Al., (2021: p. 27). This involves a combination of different measures such as:

- the rehabilitation or replacement of some specific existent pipelines that belong to the National Transmission System and the construction of new pipelines in parallel with the existing ones, like the Băcia-Hațeg-Horia-Nădlac of approximately 280km. This is why the Onești-Nădlac system is seen as a hybrid one (it is partially reliant on existing pipelines but also on replacements and new ones constructed in parallel), totaling approx. 843km and strengthened by new compression hubs;
- the construction of „four or five new compressor stations with a total installed power of approximately 66-82.5MW" ((Transgaz S.A., European Investment Bank et Al., (2021: p. 27);
- increasing the national gas transport capacity to Hungary by „4.4 billion cubic meters per year" (Transgaz S.A., European Investment Bank et Al., (2021: p. 27).

Moreover, at its western end the corridor ends at Nădlac, which is already connected to Hungary through the Nădlac-Szeged interconnector. So, through Phase III, the amount of gas that would reach there will be increased and connected next to the Tuzla-Podișor project.

Fig. 3. BRUA Corridor and Development Plan: All Three Phases, Reverse Flow, and Black Sea Supply



Source: Author's compilation based on information from SC Natural Net SRL, Transgaz S.A., Pronatura Foundation, European Investment Bank (2021).
Note: The scheme portrays all BRUA gas transmission phases in Romania, distinguishing between operational infrastructure (solid lines) and planned or postponed elements (interrupted lines). Phase I is complete and operational, connecting Bulgaria to Hungary through the Giurgiu-Podișor-Recaș corridor, using existing national pipelines between Recaș-Arad and Arad-Horia to reach Horia-Csanádpalota interconnector. The interrupted Recaș-Horia line represents the postponed Phase II which was intended to create a direct high volume capacity export corridor toward Hungary. Phase III is

illustrated through the system modifications along the Onești-Coroi-Hațeg-Nădlac path which will be rehabilitated and enhanced with new parallel segments and compression stations, as well through the introduction of a Black Sea gas supply injection pipeline (Tuzla-Podișor) and the reverse flow capability at the Isaccea interconnection point with Ukraine. Dots stand for interconnectors, compression stations and junction nodes, while the double arrowed lines represent bidirectional flow ability. For more functional specifications, consult the official technical documentation from SNTGN Transgaz S.A.

All said, BRUA is an important structural upgrade for Romania because it was designed as a multi-phase regional corridor which is supposed to link Romania, Bulgaria, Hungary and Austria. Through this, the regional connectivity is strengthened, bidirectional flows are functioning, and Romania will be more involved in the Central and South-Eastern European gas markets. Even though, only Phase I is working, as it has been shown above, BRUA has already influenced Romania's position within the regional gas transport systems.

Regarding national and energy security terms, BRUA's meaning is less about current export capacity and more about its role in improving the state's ability to defend itself and recover from challenges. BRUA helps reducing Romania's dependence on single-direction corridors and allows better access to different regional systems. Therefore, it acts as a shield against all the threats presented in this study: technical failures, political pressure, and supply disruptions. Moreover, the project will improve the capacity of absorbing future gas sources, including offshore Black Sea production, once upstream conditions will be available. Its impact will be amplified by the soon start of offshore production from the Neptun Deep gas field in Romania, which is „expected to produce 8 bcm/y of natural gas in the first 10 years of its operation" (European Commission, Staff Working Document No. SWD 830 final 2025: p. 17) from 2027, offering „another important source of diversification for the Member States in the region" (European Commission, Staff Working Document No. SWD 830 final 2025: p. 28). So, most probably the need to use these major internal resources and transport them into regional markets will push for the completion of BRUA's Phase II and III, which will become beneficial and very necessary.

In conclusion, BRUA improves diversification, optionality, and helps ensure long-term supply stability. Even in its incomplete form, the project supports the logic of Hypothesis 1. This is why BRUA should not be understood only as an important project, but as a tactical advantage with lasting effects for Romania's energy security and its higher national security posture, as Romanian ex-president Klaus W. Iohannis was explaining in 2020: „The development of the National Gas Transmission System along the BRUA corridor is an essential stage in strengthening the energy security of both our country and the European Union, but also the energy security of the Black Sea region" (CE Energy News, 2020). Moreover, he further offered a future visualization of this: „through the connection of BRUA to the Vertical Corridor, through the materialization of the Black Sea offshore exploitations, which we hope to start as soon as possible, Romania has real assets to become an important player in the regional gas market. To this effect, I am firmly convinced that the funds invested in the gas transmission infrastructure will generate more for Romania than a competitive positioning on the relevant markets or a reassertion of our country's trustworthiness as a model partner in increasing energy security throughout the region" (CE Energy News, 2020).

The second operational international gas transport system integrating Romania into regional and international gas structures is the Trans-Balkan gas pipeline. Unlike BRUA which was imagined from the beginning as a regional pipeline with the task of diversification, bidirectional flows, and market integration, the Trans-Balkan pipeline was originally designed as a large-scale, corridor-based export system. Its history, scale, and corridor logic validate it as a distinct regional gas transport system under the assumptions of Indicator GTII.

The TBP system was thought and constructed during the former Soviet Union era and was completed in 1988. Its main purpose was to „to transport Russian gas through Ukraine (using the ATI, RI and ShDKRI pipeline systems) to supply Moldova, Romania, Bulgaria and Turkey with natural gas ("forward flow")" (EU Energy Community Secretariat & WECOM, 2024: p. 5). In time, the importance of the TBP declined because of multiple reasons: „diversification of supply routes for Turkey and the ramp-up of domestic natural gas production in Romania.

At the beginning of 2020 TurkStream - another subsea pipeline from Russia to Turkey - was commissioned, directly supplying Turkey (line 1) and creating a new Russian supply route to central Europe (line 2) via Bulgaria and Serbia towards Hungary" (EU Energy Community Secretariat & WECOM, 2024: p. 5). Therefore, now it is mostly used to cover Moldova's natural gas consumption estimated at nearly 2-3 bcm per year (EU Energy Community Secretariat & WECOM, 2024: p. 5), and as limited supplies „to Ukrainian final consumers in the Căușeni-Orlivka section (below 0,5 bcm/a)" (EU Energy Community Secretariat & WECOM, 2024: p. 5).

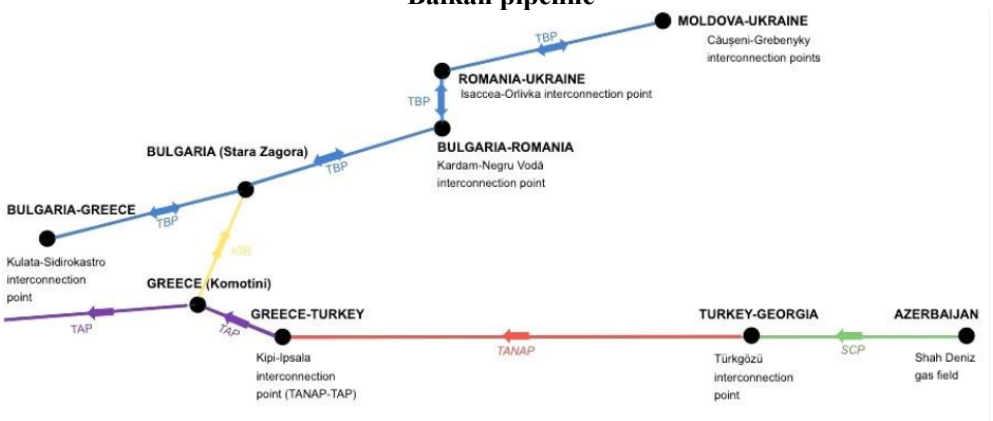
Currently, the TBP runs from Greece to Bulgaria, Romania, Moldova and into Ukraine, crossing interconnected national gas transmission systems. Modern use of the corridor depends on the coordination between the national transmission system operators, which are the ones responsible for operating high-pressure gas transmission networks. Moreover, they develop together the products' capacity and tariffs, allowing gas shippers to reserve transport capacity along the entire corridor through the Regional Booking Platform.

In its classic structure, the TransBalkan pipeline historically transported Russian gas to south. However, actual evidence shows that the corridor is no longer used regularly for Russian exports as „the long-term transit contract expired on 31 December 2024, halting all transit of Russian gas via Ukraine to EU countries and Moldova" (Astrov & Weiss, 2025: p. 12), and Gazprom did not reserve capacity at the TransBalkan route for deliveries in the beginning of 2025 (Ministry of Energy of the Republic of Moldova, 2025). So, the route is now repurposed for diversification and new supply partnerships with Azerbaijan and European sources, rather than being a channel for Russian supplies. Already steps to achieve this have been taken as for august 2025, approximately 20% of the available corridor's capacity was booked in an online booking platform auction, which is an increase comparing it to the last periods (Az News, 2025). Moreover, the capacity products were designed to reduce costs and develop the supply access toward Ukraine. As reported, auction products lowered gas transportation costs by about 25%, which helped the TransBalkan corridor to be commercially more active (Ministry of Energy of Ukraine, 2025). It is also stated that „Ukraine increased booking capacity of the Trans-Balkan route by 2.6 times" (Ministry of Energy of Ukraine, 2025), meaning that the market interest is growing regarding the use of the corridor to access southern supply sources and manage storage operations in Ukrainian facilities.

Regarding these, Romania is also supporting it as it has reduced the gas transit tariff for Ukraine via Trans-Balkan route by 50% (Logos Press, 2025). This comes as a part of a project that unites all the regional regulatory bodies in order to guarantee stable supplies and security, demonstrating that efforts are made for re-establishing and advancing corridor usage ahead of winter demand periods, especially with the disruptions in Ukraine's internal gas production and infrastructure. This move toward diversified supplies was even more possible with Azerbaijan's help through a recent, historical agreement for Ukraine who signed its first natural gas import deal with SOCAR via the Trans-Balkan in July 2025 (Reuters, 2025). Even though at first, they were pilot shipments described as small volume, they are now very meaningful, as Azerbaijani gas can reach the Bulgaria-Romania-Ukraine path. This is even confirmed by Ukrainian officials who described it as „a strategically important step that paves the way for long-term cooperation. It is also another example of diversifying supply sources and strengthening Ukraine's energy security" (United 24 Media, 2025). Additionally, since the tariff modifications made the corridor economically possible, Ukraine announced its plans to resume the Trans-Balkan imports.

Currently, as of early 2026, the Trans-Balkan corridor has moved beyond the pilot use, and it is now an important element of Ukraine's gas import strategy. It is confirmed that the state indeed resumed the regular gas imports through the corridor and that it is used to bring gas from Greece, including liquified natural gas-linked supplies, as the state wants to balance the infrastructure damage and to boost the winter energy security. At the same time, Azerbaijan reassured that the cooperation „would not be derailed" (Reuters, 2025) as SOCAR launched „natural gas supplies to Germany and Austria" (Reuters, 2026) as well in January 2026. This proves that Azerbaijan is growing importance in Europe's gas supply scenery and that it is a reliable partner, ready to commit to a long-term partnership, despite the global challenges.

Fig. 4. Pipeline Connectivity between Southern Gas Corridor and the Trans-Balkan pipeline



Legend	
Green line SCP	*South Caucasus Pipeline which transports natural gas from Azerbaijan through Georgia to Turkey.*
Red line TANAP	*Trans-Anatolian Natural Gas Pipeline which carries the Azerbaijani gas across Turkey from Türkgözü to the Greece–Turkey border at Ipsala.*
Purple line TAP	*Trans-Adriatic Pipeline which transports the gas from the GreeceTurkey interconnection point at Kipoi westward across Greece and onward to European markets.*
Yellow line IGB	*Interconnector Greece-Bulgaria. It connects Komotini to Stara Zagora allowing the transfer gas from TAP and the Greek transmission system into Bulgaria.*
Blue line TBP	*Trans-Balkan Pipeline. Bidirectional pipeline system which connects Greece, Bulgaria, Romania, Ukraine and Moldova.*
↔	*Bidirectional gas flow. Arrows do not represent actual flow volumes or contractual directions.*
⬅	*Indicative direction of gas flow. Arrows do not represent actual flow volumes or contractual directions.*

Source: Author's compilation based on ENTSOG's (2020) TYNDP Map.
Note: The figure is for schematic purposes only, and it shows the main pipelines and interconnectors following the path of Azerbaijani gas from the Shah Deniz field through the Southern Gas Corridor (SCP, TANAP, TAP), its entry into Greece at the Kipoi-Ipsala interconnector path and the next routing through the interconnector (IGB) Greece-Bulgaria or through the Kulata-Sidirokastro entry into the Trans-Balkan system (Kulata-Stara Zagora-Kardam-Negru Vodă-Isaccea-Orlivka-Căușeni-Grebenyky).

The reinvention of the Trans-Balkan pipeline is also leaving a mark on Romania's energy and national security status because it is improving the state's position as a central regional actor in the Southeastern and Eastern Europe. Romania's location in the corridor is essential especially at the Isaccea-Orlivka because the gas flows coming from Greece and Bulgaria can reach Moldova and Ukraine with Romania's help. Therefore, Romania has the dual role of a central transit actor and a connectivity hub along the south-north part of the Trans-Balkan corridor which offers the state growing relevance regarding the regional gas logistics and the decision-making. Beyond geography, the credibility and influence of Romania have also been strengthened by its implication in the policy making. Through transit tariff reductions, participation in organized regulatory initiatives, and support for integrated corridor products, Romania contributed as well to making the corridor economically possible. These measures helped the gas imports for Ukraine and Moldova and made the transnational cooperation stronger, proving that Romania is a reliable parter who can align its national interests with the objectives of the region regarding energy security.

Conclusion and discussion: Calculating the GTII for Romania and How Infrastructure Integration is a Governance Advantage

Analyzing the corridor through the national security perspective, the Trans-Balkan pipeline has evolved into an asset that guides Romania's influence beyond its borders. It helps its vulnerable neighbors to secure the energy flows, and it represents the stabilizer for the EU and NATO eastern flank, eliminating the risks that could otherwise generate secondary effects for the economy and security. Therefore, Romania has one of the most important roles as a regional energy hub which automatically improves its own national security by increasing its bargaining power, deepening its collaboration with the partner states and integrating the infrastructure within the cooperative bodies that enhance the durability and defense. Moreover, this participation also promotes the long-term diversification and shock resistance, as the Trans-Balkan pipeline is changing from a legacy export route into a multi-source system. This means that Romania will also have a new way of improving its capacity of managing the crisis situations during the high demand periods or regional disruptions.

Applying GTII to Romania results in a value of 2, proving a high level of integration into the international and regional gas transport system. Romania is strongly inserted in more than one operational pipeline system of regional relevance, most notably the ones presented in this study: the BRUA pipeline and the Trans-Balkan gas pipeline system. Both of them function as different international transmission infrastructures, rather than isolated interconnectors. Through these systems, Romania is integrated at the same time into the Central European, Southeastern European and Eastern European gas transport networks, improving its security position and successfully fulfilling the criteria for the high indicator value:

$$I_{Romania} = 2$$

As explained above, this level of integration reduces Romania's exposure to single-route cutoffs and improves its access to diversified supply sources. It benefits from routing flexibility, bidirectional flows, and different entry points, including access to resources from the Southern Gas Corridor, LNG-related supplies entering through Greece, and regional steady flows to Ukraine and Moldova. Regarding the indicator logic, such value represents a stronger optionality and lowers the vulnerability to geopolitical

pressure, technical failure, or individual supply interruptions. In line with the hypothesis of the indicator GTII, Romania's higher level of integration into international and regional gas transport infrastructure supports the national and energy security and validates the state's central and growing influential role within its region.

The results of this Indicator confirm the hypothesis. Romania's participation into these two gas transport systems strengthen its national and energy security by integrating it into a cooperative regional framework. Beyond just the technical capacity, this involvement enhances political credibility, geopolitical relevance, bargaining power, and crisis management abilities. From a political science point of view, the infrastructure integration comes as a form of structural power. So, it allows the state to create regional stability, to support partners during crises, and to align its national interests with the bigger regional objectives.

The findings reveal also Romania's role as a great regional stabilizer by facilitating the gas flows to Moldova and Ukraine, proving that infrastructure governance can be used for positive implications regarding the regional security. Despite its incomplete implementation, BRUA is still connecting Romania to its neighboring markets. Its operational configuration places Romania into a wider transmission framework, improving its optionality. Moreover, with the Neptun Depp project becoming operational after 2027, this will most probably mean that the postponed BRUA phases will be considered and become a reality. For Romania, this could mean great success regarding its economic and security status. Regarding Trans-Balkan Pipeline, this system has improved even more Romania's role. Now the state has a bigger obligation than just regulatory cooperation, tariff adjustments, and support for the integrated corridor products. With the new access to the Azerbaijani gas resources through the Southern Gas Corridor, Romania has the great role of supporting Moldova's and Ukraine's energy security. This central position along the corridor grows the regional relevance and strengthens its characterization as a stabilizing actor on the EU and NATO eastern flank.

In conclusion, this article has demonstrated that integration into international and regional gas transport systems represents a significant and measurable dimension for national and energy security. Even in its incomplete form, the BRUA project and the TBP support Romania's tactical position and validates the main hypothesis that higher integration leads to stronger security results. As future plans will materialize, the importance of these present infrastructures will matter even more. Therefore, energy infrastructure should be understood as a governance instrument with lasting effects for cooperation, security, and politics in Europe.

References:

Abdul N. for Azernews (2025). *20% of Trans-Balkan Gas Corridor capacity booked for August 2025*, https://www.azernews.az/business/245300.html, last accessed on the 21st of January 2026.

Astrov V., Hanzl-Weiss, D. (2025). *The European gas market: Emancipating from Rusia in Policy Notes and Reports, The Viena Institute for International Economic Studies Publishing House*, p. 12, available at: https://wiiw.ac.at/the-european-gas-market-emancipating-from-russia-dlp-7261.pdf, last accessed on the 19th of January 2026.

Bagirova, N. et al. for Reuters (2026). *Azerbaijan starts natural gas supplies to Germany and Austria*, accessible at: https://www.reuters.com/business/energy/azerbaijan-

starts-natural-gas-supplies-germany-austria-2026-01-16/, last accessed on the 22nd of January 2026.

Bulgartransgaz EAD (2019). *2019-2028 Ten-Year Network Development Plan of Bulgartrans EAD*, Management Board Meeting Report, Approved with Decision under Protocol No 345/23.04.2019, accessible at: https://bulgartransgaz.bg/files/useruploads/files/amd/tyndp%202017/TYNDP%202019-2028%20EN.pdf, last accessed on the 11th of January 2026.

CE Energy News (2020). *The Phase one of the BRUA pipeline is complete*, https://ceenergynews.com/oil-gas/the-phase-one-of-the-brua-pipeline-is-complete/, last accessed on the 16th of January 2026.

CEO of Naftogaz Group Koretskyi's, N. statement in Mykhailenko's, D. article for United 24Media (2025). *Ukraine Nears Gas Supply Deal With Azerbaijan via Trans-Balkan Corridor*, https://united24media.com/latest-news/ukraine-nears-gas-supply-deal-with-azerbaijan-via-trans-balkan-corridor-10845, last accessed on the 22nd of January 2026.

Chivers, C. J. for The New York Times (2006). *Explosions in Russia Cut Gas Pipelines to Georgia*, https://www.nytimes.com/2006/01/22/international/europe/explosions-in-russia-cut-gas-pipelines-to-georgia.html, last accessed on the 5th of April 2025.

de Jong, S., Wouters, J., & Sterkx, S. (2010). *The 2009 Russian-Ukrainian Gas Dispute: Lessons for European Energy Crisis Management after Lisbon in European Foreign Affairs Review,* Vol. 15, Kluwer Law International BV Publishing House, pp. 511-538.

Ediger, V. S., Bowlus, J. V. & Aydin M. (2020). *Geopolitics and Gas-Transit Security Through Pipelines in Regulations in the Energy Industry*, Springer Publishing House, pp. 88-91.

Energy Community Secretariat (2024). *Improvement of the commercial attractiveness of the Trans-Balkan Pipeline System: Analytical and recommendations report*, Viena: Energy Community Secretariat (EU4 Energy Governance Programme), Prepared by WECOM, p. 5.

European Bank for Reconstruction and Development (n.d.). *BRUA Pipeline – project summary document*, https://www.ebrd.com/home/work-with-us/projects/psd/49149.html#customtab-9f610af65e-item-53f5d5beaa-tab, last accessed on the 8th of January 2026.

European Commission (2025, June 17). *Assessing the impact of measures to phase out Russian gas imports and improve the monitoring of potential energy dependencies and amending,* Regulation (EU) 2017/1938, Staff Working Document No. SWD (2025) 830 final), p. 17, accessible at: https://www.eu.dk/samling/20251/kommissionsforslag/KOM(2025)0828/forslag/2149573/3042878.pdf, last accessed on the 16th of January 2026.

European Network of Transmission System Operators for Gas (2019). *Gas Regional Investment Plan Southern Corridor,* Based on ENT SOG's TYNDP 2018, Annex B, p. 257, accessible at: https://www.entsog.eu/sites/default/files/2020-06/l_entsog_SC_GRIP_2019_Annex_B_03.pdf, last accessed on the 12th of January 2026.

Evans, R. for Arcadis – Design & Consultancy for natural and built assets (2017). *Romanian Section of the BRUA Natural Gas Transmission Corridor Project – Supplementary Environmental Impact Assessment Report*, EC Harris and Hyder

Publishing House, accessible at: https://www.eib.org/attachments/registers/79726902.pdf, last accessed on the 10th of January 2026.

Isachenkov, V. for Associated Press (2025). *Russia and Iran sign a partnership treaty to deepen their ties in the face of Western sanctions*, accessible at: https://apnews.com/article/russia-putin-iran-pezeshkian-treaty-partnership-71a20990373851741d1fe76a81699036, last accessed on the 5th of April 2025.

Kardaś, S. & Kłysiński, K. (2017). *The story that never ends. A new stage in the energy dispute between Russia and Belarus*, OSW - Centre for Eastern Studies Publishing House, accessible at: https://www.osw.waw.pl/en/publikacje/osw-commentary/2017-05-17/story-never-ends-a-new-stage-energy-dispute-between-russia-and, last accessed on the 5th of April 2025.

Konończuk, W. (2007). *Belarusian Russian Energy Conflict: The Game Is Not Over*, in Fundacja Batorego Stefan Batory Foundation, Więcej niż sąsiedztwo - More than Neighbours, Analiza Policy Brief House Publishing, p. 3.

Logos Press (2025). *Moldova approved two new routes of the vertical gas corridor*, accessible at: https://logos-pres.md/en/news/moldova-approved-two-new-routes-of-the-vertical-gas-corridor/, last accessed on the 21st of January 2026.

Ministry of Energy of the Republic of Moldova (2025). *Gazprom did not make bookings on the Trans-Balkan pipeline for February to transport gas to the transmission region*, accessible at: https://energie.gov.md/en/content/gazprom-did-not-make-bookings-trans-balkan-pipeline-february-transport-gas-transnistrian, last accessed on the 19th of January 2026.

Ministry of Energy of Ukraine (2025). *Ministry of Energy: Trans-Balkan route capacity booking increased by 2.6 times*, https://www.kmu.gov.ua/en/news/minenerho-broniuvannia-potuzhnosti-transbalkanskoho-marshrutu-zbilsheno-u-26-raza, last accessed on the 21st of January 2026.

Novikau, A. (2023). *Energy Security in Security Studies: A Systematic Review of Twenty Years of Literature*, Issue 3, Vol. 17, CEIJSS Publishing House, pp. 35-37.

Pascual, C., Zambetakis, E. (2016). *From Security to Survival*, Brookings Institute Publishing House, pp. 9-17.

Pruchnicka, A., Polityuk, P. et al. for Reuters (2025). *Ukraine signs first Transbalkan gas deal with Azerbaijan's SOCAR*, https://www.reuters.com/business/energy/ukraine-signs-first-transbalkan-gas-deal-with-azerbaijans-socar-2025-07-28/, last accessed on the 22nd of January 2026.

Reuters (2008). *FACTBOX: Russian oil and gas export interruptions*, available at: https://www.reuters.com/article/world/us/factbox-russian-oil-and-gas-export-interruptions-idUSLS578972/, last accessed on the 5th of April 2025.

Reuters (2025). *Azerbaijan says energy cooperation with Ukraine won't be derailed by Russian strikes*, available at: https://www.reuters.com/business/energy/azerbaijan-says-energy-cooperation-with-ukraine-wont-be-derailed-by-russian-2025-08-10/, last accessed on the 22nd of January 2026.

SC Natural Net SRL, Pronatura Foundation, Transgaz S.A. & European Investment Bank (2021). *Studiu de Evaluare Adecvată - Planul de Dezvoltare a Sistemului Național de Transport Gaze Naturale 2021-2030*, p. 21, accessible at:

https://www.mmediu.ro/app/webroot/uploads/files/EA%20rev%202%20final.pdf, last accessed on the 8th of January 2026.

Socor, V. (2006). *Russia Oil Supplies to Lithuania Cut Off* in JamesTown Foundation, Eurasia Daily Monitor, Vol. 3, Issue 150, accessible at: https://jamestown.org/program/russian-oil-supplies-to-lithuania-cut-off/ , last accessed on the 5th of April 2025.

Three Seas Project (n.d.) *Projects - BRUA*, accessible at: https://projects.3seas.eu/projects/brua-development-on-the-territory-of-romania-of-the-national-gas-transmission-system-along-the-corridor-bulgaria-romania-hungary-austria-(brua-phase-1-and-2)-and-enhancement-of-the-bidirectional-gas-transmission-corridor-bulgaria-romania-hungary-austria-(brua-phase-3)-and-the-development-on-the-territory-of-romania-of-the-southern-gas-transmission-corridor-for-taking-over-gas-from-the-black-sea-shore-(black-sea-podisor), last accessed on the 10th of January 2026.

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ORIGINAL PAPER

Post-Crisis Governance and Bank Risk-Taking in Europe

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Abstract:
This study explores the relationship between governance standards and the risk-taking behavior of European banks, focusing on those listed on stock markets, and considering the regulatory changes that followed the financial crisis.In light of the governance deficiencies observed during the global financial crisis and the subsequent COVID-19 epidemic, this research underscores risk management as the primary objective of bank governance, above the pursuit of short-term profitability.This study employs fixed-effects regressions to analyze bank-level panel data. The data comes from the European Banking Authority's (EBA) EU-wide Transparency Exercise, covering the years 2021 to 2024. This study aims to investigate if stronger governance, as represented by the Common Equity Tier 1 (CET1) capital ratio, is associated to less risk on the balance sheet, which is evaluated by the leverage ratio.The results demonstrate a strong and statistically significant association between a bank's governance and its willingness to take risks. Specifically, a higher level of capitalization is associated to a much lower level of risk.In contrast, a strong association between governance variables and profitability indicators is not identified. The data imply that European banks mainly utilize prudential approaches to manage their operations, which helps to limit excessive risk-taking. This study adds to the previous research on bank governance, especially focusing on findings related to risk. Moreover, our analysis gives vital information for regulators and policymakers who are worried about the financial stability of the European banking system.

Keywords: *Bank governance, Risk-taking behavior, European banking system, Capital adequacy (CET1), Leverage ratio, Financial stability.*

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1. Introduction

The global financial crisis of 2007–2008, along with the COVID-19 epidemic, profoundly reshaped the regulatory and governance structures within the banking sector. In both cases, the combination of excessive risk-taking, insufficient oversight, and poorly constructed incentive systems greatly enhanced systemic instability Despite substantial pay packages, many financial executives and board members showed a lack of foresight or action to prevent these crises. This raised significant questions about the effectiveness of bank governance and how they were compensated (Vallelado, Andrés, & Reig, 2018). As a result of these failures, policymakers and regulators have increasingly stressed the relevance of pay systems in banking governance. Compensation systems significantly influence managerial motivations, risk-taking, and the long-term stability of companies, particularly those whose actions have wider consequences on the system. Bebchuk and Spamann (2010) suggest that the remuneration systems utilized before the financial crisis encouraged a concentration on short-term earnings, which then undermined long-term stability.Consequently, this situation contributed to the building of excessive risk

The European Union responded to these issues by enacting several regulatory adjustments, with the Capital Requirements Directive IV (CRD IV; Directive 2013/36/EU) being a key example. CRD IV established comprehensive rules regarding pay in credit institutions. These rules included limits on variable pay, requirements for deferring payments, and the use of financial instruments to ensure that incentives are linked to long-term performance (Arts. 74, 75, and 92 et seq.).Ferrarini (2015) argues that the success of these measures depends not only on following the laws, but also on the quality of institutions and the current governance practices in each member state.

The impact of pay restrictions is expected to vary throughout Europe. Emerging European economies, such as Romania and Bulgaria, along with other Central and Eastern European nations, often exhibit less developed institutional structures and a higher incidence of perceived corruption compared to more established markets like Germany, France, and the Nordic countries

In these instances, financial limits could have a bigger effect on behavior, potentially lowering self-serving acts and excessive risk-taking. In mature countries, however, these laws could largely affect banks' capacity to attract and keep qualified directors, which could lead to distinct governance trade-offs. This study explores the role of governance discipline in publicly traded European banks. This study explicitly examines how governance systems affect bank performance within the regulatory climate that followed the financial crisis.This approach, rather than focusing exclusively on profitability, stresses the risk-taking behavior of banks. The fundamental purpose of the legislation put in place after the financial crisis is to guarantee financial stability, which highlights the vital role of governance.

This study contributes to the current issue over how well governance and remuneration systems work in the banking sector, specifically focused on European institutions that follow the same set of laws. It contributes to the existing research on bank governance and executive remuneration in three crucial ways. This study, unlike much of the existing research that focuses on executive pay or board structure, emphasizes governance discipline, as indicated by the careful results.This strategy coincides with the fundamental goals of banking regulation that were set after the financial crisis. Consequently, the focus on bank risk-taking, rather than profitability, highlights a dimension of performance that is essential for financial stability, but often overlooked in

empirical governance research. This analysis next examines current data from European banks listed on stock exchanges, which have been operating under a uniform regulatory framework since the epidemic.

This offers relevant insights into how governance mechanisms perform when they are subject to heightened supervisory scrutiny. These findings together increase our understanding of how governance influences the risk profiles of banks. Moreover, these elements add to the ongoing discussions regarding how effective the regulatory measures in Europe have been since the financial crisis.

This study intends to solve the following research questions:
RQ1_: How have enhanced governance systems implemented in European listed banks after the financial crisis influenced their levels of risk-taking?
RQ2: Does the effect of governance rigor largely influence a bank's risk-taking, rather than its short-term financial results?

2. Literature Review

2.1 Compensation, Incentives, and Bank Risk-Taking

A bank's risk-taking behavior is greatly influenced by how it arranges its compensation and the incentives it offers. The architecture of these systems can considerably affect a bank's risk profile. For example, a bank's pay structure that significantly rewards short-term results could incentivize taking on too much risk. This is because workers could favor short financial rewards over the bank's long-term stability.
On the other hand, remuneration structures that emphasize long-term performance might help align employee interests with the bank's overall success.
Therefore, the way banks organize their pay and incentive systems is a crucial influence in how much risk they take. Many studies have studied how different remuneration schemes affect the behavior of managers and their propensity to take risks in financial organizations.

Bebchuk and Spamann's 2010 study demonstrated that executive pay structures, which stressed short-term results, were linked to higher risk-taking before the global financial crisis.
Similarly, Beltratti and Stulz (2010) believe that governance systems focused on increasing short-term shareholder value made banks more vulnerable during times of financial volatility.
Research shows a substantial correlation between how much banks pay their employees and various consequences. Khatib, Al Amosh, and Ananzeh (2023) identified a connection between board compensation and bankruptcy risk, earnings management, bank stability, and merger activity. Studies of executive remuneration generally show either negative or statistically negligible relationships between CEO pay and a company's financial performance. This highlights the likelihood of agency difficulties and the extraction of economic rents (Yahya & Ghazali, 2015; Ghazali & Yahya, 2017; Chou & Buchdadi, 2018).

2.2 Board Independence and Corporate Governance

Agency theory indicates that when ownership and control are separated, managers might act in their own interests.Effective oversight by a company's board of directors can help reduce this tendency (Fama & Jensen, 1983). Independent and non-executive directors are meant to be the watchful guardians, ensuring management acts in the best interests of shareholders. Nikolić and Babić (2016) believe that the challenges related to agency are

made worse by bad governance in economies that are evolving. This underlines the significance of adequate oversight mechanisms for boards of directors.A bank's board of directors greatly influences its performance and its approach to risk. Aebi, Sabato, and Schmid (2012), coupled with Erkens, Hung, and Matos (2012), found that a bank's ability to endure financial crises is related to the number of independent directors and the general composition of its board. The dimensions of a board play a role in its effectiveness in overseeing a corporation, too. Research reveals that governance procedures differ significantly between developing and mature markets (Ongore et al., 2014).

2.3 Independent Director Compensation and the Research Gap

Although executive pay and board structure have been examined a lot, the compensation of independent and non-executive directors hasn't garnered as much attention. This disparity is remarkable, especially considering the onerous supervisory function that independent directors are required to fulfill, particularly in sophisticated and high-risk institutions like banks. If independent directors are paid too little, they could not have the motivation or resources to successfully criticize management.This could limit their ability to oversee and encourage unsafe behavior.Research reveals that independent directors can assist stabilize organizations In their 2018 study, Ben Bouheni and his team identified a correlation between a more independent board of directors and less risk-taking by banks. In contrast, Sandel (2009) contends that the way managers were compensated before the crisis concentrated too much on short-term performance, which led to bad decision-making.The data imply that the efficacy of independent boards depends not only on their existence, but also on the incentives they have. This study builds on current research by evaluating how governance procedures and risk-taking are related in publicly traded European banks, considering the legislative changes that followed the financial crisis. The analysis, which emphasizes results based on risk rather than short-term profitability, coincides with the core goals of banking regulation. The approach also offers a more detailed understanding of how governance systems work in practice.

Based on agency theory, research on corporate governance, and the goals of banking laws after a crisis, the following hypotheses are proposed: Higher Common Equity Tier 1 (CET1) capital ratios, which imply tighter governance, are associated to less risk-taking by banks. The way a bank is governed seems to have a stronger connection to how much risk it takes on than to its short-term financial results.

These ideas suggest that the major goal of banking governance is to avoid excessive risk, rather than focused on maximizing short-term financial profits.

3. Data and Methodology

3.1 Data

The empirical research employs bank-level data from the European Banking Authority's (EBA) EU-wide Transparency Exercise. This study provides standardized and publicly available financial data for major European banks operating within the European Union.

The dataset, covering the years 2021 to 2024, allows for an analysis of the regulatory environment that evolved following the pandemic. The environment is particularly focused on how governance structures functioned under increased supervisory scrutiny (European Banking Authority, 2021–2024).

The study's sample covers publicly traded banks in Central and Eastern Europe, notably those from Austria, Poland, the Czech Republic, Hungary, Romania, Slovenia,

and the Baltic nations. The resulting dataset is unbalanced since not all banks provide data for every year, which leads to a total of 66 bank-year observations.

These data structures are commonly used in international banking research. Using fixed-effects approaches helps to prevent bias in the estimate process (Wooldridge, 2010).

The financial data shown here is consolidated and comes from European Banking Authority (EBA) templates. These templates cover a range of financial metrics, including own funds, leverage exposure, profitability, and the total scale of the balance sheet. The uniform reporting system allows for the comparison of data across different countries and institutions.

3.2 Variable Definitions

Bank risk includes a variety of possible dangers that could undermine a financial institution's soundness and its capacity to make money. These potential problems might occur from several sources, including economic shifts, new regulations, and operational errors. Navigating and mitigating these risks is essential for a bank's sustained prosperity. The leverage ratio, which is the ratio of Tier 1 capital to total exposure, is used to quantify the risk of a bank.This a common tool in banking research, used to analyze the risk on a bank's balance sheet and its vulnerability to unfavorable events, particularly during financial instability (Demirgüç-Kunt, Martinez Peria, & Tressel, 2015; Basel Committee on Banking Supervision, 2014).

The study of governance involves examining how organizations are administered and controlled. This comprises a thorough examination of the structures, processes, and rules that influence decisions and actions within an organization. The aim is to grasp how these components function in concert to fulfill the organization's aims and targets. In addition, governance requires evaluating how well these processes work and making changes. This is important for both academics and professionals, as it helps improve how organizations function and are held accountable. The Common Equity Tier 1 (CET1) capital ratio is a key measure of how well a financial institution is governed and supervised. Although Common Equity Tier 1 (CET1) is largely a measure of financial stability, it also indicates the effectiveness of a company's internal governance and the board of directors. Board approval is a must for capital decisions, and regulators keep a close eye on them, too. Previous research indicates that better governance is associated to higher capitalization and more cautious risk management (Aebi, Sabato, & Schmid, 2012; Anginer, Demirgüç-Kunt, Huizinga, & Ma, 2018). The factors that researchers purposely keep constant throughout an experiment are called controlled variables. This approach allows for the isolation of the independent variable's impacts. The main purpose is to show that any changes in the dependent variable are only caused by changing the independent variable, not by other, unplanned factors. The study considers the size of the bank, which is measured by the natural logarithm of its total assets. It's crucial to recognize that larger banks could have distinct risk profiles

These variations could be owing to the benefits of diversification, stronger rules, or implicit government backing, as suggested by Beltratti and Stulz (2012). To account for shared economic conditions and regulatory changes that affect all banks, the study includes year fixed effects. The Common Equity Tier 1 (CET1) ratio, while largely a measure of financial stability, also indicates a company's internal management and the effectiveness of its board of directors in overseeing the organization.

Therefore, capital planning, dividend policy, and risk management plans require board approval and are also regulated by regulatory agencies. CET1 represents the results of governance and oversight processes, rather than the exact governance structures implemented. This approach is consistent with earlier research, which implies that capitalization acts as a visible indicator of how well banks are governed and how they manage risk.

3.3 Empirical Strategy

Using a fixed-effects panel regression model, which controls for unchanging characteristics of individual banks, we evaluate the connection between governance and bank risk.

This approach evaluates the permanent variations in business models, ownership structures, and the rules of the institutions involved. Without these differences, the accuracy of the computed coefficients could be affected (Wooldridge, 2010). The fundamental model is represented by:

$$Risk\_it = \beta\ Governance\_it + \gamma\ Controls\_it + \alpha\_i + \delta\_t + \varepsilon\_it$$

The equation models the link between risk and the factors that affect it. The phrase "Governance_it" refers to the governance structure of a certain entity at a specific point in time. Controls_it includes the existing controls that were in place at that time. The word "α_i" accounts for effects distinct to each entity, while "δ_t" captures impacts specific to each time period. The term "ε_it" denotes the error term, which captures factors that aren't directly observable. In this case, Risk_it represents the leverage ratio of bank i in year t. The Common Equity Tier 1 (CET1) ratio serves as a measure of how well a company is governed. Additionally, the variable α_i accounts for bank-specific fixed effects, whereas δ_t represents year-specific fixed effects. The symbol δt denotes the fixed effects for each year.

To account for the potential for serial correlation within banks, we cluster standard errors at the bank level, using Petersen's (2009) method. The emphasis on risk, rather than profitability, is supported by both theoretical and practical investigations. These findings show that the main goal of banking governance is to reduce excessive risk, rather than to increase short-term profits (Bebchuk & Spamann, 2010; Laeven & Valencia, 2018).

4. Results

The results are as follows. This section summarizes the research findings on the connection between governance policies and risk-taking in publicly traded European banks. This research uses bank-level panel data from the EBA Transparency Exercise, covering the years 2021 to 2024.

4.1 Preliminary Observations

The table illustrates the findings of the fixed-effects regression study, which assessed the association between governance discipline and bank risk. The leverage ratio is used to analyze a bank's risk, whereas the Common Equity Tier 1 (CET1) capital ratio is used to assess its governance and control.T he models contained both bank-specific fixed effects and year-specific fixed effects. In addition, standard errors were adjusted to account for clustering at the bank level. The results demonstrate a substantial and

statistically significant association between how well a bank is governed and the amount of risk it takes on. The positive and statistically significant coefficient for the CET1 ratio, with a significance threshold of 1%, implies that banks with stronger capital adequacy show significantly lower balance-sheet risk. The discovery holds economic weight, and its significance persists regardless of the bank's scale. In contrast, past regression analyses utilizing return on equity as the dependent variable did not provide statistically significant findings. This shows that how banks are controlled is more focused on controlling risk and ensuring financial stability, rather than solely on short-term profits.

4.2 Economic Explanation

The positive and statistically significant correlation for the CET1 ratio shows that better governance measures help restrict excessive leverage and the accumulation of risk. This conclusion emphasizes how governance procedures shape the risk profiles of banks, rather than just boosting short-term financial gains. The results are comparable across several models that account for hidden bank-specific characteristics and shared historical trends, which underlines the strength of the observed link. The model's high capacity to describe the data implies that governance characteristics considerably affect the disparities in risk-taking behavior seen in banks throughout the analyzed time period.

4.3 Summary of Findings

The available research reveals that European banks largely employ governance tools to mitigate risk. While a direct correlation between governance variables and profitability isn't evident, a strong link exists between governance standards and reduced risk-taking. The findings show that the effectiveness of governance frameworks should be evaluated using risk-based outcomes, rather than standard profitability indicators.

4.4 Robustness Checks

To confirm the reliability of our findings, we undertook additional robustness checks. These tests are aimed to confirm the results' reliability across varied situations and assumptions. We adjusted critical parameters, re-estimated the models using different specifications, and then examined how sensitive our conclusions were to potential outliers. Each of these procedures is critical for increasing the dependability of our analysis.

To confirm the trustworthiness of the first findings, numerous additional models were estimated. To address concerns about the likelihood of simultaneous effects and reverse causality between capitalization and risk-taking, governance discipline was measured with a one-period lag. Moreover, employing various models that eliminated extreme data points gave comparable results. In addition, investigations of several bank groups, separating larger and smaller institutions, indicated that the negative association between governance and risk-taking isn't limited to a certain type of bank.The key findings are consistent across all tests, reaffirming the notion that better governance is consistently connected to less risk-taking by banks.

5. Conclusions

This paper studied the relationship between governance and risk-taking in publicly traded European banks, focusing on the time after the financial crisis and the resulting regulatory adjustments. The 2007–2008 global financial crisis, which revealed significant governance weaknesses, and the subsequent COVID-19 epidemic, have collectively emphasized risk containment as a primary objective in reforming bank

governance and pay policies. Using bank-level panel data from the European Banking Authority (EBA) Transparency Exercise, encompassing the years 2021 to 2024, and a fixed-effects model, this study assessed the consistent link between governance-related indicators and balance-sheet risk. The data indicates a substantial and statistically significant association between governance, as assessed by the Common Equity Tier 1 (CET1) capital ratio, and bank risk, as represented by the leverage ratio.Banks boasting elevated Common Equity Tier 1 (CET1) ratios present a markedly reduced risk profile inside their financial statements. The bond endures, a constant even when factoring in the bank's scale and the ebb and flow of broader patterns. In contrast, models that focus on short-term profitability, like return on equity, don't exhibit statistically significant results. These findings, when evaluated together, support the concept that banking governance predominantly relies on prudential techniques. These strategies help manage leverage and reduce risk, instead of immediately influencing short-term profitability. The results have two significant consequences. The authors begin by explaining the policy reasons behind the EU's post-crisis reforms, particularly CRD IV. This directive intends to increase oversight and match financial incentives with long-term stability. Therefore, the research reveals a close correlation between the quality of governance, the effectiveness of supervision, and the ensuing risk levels. This is because capitalization reflects both statutory needs and internal governance choices. Furthermore, the results underline the significance of assessing governance effectiveness using risk-adjusted indicators that align with financial stability goals, rather than just relying on profitability measures that could potentially hide risky behavior.

At the same time, the analysis reveals limitations, which identifies areas for future investigation. This study focuses on the period after the pandemic, specifically examining a set of publicly traded European institutions. The results in an unbalanced panel dataset, which implies there are very few observations for each bank and year.

Moreover, while Common Equity Tier 1 (CET1) provides a useful measure of governance within a prudential context, it does not directly evaluate board independence, the incentives offered to directors, or the differences in pay between executive and independent directors, as the study's theoretical framework suggests.

Therefore, future research should incorporate extensive data on governance and pay. This should involve metrics of board independence, how directors are paid, and the use of deferred or instrument-based compensation. This approach allows for a direct study of how remuneration structures affect the quality of oversight and the level of risk taken.

A more full understanding of how institutional circumstances affect the impact of governance and compensation changes might be accomplished by considering the periods before and after the implementation of CRD IV, and by explicitly distinguishing between emerging and developed European markets. The outcomes of this study have substantial consequences for regulatory agencies and lawmakers. First, they favor the continued use of capital-based governance systems, which are designed to curb excessive risk-taking in the banking sector. Moreover, the results suggest that evaluations of governance effectiveness should prioritize risk-based indicators above measures of short-term profit, especially in institutions that are vital to the financial system.

The findings underscores the need of uniform supervisory practices across Europe. This is because the way governance is enforced seems to be a critical aspect in shaping banks' risk profiles within a united regulatory system. These findings add to the expanding corpus of research that ties how banks are governed with their financial stability. The authors propose that the success of governance is best characterized by how

well it manages risk, which aligns with the goals of regulatory measures made following a crisis.This position is especially relevant for regulators, shareholders, and policymakers who are trying to increase the resilience of European banking institutions in the face of evolving macro-financial risks.

Authors' Contributions:

The authors contributed equally to this work.

References:

Aebi, V., Sabato, G., & Schmid, M. (2012). Risk management, corporate governance, and bank performance in the financial crisis. *Journal of Banking & Finance*, 36(12), 3213–3226. https://doi.org/10.1016/j.jbankfin.2011.10.020

Amin, A., Li, X., & Zhang, Y. (2024). Independent directors' connectedness and bank risk-taking. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.4940835

Anginer, D., Demirgüç-Kunt, A., Huizinga, H., & Ma, K. (2018). Corporate governance and bank capitalization strategies. *Journal of Financial Intermediation*, 35, 106–121. https://doi.org/10.1016/j.jfi.2017.12.002

Basel Committee on Banking Supervision. (2014). *Basel III leverage ratio framework and disclosure requirements*. Bank for International Settlements.

Bebchuk, L. A., & Spamann, H. (2010). Regulating bankers' pay. *Georgetown Law Journal*, 98(2), 247–287.

Beltratti, A., & Stulz, R. M. (2012). The credit crisis around the globe: Why did some banks perform better? *Journal of Financial Economics*, 105(1), 1–17. https://doi.org/10.1016/j.jfineco.2011.12.005

Ben Bouheni, F., Idi Cheffou, A., & Jawadi, F. (2018). Analyzing governance structure of French banking groups. *Research in International Business and Finance*, 44, 40–48. https://doi.org/10.1016/j.ribaf.2017.05.016

Boivie, S., Bednar, M. K., Aguilera, R. V., & Andrus, J. L. (2016). Are boards designed to fail? The implausibility of effective board monitoring. *Academy of Management Annals*, 10(1), 319–407. https://doi.org/10.5465/19416520.2016.1120957

Dalton, D. R., Hitt, M. A., Certo, S. T., & Dalton, C. M. (2007). The fundamental agency problem and its mitigation: Independence, equity, and the market for corporate control. *Academy of Management Annals*, 1(1), 1–64. https://doi.org/10.1080/078559807

Demirgüç-Kunt, A., Martinez Peria, M. S., & Tressel, T. (2015). The impact of the global financial crisis on banks' capital. *Journal of Financial Stability*, 20, 1–15. https://doi.org/10.1016/j.jfs.2015.07.002

Erkens, D. H., Hung, M., & Matos, P. (2012). Corporate governance in the 2007–2008 financial crisis: Evidence from financial institutions worldwide. *Journal of Corporate Finance*, 18(2), 389–411. https://doi.org/10.1016/j.jcorpfin.2012.01.005

European Banking Authority. (2015). *Guidelines on sound remuneration policies under Articles 74(3) and 75(2) of Directive 2013/36/EU*. EBA.

European Banking Authority. (2021–2024). *EU-wide Transparency Exercise*. European Banking Authority.

Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *Journal of Law and Economics*, 26(2), 301–325. https://doi.org/10.1086/467037

Ferrarini, G. (2015). *CRD IV and the mandatory structure of bankers' pay* (ECGI Law Working Paper No. 292/2015). European Corporate Governance Institute. http://ssrn.com/abstract=2593757

Khatib, S. F. A., Al Amosh, H., & Ananzeh, H. (2023). Board compensation and bank performance: The moderating role of governance mechanisms. *Journal of Financial Reporting and Accounting*, 21(2), 345–366.

Laeven, L., & Valencia, F. (2018). Systemic banking crises revisited. *IMF Working Paper*, WP/18/206.

Minton, B. A., Taillard, J. P., & Williamson, R. (2014). Financial expertise of the board, risk taking, and performance: Evidence from bank holding companies. *Journal of Financial and Quantitative Analysis*, 49(2), 351–380. https://doi.org/10.1017/S0022109014000283

Nikolić, J., & Babić, V. (2016). Corporate governance in transition economies: Ownership concentration vs. ownership dispersion. *Economic Horizons*, 18(3), 237–249. https://doi.org/10.5937/ekonhor1603237N

Ongore, V. O., K'Obonyo, P. O., Ogutu, M., & Bosire, E. (2014). Board composition and financial performance: Empirical analysis of companies listed at the Nairobi Securities Exchange. *International Journal of Economics and Financial Issues*, 5(1), 23–43.

Petersen, M. A. (2009). Estimating standard errors in finance panel data sets: Comparing approaches. *Review of Financial Studies*, 22(1), 435–480. https://doi.org/10.1093/rfs/hhn053

Sandel, M. J. (2009). *Justice: What's the right thing to do?* Farrar, Straus and Giroux.

Vallelado, E., Andrés, P., & Reig, C. (2018). European banks' executive remuneration under the new European Union regulation. *SSRN Electronic Journal*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5080351

Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data* (2nd ed.). MIT Press.

Anexxes

Table 3. Fixed-Effects Regression Results: Governance and Bank Risk

Dependent variable: Leverage Ratio

Variables	(1) Baseline Model	(2) Lagged Governance	(3) With ROE Control
CET1 Ratio	0.083***	–	0.079***
	(0.021)		(0.024)
CET1 (t−1)	–	0.076***	–
		(0.025)	
Log Assets	0.011	0.010	0.009
	(0.008)	(0.009)	(0.008)
ROE	–	–	0.004
			(0.003)
Constant	3.412**	3.105**	3.287**
	(1.302)	(1.411)	(1.356)

Fixed Effects

Bank Fixed Effects		Yes	
Year Fixed Effects		Yes	

Model Statistics

Statistic	(1)	(2)	(3)
Observations	66	54	66
Number of Banks	18	18	18
R^2 (within)	0.42	0.39	0.43
F-statistic	12.84***	10.77***	11.95***

Notes: Standard errors clustered at the bank level are reported in parentheses.
*** p < 0.01, ** p < 0.05, * p < 0.10

Appendix A. Panel Dataset Structure

Table A1. Structure of the Panel Database (2021–2024)

Variable Name	Symbol in Model	Definition	Measurement	Role
Bank Identifier	i	Unique bank code	Categorical	Panel ID
Year	t	Time period (2021–2024)	Numeric	Time fixed effects
Leverage Ratio	Risk_it	Tier 1 Capital / Total Exposure	Percentage (%)	Dependent variable
CET1 Ratio	Governance_it	Common Equity Tier 1 Capital / Risk-Weighted Assets	Percentage (%)	Main independent variable
Log Total Assets	Size_it	Natural logarithm of total assets	Continuous	Control variable
Return on Equity	ROE_it	Net income / Shareholders' equity	Percentage (%)	Alternative dependent variable
Lagged CET1	CET1_it-1	CET1 ratio lagged one period	Percentage (%)	Robustness check

Table A2. Panel Structure

Characteristic	Description
Dataset Type	Unbalanced panel data
Number of Observations	66 bank-year observations
Countries Included	Austria, Poland, Czech Republic, Hungary, Romania, Slovenia, Baltic States
Period Covered	2021–2024
Data Source	European Banking Authority (EBA) – EU-wide Transparency Exercise
Estimation Method	Fixed-effects panel regression
Standard Errors	Clustered at bank level

Model Specification

$$LeverageRatio_{it} = \beta_1 CET1_{it} + \beta_2 LogAssets_{it} + \alpha_i + \delta_t + \varepsilon_{it}$$

Where:
α_i = bank fixed effects
δ_t = year fixed effects
Standard errors clustered at bank level

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ORIGINAL PAPER

Food and Politics: State Food Controls in Totalitarian Regimes

Laetitia Casangiu[1)]

Abstract:
This study brings to the forefront a lesser-known aspect of private life under two political regimes at opposite ends of the political spectrum, from different historical periods. It examines the state-imposed restrictions on food supply and consumption under the Fascist regime in Italy and those established by the Communist regime in Romania, which share many points in common despite the numerous ideological differences and the temporal and geographical distance between them.

Keywords: *nutrition, autarky, communism, fascism, state food controls, totalitarianism.*

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Introduction

The procurement of raw materials and the food necessary for nourishment has always played an essential role in the life of every individual and the society to which they belong. Consumer tastes, dietary habits, and the rituals of serving meals have evolved historically, leaving a strong imprint on the community of origin.

In defining gastronomy, we observe a terminological approach of progressive intensity: from the concept of nutrition, which consists of procuring food and satisfying an essential need of the human body, to that of specific cuisine, in which characteristic elements take shape based on local raw materials, the occupations of the local inhabitants, and external influences, culminating in the concept of gastronomy, which is "the art of cooking and eating well" (Kivela & Crotts, 2006: 354-355).

Nutrition differentiated early humans from animals and other entities through the transformation of primary products from nature - initially with the aid of fire, and subsequently through more elaborate methods of cooking and food preservation: "Besides the rules and rituals of conviviality, food itself had played an essential role in establishing human identity." (Flandrin & Montanari, 2011).

Diet represents an important cultural (Montanari, 2018, 10) and identity-related factor which, in conjunction with language, traditions, and beliefs, "creates the feeling of belonging or social differentiation and, together, they transmit the values of society, inserting themselves at the very heart of the process of constructing an identity." (Stano, 2015).

In this study, we will primarily address the political aspect of this topic, highlighting the consequences that may derive on a social level.

Given the recent emergence of a certain nostalgia in Europe for the totalitarian regimes of the past, it may be useful to refresh our memory regarding specific aspects that had direct consequences on the private lives of the population that suffered first-hand the effects of the decisions enacted by the authorities.

As Gianfranco Marrone states in the article published in the volume "Cucina politica. Il linguaggio del cibo fra pratiche sociali e rappresentazioni ideologiche", “the cuisine and the politics are two cultural spheres that rarely converge” and when they do, it concerns policies regarding agricultural production, the presence and distribution of food across the planet, and consumption policies (Marrone, 2020: 190).

The two fields also intersect when figures from public or political life present a novel aspect of their lives by publishing cookbooks set in a specific historical period. Such is the case of Queen Margaret of Romania who, in the volume "Carte regală de bucate" (“The Royal Cookbook”), alternates culinary family recipes with those from the great royal courts of Europe. Even if these seemingly “are presented distinctly from the noble portraits of the personalities who prefer or generate them (personalities who, through textualization, have become literary characters), a discerning reader easily perceives both a strong connection between the respective dish and the narrative pretext-character for whom it serves as a true emblem, as well as the specific Romanian epic layers that seem to depict a direct confrontation between the discourse of art (even culinary art) and that of the unfolding contemporary history.” (Casangiu, 2012: 239).

The kitchen-politics binomial can therefore be more cohesive in a specific historical context than anyone might imagine. In the two regimes analysed in the present article, food can simultaneously constitute a weapon for political propaganda and a coercing instrument over the population.

In the preface to the volume "Quando il fascismo dettava la dieta. La propaganda a tavola, tra sovranità alimentare e autarchia", Alberto Grandi and Daniele Soffiati emphasize that, despite the Italian fascist period being one of the most analysed and studied eras, the food and the Italian cuisine of that time are the least scientifically addressed. Paradoxically, elements from remote periods are analysed, such as certain dishes from Antiquity and Middle Ages, while important aspects of the interwar period are glossed over or given marginal space. A rigorous and meticulous research of the editorial production of the era and the press of the time would make an important contribution to the knowledge of Italian cuisine's evolution and would offer new interpretations for the history of Fascism. (Grandi&Soffiati, 2025: 5-6).

Once the totalitarian regime was overcome, the dishes may remain the same, but tastes change when, instead of a controlled economy, a market economy based on free trade is established in a developing country. (Capatti, 2014: 3)

Regarding the Communist period in Romania, there are numerous press articles and literary memoirs that describe the hardships suffered by the population in that era. A scientific approach of the phenomenon can be found in the article of researcher Mioara Anton, *Cultura penuriei în anii '80: programul de alimentație științifică a populației (The Culture of Shortage in the 1980s: the Scientific Dietary Program for the Population),* published in 2015, in *Revista istorică*, while Mihai Trăilă brings a complex and documented contribution, in the volume *În umbra "Epocii de Aur": raționalizare, austeritate și criză în București (1979-1989) (In the Shadow of the 'Golden Age': Rationing, Austerity, and Crisis in Bucharest (1979–1989))*, published in 2025 by Editura Militară, which represents the results of his doctoral studies, focused on the analysis of food and energy rationing policies during Socialist Romania.

Research methodology

The research is multidisciplinary and interdisciplinary in nature, from a historical, economic, anthropological, and sociological perspective. The research methodology is based on the comparative analysis of specialised literature, synthesizing and structuring information while emphasising the similarities and differences of the two regimes.

The study is a comparative one, identifying the similarities and the differentiating elements between the two regimes.

Contents

Food restrictions during Mussolini's Fascist regime: historical context

While much has been written about the Fascist regime in Italy, paradoxically, less has been written about food during that period and its consequences on the evolution of Italian gastronomy. Italian cuisine between the two World Wars is to be found just in certain chapters of larger works or a statistical approach in socio-economic analyses (Grandi&Soffiati, 2025: 5-6).

After Italy invaded Ethiopia (the occupation lasted between 1935 and 1941), League of Nations imposed some sanctions against it, such as: the member states were forbidden to import any type of products from Italy, to grant loans, and to export to it raw materials and other goods of military use. These measures triggered a series of grievances to Mussolini's regime who started an aggressive propaganda against the sanctions he considered unjust. As a primary response, the Fascist regime started the autarky campaign at the General Assembly of the Corporations on March 23, 1936, on which occasion Mussolini declared that Italy's main objective was to achieve economic autonomy in the shortest possible time (Laforgia, 2025: 32-33). From that moment on, Italians' diet, "for

twenty years, was characterised by a combination of austerity and propaganda. The worse the situation became, the more sacrifices Mussolini demanded from his people in the name of creating a new Roman Empire" (Dickie, 2007: 270). Fascist food and culinary policy were supposed to encourage a return to regional gastronomic traditions and rural cooking; instead, it promoted a Spartan austerity (Meldini, 2013: 81)

This period represented the preparation for what was to follow during the war, when the most frequent word in recipes was "without". The cuisine of those times is remembered as a cuisine of hunger and scarcity in which people tried to manage with the little they had. (Bertolo, 2017: 28).

Food restrictions during Ceaușescu's Communist regime: historical context

The economic crisis brought by World War II, the Soviet military occupation, the establishment of the Communist regime, led to a decline in the culinary discourse in the public sphere. During Ceaușescu's regime, the first dysfunctions in the population's supply appeared since the end of 1974 when "numerous shortages in basic food products were signalled on the Romanian market, mainly for sugar and oil" (Burakowski, 2011: 259). The darkest period of food shortages, however, starts after the adoption of Law no. 13/1980 on December 19, 1980, regarding the establishment, the distribution and the use of resources by county for supplying the population with meat, milk, vegetables, and fruit. Later, on October 10, 1981, the State Council issued a decree regarding the prevention and combating of speculation. Essentially, the acquisition of basic food products in quantities exceeding a family's needs for a month was punished with imprisonment ranging from six months to five years. During the same period, in July 1982, the rationing of food products was introduced at the same time with the launch of the Scientific Dietary Program for the population which was in place until the 1989 Revolution. This program, "imposed in a period of economic austerity, did not have the aim to improve the quality of the Romanians' diet, but rather responded to the regime's needs of rationing and economizing" (Anton, 2015: 345).

There are multiple causes for the shortages during Ceaușescu's regime highlighted in the "Final Report" of the Presidential Commission for the study of the Communist dictatorship in Romania. One of these is found within the political and economic system of centralized organisation, which entailed both the accumulation of resources at the centre for redistribution, and the planning of all economic activities within the context of extensive industrialisation. The consequences directly impacted the population through the neglection of its consumption needs (Tismăneanu, 2006: 441).

Other factors mentioned in the quoted report are of exogenous nature and regard the global economic crisis of the 1970's, following which Romania, wishing to continue its industrialization policy, contracted numerous foreign loans on unfavourable terms thus finding itself caught in the interest rate trap. The investments, undertaken especially with the purpose of developing the heavy industry, entailed an enormous sacrifice for the population that struggled to cope with shortages of food, essential goods and energy. Ceaușescu's decision to prepay the external debt further intensified the hardships, and implicitly, the discontent of the country's citizens.

"The rations of the urban residents for bread, meat, sugar, eggs, oil, butter and flour varied from one county to another and from year to year. As for the villagers, their minimal needs were only ensured for sugar and oil, provided they delivered the products contracted with the state" (Betea et al, 2015: 167). As Nicolae Ceaușescu thought that the population's food problems were not the result of lack of supply on the market but rather

of the bad culinary habits the Romanians had, the series of restrictive measures culminated with the introduction, in 1984, of the Scientific Dietary Program for the population developed by academician Iulian Mincu. During this entire period, despite the numerous shortages, Romanian gastronomy evolved and reinvented itself, new recipes appeared, some ingredients that were hard to find were replaced with others, and a development occurred alongside the official policy.

The citizens of Socialist Romania "who in theory lived in one of the most prosperous and auspicious periods in the country's history, actually had to go through great lengths to survive. Essential food (bread, sugar, oil, eggs, milk, meat) had become scarce goods, despite the rationing measures imposed by the regime. Imports of consumer goods and other products, such as pharmaceuticals, were drastically reduced" (Tismăneanu, 2006: 445).

Similarities between the two totalitarian regimes during food restrictions

Exogenous factors.

During both political regimes, certain external circumstances lay at the basis of the food restriction measures, justifying the extreme measures of the authorities on the domestic front.

It: After Italy invaded Ethiopia, which was turned into a colony (1935), League of Nations**,** based in Geneva, imposed economic sanctions against Italy which led to a strong reaction from the fascist leader, using this event as a pretext to start a massive autarkic propaganda campaign and to impose increasingly severe austerity measures.

Ro: In the context of the global economic crisis, the International Monetary Fund (IMF) and the World Bank initiated a stricter lending policy, simultaneously conditioning them to restructure the industry with high energy consumption, which Ceaușescu considered to be an interference of these institutions into the domestic affairs of the country. At the end of 1981, he decided to pay off Romania's foreign debt, with disastrous consequences on the living standard of the Romanians during the last decade of the Communist regime. (Constantin, 2020: 321)

Autarky

The word "autarky" comes from Greek, *Autarkeia (autos + arkeus)*, and it means to be self-sufficient. In the context of this research, autarky refers to a country capable of producing on the domestic front all that is needed for its economy and consumption, thus becoming independent of foreign sources. (Simonetti, 2019).

It: The fascist regime launched the autarky campaign at the General Assembly of Corporations on March 23, 1936, when Mussolini declared that Italy's main objective was to achieve economic autonomy in the shortest possible time (Laforgia, 2025: 32-33). The Duce (Mussolini) himself declared for *Domus* magazine, in the issue of June 1, 1940, that all people should have an autarkic mentality, meaning they must give up consuming those goods that were not considered indispensable and which could be replaced with national products to contribute to the country's trade balance. (Cavallero, 2009: 33)

Ro: In Romania the autarkic regime was established through two decrees regarding territorial self-governance and self-supply. Specifically, these were Decree no. 306 of October 9, 1981, regarding the measures to prevent and combat acts that affected the proper supply of the population, and Decree no. 313 of October 17, 1981, concerning measures related to territorial self-governance and self-supply.

Ceaușescu's regime considered autarky a recipe for success for repaying the foreign debt, without considering the disastrous economic and social consequences. (Trăilă, 2025: 51).

The massive exports of goods, though the industrial products were uncompetitive on foreign markets, focused mainly on agricultural products, leading to great domestic imbalances.

Propaganda

It: In Fascist Italy, an intense propaganda was launched to support the consumption of domestic foods. Rice, along with potatoes and corn, were meant to replace pasta in the daily diet, mostly of foreign origin, to help reduce import costs (De Grazia, 2023: 230).

Another example of intense propaganda is that of encouraging fish consumption. Despite the obsessive promotion of fish-based diets through newspapers and cookbooks, the Italians living in inland areas were not convinced to eat more fresh fish. Only in the poorer areas was dry hake the most popular holiday dish (Vené, 1988: 77).

Ro: In Communist Romania, the obsession with paying off foreign debt led to the massive export of agricultural and food products and, subsequently, to the creation of a shortage on the domestic market. However, certain products were available in excess, such as frozen fish, "which was promoted but not purchased. The Romanian Ocean fishing fleet ranked fourth in the world. Therefore, fish was found in abundance, and anything found in abundance is rejected a priori because you get the feeling that it is being shoved down your throat" (Muzeul țăranului român, 2003: 254).

In the absence of television, represented exclusively by the public channel, which had a broadcasting schedule of only a few hours a day and was monopolized by programs dedicated especially to political news, information was conveyed primarily through newspapers, magazines and publications. Almanacs and magazines presented portraits of extraordinary women who stood out in the workplace, as well as heroine mothers dedicated to large families. The commercial advertising pages from almanacs, such as *Femeia*, *Flacăra* and *Turistic* from the 1970's and 1980's, focused exclusively on the presentation of Romanian products: canned vegetables and fruit, frozen fish and derived products, and pastry products. As early as 1984, Elena Ceaușescu, the dictator's wife, had come to be considered the second-in-command in the state, with the official position of First Deputy Prime Minister. "In her capacity as head of the CC of PCR, President of the National Council for Science and Technology and First Deputy Prime Minister of the Government, Ceaușescu's wife had the other dignitaries subordinated to her" (Betea et al., 2012: 235). She was also responsible for the propaganda and supervised all the programs proposed by the head of the department (idem, 249).

The totalitarian regime's preoccupation with a temperate lifestyle

It: Since the beginning of the 1920-1930 decade, the Fascist regime launched the manifesto of change for the new type of man. Mussolini himself spoke during some medical congresses to show his theories regarding diet and lifestyle, from which he excluded pasta and alcohol on the grounds that they slowed down the power of reaction and made Italians less belligerent. The creation of the new man involved several stages, including "procreation, physical and mental health, marriage, education, and therefore also diet" (Grandi & Soffiati, 2025: 9).

In 1935, Mussolini declaimed publicly his dietary principles claiming that his body had become a supervised and controlled engine which worked with absolute

precision, and that he followed exact dietary rules in which meals were frugal (Simonetti, 2019).

The magazine "La Cucina Italiana", the most important gastronomic publication in Italy, also became an instrument for the regime's propaganda, and between 1936 and 1939, adopted the autarkic rules supporting the renunciation of meat consumption twice a week, the adoption of a diet that included raw food, at the same time commending national products such as rice and fish. The magazine also became a supporter of diets and nutritional rules for keeping fit, despite the food shortage and of the numerous necessities. In the pages of the magazine a real campaign was carried out against obesity and excess fat, considered a hazard for health, but also a harmful factor for feminine aesthetics (Simonetti, ibidem). The vegetarian movement also progressively became part of the fascist culture, creating a lifestyle model based on the consumption of fruit and vegetables and on outdoor physical activity (Capatti, 2025: 12).

The gradual introduction of the health aspects took place both in daily cookbooks and in the avant-garde texts and possibly represented a starting point for a "biopolitical" use of food which has its origin in the Fascist period, and it extends, evolving, into the present day (Cervelli, 2019: 24).

Ro: In the 1980's, academician Iulian Mincu published numerous papers regarding the diet of the population, underlining the correlation between countless metabolic diseases and an inappropriate consumption of foods. Therefore, in 1978, „*Alimentația rațională a omului sănătos*" (*The Rational Diet of a Healthy Person*) was published, which represented the basis for the Scientific Dietary Program of the population introduced in 1984. This program had as its main motto the fight against obesity, with the reduction of food consumption among the population from 3300 to 2800-3000 calories daily. Theoretically, the planned consumption did not necessarily mean "a drastic decline in the population's living standards", but no economy was made, in the context in which "procuring food products constituted an increasingly difficult problem for the population" (Burakowski, 2011: 466). Procuring food was becoming increasingly deficient, with queues in front of all stores, situation that continued until the fall of the Communist regime.

Food rationing – card-based distribution

It: The ration card for the procurement of certain foods was introduced in Italy in January 1940, first for sugar and coffee (this being later removed from sale), then, since October, also for oil, fat, lard, and for pasta and rice at the end of the year. As of October 1, 1941, bread was also rationed (200 grams per day per person, with an additional allowance for those doing heavy work) (ANPI, 2015: 18-19). The ration cards were distributed by the local authorities every two months for each family member. The main purpose of autarky and the rationing of food products once the ration cards were introduced was pressuring the Italians to consume as many national products as possible (Simonetti, 2019)

Ro: The decision to pay off the foreign debt resulted in increased exports, aimed at attracting foreign currency into the country, and a reduction in the import of goods. At the same time, under conditions of economic scarcity, the purchase of basic food products (bread, meat, milk, eggs, oil, flour) was rationed, and for many types of products it was carried out only using ration cards.

Through Decree no. 306 of October 9, 1981, certain measures were implemented with the main objective of combating and preventing acts liable to affect the proper supply

of the population. Article 1 of the mentioned legislative act defined the offence of speculation, which included the purchase of food products for the purpose of hoarding supplies. Therefore, purchasing quantities that exceeded the monthly household consumption needs was not permitted for: oil, sugar, flour, corn flour, rice, coffee (Trăilă, 2025: 69). Articles 3 and 4 of the decree indirectly introduced the card rationing of basic food products, imposing the local councils to take measures to ensure that these categories of products were sold only to people living or employed in units and institutions within the respective locality. The rationing system based on cards was not identical throughout the country, but it depended largely on the capabilities of the local authorities to distribute the goods to the population.

The personality cult

It: The diet of the Italian people became increasingly precarious throughout the twenty years of Fascism, representing a combination of austerity and propaganda. Even though the situation was further deteriorating, Mussolini demanded the people to make ever greater sacrifices, being driven by imperialist ambitions, in the name of establishing a new Roman Empire (Dickie, 2007: 270). In 1932, on the ten-year celebration of the March on Rome, an exhibition of the Fascist Revolution was organised, Mussolini's figure predominating in all the exhibits displayed. He considered himself the undisputed leader, capable of inspiring a new faith able to transform the masses into a "totalitarian organised moral community" that could lead to the unification of the nation. (Focus, October, 2013)

Ro: In the 1980's, the personality cult was developed to an unprecedented level, being fuelled also by those in the higher structures of the state political apparatus. On the one hand, this represented "a means by which they attempted to mask Ceaușescu's lack of legitimacy, the failure of the economic policy and the social crisis, and, on the other hand, to channel the energy of the population in order to exclude uncontrolled occurrences" (Constantin, 2020: 327).

Differences between the two totalitarian regimes during food restrictions

The role of the woman

It: During the Fascist regime, the housewife played a central role in adhering to food restrictions, in choosing and preparing the ingredients available on the market. The magazine *Cucina italiana* often contained appeals addressed to the housewives who had to strive to make dishes previously considered unappealing seem tasty. The woman was considered primarily responsible for the destiny of the people (Laforgia, 2025: 39). A real campaign of awareness and mobilisation of the population was launched: in November 1936, the work *Le massaie contro le sanzioni* (in translation "Housewives Against Sanctions") by Lidia Morelli was published (Laforgia, 2025: 81). In 1938, she published *Per voi massaie d'Italia* (in translation "For You, Housewives of Italy"), in which she praised the Duce (Mussolini) for his role as a father who oversaw changes in all fields (Bertolo, 2017, 7). Another author, Ada Bonfiglio Krassich, launched the volume *La cucina italiana in tempo di sanzioni* (in translation "Italian Cuisine During the Sanctions' Period") in 1936, in which she addressed housewives asking them to contribute to the change of culinary culture, in the sense of modifying consumption habits during restrictions. An important figure in the field of culinary publications was Petronilla who offered housewives advice and recipes belonging to an autarkic cuisine that went from "little" to "nothing" (Ceretta, 2010: 10-14).

Ro: During the Communist regime in Romania, women gained a considerable position in society, being present and active outside the household. They were considered an important pillar in building modern society, across all sectors of the economy: they were active in industry, in research, in agriculture, the housewife role being a secondary one.

Women "had to adopt the activist model, to get involved in women's organisations (established at all levels and coordinated centrally)" (Drăghici, 2020: 92) and to simultaneously assume the roles of mothers, wives, workers, citizens. Without giving up their central role in the household, the woman had to ensure the nation's birth rate, deliver maximum productivity at the workplace, and be civically active.

The role model to follow, supported by the regime's propaganda, was "world-renowned scientist" Elena Ceaușescu.

Cookbooks

A cookbook is not just a collection of ingredients and instructions necessary for their preparation, but it is the collective history of peoples (Simonetti, 2019).

It: During the peak period of Italian Fascism, alongside autarkic cookbooks, a propaganda press gained momentum, based on new publications, magazines, and cookbooks, which aimed to educate housewives in the rational use of the little resources at their disposal (ANPI, 2015: 19)

Ro: In Communist Romania, there was a huge discrepancy between the content of cookbooks, which continued to appear with the same type of recipes as before as if nothing had changed, and the social reality in which many of the ingredients necessary to prepare a dish or dessert presented in those publications were not available. From the accounts of those who were adults during that period, we learn that around the holidays people queued for weeks on end to purchase the necessities to put on the Christmas or Easter table. An in-depth analysis of the culinary publications in a political and social context full of restrictions and deprivations is conducted by Adriana Sohodoleanu in the article entitled *Apetitul socialist: ce citim în cărțile românești de bucate dincolo de rețete?* (*Socialis*t *Appetite: What Do We Read in Romanian Cookbooks Beyond the Recipes?*), published online on the editorial platform "Iscoada" in 2021 (Sohodoleanu, 2021).

Conclusions

This study, without claiming to be exhaustive, offers a new research perspective on two political regimes that may have convergence points even though they appear incompatible doctrinally, ideologically, and historically. The analysis of aspects related to food restrictions in the two totalitarian regimes serves to highlight numerous similarities between them. Even though they involve two different historical periods and doctrines at opposite ends, the similarities, through the almost identical repetition of methods for implementing reprehensible measures, show us that one never learns enough from the lessons of history and that history often repeats itself.

References:

ANPI, Comune di Milano, (2015), *Dal pane nero al pane bianco. L'alimentazione in Italia tra fascismo, guerra e liberazione*

Anton, M., (2015), *Cultura penuriei în anii '80: programul de alimentație științifică a populației*, *Revista istorică* 26 (3-4), 345-356

Bertolo, B.,(2017), *Donne e cucina in tempo di guerra. Dal '39 al '45: il conflitto raccontato attraverso le ricette «della fame»*, Susalibri

Betea, L., Mihai F.-R., Țiu, l., (2015), *Viaţa lui Ceauşescu – Vol.1-Ucenicul Partidului*, Editura Cetatea de Scaun, Târgovişte

Betea, L., Mihai F.-R., Țiu, l.,(2013), *Viaţa lui Ceauşescu – Vol.2- Fiul Poporului*, Editura Cetatea de Scaun, Târgovişte

Betea, L., Mihai F.-R., Țiu, l., (2015), *Viaţa lui Ceauşescu – Vol.3- Tiranul*, Editura Cetatea de Scaun, Târgovişte

Burakowski A., (2011), *Dictatura lui Nicolae Ceauşescu Geniul Carpaţilor*, Polirom, Bucharest

Capatti A., (2025), *Vegetariani. La storia italiana dal 1900 ai giorni nostri*, Slow Food Editore

Capatti A., Montanari M., (1999), *La cucina italiana*, Laterza

Capatti, A., De Bernardi, A., Varni, A., (1998), *Introduzione*, Storia d'Italia, Annali 13, L'Alimentazione, Giulio Einaudi Editore, Torino

Capatti, A., Montanari, M., (2018), *La cucina italiana, storia di una cultura,* Editori Laterza

Capatti, A., *Storia della cucina italia*, (2014), Guido Tommasi Editore, Milano

Casangiu, L.I., (2012), *Literaritate şi intertext în Cartea regală de bucate a Principesei Margareta a României/ Literariness and Intertextuality of Royal Cook Book by Princess Margarita of Romania*, in the volume: *Creaţie şi Creativitate în secolul XXI / Creation and*

Creativity in the 21st century, Ed. STEF, Iași, 2012; ISBN 978-606-575-184-2, pp. 239-246; https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2069299 (pp. 239-246)

Cavallero Enza, (2009), *Il duce, il cibo e l'autarchia*, Araba Fenice

Ceretta, L., (2010), *Le donne e la cucina fra le due guerre. Assennatezza e risparmio, consigli di ieri utili anche oggi.* Susalibri, Torino

Cervelli, P., (2019), *Regimi alimentari e regimi politici: il caso del fascismo italiano*, 2019, E|C Serie Speciale – Anno XIII, n. 27

Constantin G.S., (2020), *Viaţa cotidiană în ultimii ani ai dictaturii lui Nicolae Ceauşescu (1980-1989),* in "Urbanitas – magazine of integrated urban studies", I, 322-330

De Grazia V., (2023), *Storia delle donne nel regime fascista*, Marsilio Editori

Dickie J., (2007), *Con gusto. Storia degli italiani a tavola*, 2007, Bari, Editori Laterza

Drăghici E., (2020), *Imagini ale statutului social al femeii: abordare socio-culturală*, Annals of Dunărea de Jos University from Galaţi, Fasc. XX, Sociology, no. 15, 2020, pp. 89-118

Flandrin, J.-L., Montanari M., (2011), *Storia dell'Alimentazione*, Bari, Editori Laterza

Grandi A, Soffiati D, (2025), *Prefazione* la "Quando il fascismo dettava la dieta. La propaganda a tavola, tra sovranità alimentare e autarchia", People Storie

Kivela, J., Crotts J., (2006), *Tourism and Gastronomy: gastronomy's influence on how tourists experience a destination*, Journal of Hospitality & Tourism Research, Vol.30, no.3, August 2006 354-377

Laforgia, E., (2025), *Quando il fascismo dettava la dieta. La propaganda a tavola, tra sovranità alimentare e autarchia*, People Storie

Meldini, P., (2013), *Gli Italiani e il cibo negli ultimi due secoli*, GuaraldiLAB

Mincu, I., (1978), *Alimentaţia raţională a omului sănătos*, Editura Medicală, Bucharest

Montanari, M., (2020), (a cura di) *Cucina politica. Il linguaggio del cibo fra pratiche sociali e rappresentazioni ideologiche*, Editori Laterza, Bari

Morrone, G., (2020), *Politiche della cucina: una prospettiva semiotica*, in "Cucina politica. Il linguaggio del cibo fra pratiche sociali e rappresentazioni ideologiche", Editori Laterza, Bari, 188-202

The National Museum of the Romanian Peasant, (2003), *Anii '80 şi bucureştenii*, Editura Paidea, Bucharest

Petronilla, *La cucina del tempo di guerra*, (1977), Guaraldi Editore

Randi E., (1942), *La cucina autarchica: nozioni teoriche e pratiche di autarchia alimentare*, Conini ed., Firenze

Randi E., (1976), *La cucina del ventennio,* a cura di Guido Mondaini, Genova

Simonetti, S., (2019), *Fame di guerra. La cucina del poco e del senza*, Argot Edizioni

Stano, S., (2015), *Note per una semiotica del cibo*, în *Cibo e identità culturale*, Lexia Rivista di semiotica

Tismăneanu V., (2006), *Comisia prezidențială pentru analiza dictaturii comuniste din România*, *Raport final*, Bucharest

Trăilă M., (2025), *În umbra "Epocii de Aur": raţionalizare, austeritate şi criză în Bucureşti (1979-1989)*, Editura Militară

Venè G., (1988), *Mille lire al mese. Vita quotidiana della famiglia nell'Italia fascista*, Arnoldo Mondadori Editore

Legislation

Law no. 13 of December 19, 1980, regarding the establishment, distribution and use by county, of the resources for supplying the population with meat, milk, vegetables and fruit

Decree no. 306 of October 9, 1981, regarding certain measures for the prevention and combating of acts affecting the proper supply of the population

Website

Focus, https://www.focus.it/cultura/storia/mussolini-maestro-di-dittatura

Historia, https://historia.ro/sectiune/general/imaginea-si-rolul-femeii-in-perioada-comunista-584952.html#google_vignette

Sohodoleanu A., *Apetitul socialist: ce citim în cărţile româneşti de bucate dincolo de reţete?,* 5.05.2021, https://iscoada.com/text/apetitul-socialist-ce-citim-in-cartile-romanesti-de-bucate-dincolo-de-retete/

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ORIGINAL PAPER

Artificial Intelligence and the Reconfiguration of History Learning: An Interdisciplinary Analysis from the Perspective of Educational Sciences and Behavioral Anthropology

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Abstract:
This article proposes a new approach in learning and teaching history: the use of artificial intelligence. The novelty of this proposal resides in the fulfillment of the gap between the way of how the new generation thinks versus how the old ones do. It is essential to find a workable approach in sharing information in an adequate way to the new generation. And because the presence of AI cannot be denied, we need two things: to teach the new generation how to use it constructively in order not to lose their critical thinking or the development of IQ and at the same time to remap the informational transfer. This article highlights AI's potential to counter narrative biases, support critical source analysis, and generate innovative narrative forms for studying history. The use of AI in history education does not substitute historiographical work, but amplifies it and reorients it towards reflective, participatory, and interdisciplinary learning.

Keywords: *History Learning and AI, Artificial Intelligence in Education, Behavioral Anthropology of Learning, AI-Mediated Knowledge Construction,Human–AI Interaction in Learning.*

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1. Introduction

The premise from which we must start is that we cannot disconnect the new generation from the reality they live in, which is in line with new technological developments. From the use of social media to the use of AI, the new generation grows, develops, and learns to perceive and know the surrounding world in a way that differs from previous generations. This is why technical progress must be properly integrated, not isolated or dismissed. Thus, I consider it fundamental that we learn to use AI efficiently and beneficially, so that children's potential grows through this use, rather than being diminished.

In the pedagogy of history, the traditional paradigm—centered on the transmission of information—faces evident limits: information overload, students' difficulty in connecting events to one another, lack of critical thinking, and the perception of history as a rigid and irrelevant subject. And this was a problem long before the arise of AI technology. At least in Romanian Educational system, most of the children rejected this discipline due to the fact that they had to learn by heart dates and names without understanding how these may help them in every day life (Osiac, 2018). AI has the potential to change this perception by transforming history into an interactive, visual, narrative, and analytical space.

What we must therefore determine is how AI can support the learning of history in a way that is at once rigorous, critical, and accessible, while also being adapted to the configuration of new social and technological realities.

2. Theoretical Foundations: History, Education, and Technology

Despite the common perception that history is a static collection of data, events, and timelines, within contemporary sciences it is understood as a profound interpretive discipline situated at the intersection of source analysis, hermeneutics, and social theory. As stated before, many students distance themselves from the study of history based on the idea that it is merely a string of dates and events whose relevance they could not identify in everyday practice. Yet the historian—and history in general—does not limit itself to inventorying facts, but constructs explanations by critically evaluating sources, comparing divergent perspectives, examining multiple causalities, and analyzing power relations that shape both events and the ways in which they are recorded. In this sense, history is a process of interpretation in which raw data gains meaning through contextualization and critical dialogue.

Therefore, any technology, including artificial intelligence, that interacts with the discipline must respect this interpretive and dialogical character, avoiding the illusion of algorithmic objectivity. AI can support historical analysis only if it is integrated within an epistemological framework that recognizes the plurality of interpretations, the limits of sources, and the essential role of human reflection in the construction of historical knowledge (Santamaria-Velasco et al., 2025). Thus, history remains not only a study of the past, but an ongoing interpretive process that demands critical thinking and hermeneutic sensitivity.

The constructivist paradigm, consolidated through the contributions of Piaget and Vygotsky (Taber, 2024) and subsequently extended through socio-constructivism and connectivism, maintains that learning is not a process of passive information transfer, but

an active construction of meaning achieved through interaction, reflection, and social negotiation. In history education, AI supports constructivist learning by enabling students to actively reconstruct the past through inquiry, collaboration, and personalized exploration, transforming them from passive recipients into active agents of historical understanding (Bazanis et al., 2025).

Within contemporary history education, artificial intelligence can be understood not merely as a simple technological tool but as an extension of human cognitive capacities, capable of amplifying processes of analysis, interpretation, and reflection (Issayev & Apendiyev. 2025). Through its ability to process vast quantities of information, to identify subtle patterns, and to formulate interdisciplinary connections, AI functions as a "cognitive partner" in the act of learning and historical research (Madanchian & Taherdoost, 2025). From this perspective, AI is not limited to the role of calculator or digital archive but becomes a co-author of historical interpretation, facilitating the generation of inferences, scenarios, and hypotheses that may transcend the limits of individual human analysis. Students can use AI to compare sources, identify causal relationships, visualize complex phenomena, or formulate more sophisticated questions, thereby constructing a learning framework in which technology amplifies critical reflection rather than replacing it. In this sense, AI can support the development of advanced forms of historical thinking, offering a work environment in which human–machine interaction produces a deeper and more nuanced understanding of the past.

3. Experiential Reconstruction of the Past: Towards a Pedagogy of Immersion

The experiential reconstruction of the past represents one of the most innovative contributions of artificial intelligence to history pedagogy, as it enables students to access historical realities through visual and narrative immersion rather than abstract description (Bonsu et al., 2025). Generative AI can recreate vanished cities, simulate historical events, and model everyday life in different epochs, allowing learners to explore contexts that are no longer directly observable. Through such immersive representations, students can analyze social dynamics, compare historical transformations, and engage with the past in a multisensory manner that extends beyond traditional text-based learning.

This approach aligns with the theory of situated learning, which emphasizes that authentic understanding emerges through engagement with meaningful contexts rather than through rote memorization (Lave & Wenger, 1991). AI-generated simulations create virtual historical environments in which students can actively explore and interact, fostering deeper comprehension and contextual awareness (Smith, 2025). Furthermore, the integration of generative imagery enhances learning by activating episodic memory, which is more effective than purely verbal processing in retaining complex information (Torres-Morales et al., 2024). As a result, AI transforms history education into an immersive, interactive, and cognitively rich experience that supports diverse learning styles and promotes lasting understanding.

4. Personalization of Learning and Epistemic Equity

The integration of artificial intelligence into history education is transformative primarily through its capacity to enable highly personalized learning, thereby contributing

to epistemic equity within educational environments. Unlike traditional models that address an "average" learner, AI adapts content to each student's pace, cognitive level, and learning style, optimizing understanding and reducing disparities in access to knowledge (Almalawi, 2024). This adaptability supports a pedagogy that values diversity and promotes inclusion, making historical learning more accessible and relevant for varied learner profiles (Kulbayeva, 2025).

Furthermore, AI facilitates intelligent didactic differentiation by adjusting explanations according to students' cognitive–affective rhythms, from simplified narratives to complex, multi-layered analyses. This individualized support enhances autonomy, minimizes cognitive barriers, and fosters deeper comprehension of historical contexts. In parallel, AI significantly improves accessibility by transforming content into multiple formats—audio, visual, or simplified text—and by providing translations or adaptive pathways tailored to learners with diverse needs.

As a result, artificial intelligence not only optimizes the learning process but also democratizes access to historical knowledge, transforming history education into a more inclusive, flexible, and equitable experience.

5. Contributions of Behavioral Anthropology: AI as an Analyzer of Historical Patterns

Behavioral anthropology, an interdisciplinary field situated at the intersection of anthropology, social psychology, and cognitive sciences, investigates how collective behaviors, cultural norms, symbols, and social pressures influence historical evolution. Traditionally, the analysis of these dimensions has relied on fieldwork, qualitative interpretations, and cross-cultural comparisons, which sometimes limit the scalability of research (Naidin, 2025). What I want to underline is that the integration of artificial intelligence into this field opens a new methodological horizon: AI enables the simultaneous processing of massive quantities of historical, demographic, linguistic, and cultural data, offering a "big history" perspective on human developments. In this sense, AI can identify recurring patterns in social behavior, from the dynamics of solidarity and conflict to how communities react to climatic, economic, or political stress. By correlating these data, it becomes possible to map behavioral structures that would otherwise remain invisible at the level of traditional analysis.

Moreover, AI facilitates an understanding of how cultural and symbolic practices shape historical processes, revealing subtle connections between collective memories, rituals, founding myths, and the dynamics of social institutions. For instance, AI can analyze the evolution of identity discourses, the role of narratives in creating a sense of belonging, or the influence of political symbols on collective mobilization. This behavioral–anthropological approach allows a reconceptualization of history as an emergent system, in which individual decisions and cultural practices accumulate into significant macro-level patterns (Naidin, 2026). I argue that it is obvious that AI not only complements the traditional methods of behavioral anthropology but amplifies them, offering tools for analyzing complex relationships between culture, behavior, and historical change. In this way, AI becomes an epistemic mediator between micro-cultural narratives and macro-historical processes, contributing to a deeper and more nuanced understanding of the evolution of human societies.

Through their capacity to process very large volumes of data, artificial intelligence algorithms can detect collective patterns that would remain difficult to

observe through traditional methods of historical analysis (Jamarani et al. 2024). Using techniques such as clustering, network analysis, and predictive modelling, AI can reveal regularities in the dynamics of migrations, trade flows, and cultural exchanges, shedding light on how populations moved, interacted, and influenced each other in different periods. It can also analyze the internal structure of empires, identifying power relations, administrative nodes, and recurrent zones of instability, as well as patterns of diffusion of religious, technological, or political ideas. Likewise, algorithms can map informal networks of influence—political elites, intellectual communities, commercial groups—revealing subtle logics that shape historical evolution. This capacity to integrate disparate data into a coherent vision turns AI into a tool of macro-historical analysis that helps students understand that history is not merely a succession of events, but the result of complex interactions between actors, structures, and social processes.

One of the most valuable contributions of artificial intelligence to historical research and teaching lies in its capacity to integrate and correlate large volumes of data drawn from economic, climatic, and demographic sources, offering a multi-level perspective on historical phenomena. We know that, traditionally, historians have faced methodological limits related to the availability and comparability of data, as well as to the difficulty of analyzing multiple variables simultaneously. AI overcomes these constraints through analytical models capable of detecting complex relationships between historical events and factors such as economic fluctuations (grain prices, trade cycles), climate crises (drought, volcanic eruptions, multi-annual climate oscillations), population migrations, or technological transformations. In this way, students can understand that history is not determined exclusively by political or military decisions, but by a constellation of structural forces that are often invisible at the level of traditional textbooks (Camps-Valls, 2025).

Through this integrative approach, AI contributes to the development of systemic historical thinking, in which events are interpreted as outcomes of interactions between environment, economy, technology, and social dynamics. For example, AI can highlight links between medieval climate crises and political instability, between technological innovations and demographic transformations, or between fluctuations in food prices and popular revolts. This ability to visualize interdependencies among macro-level variables (economic structures, climate change), mezzo-level dynamics (regional processes), and micro-level realities (everyday life of individuals) transforms the study of history into a complex, interdisciplinary endeavor. In this way, AI not only amplifies analytical capacity but also promotes a deeper understanding of how historical phenomena emerge from networks of connections, offering students a holistic view of the past (Dong et al., 2025).

A significant conceptual danger in integrating artificial intelligence into the study of history is algorithmic determinism, the tendency to regard AI models as tools capable of offering exhaustive, "mathematized" explanations of historical processes. Because these models can generate graphs, predictions, statistical correlations, and causal simulations with a high degree of internal coherence, students and even teachers may be tempted to perceive history as a fully predictable system, in which events unfold according to deterministic logics (Almalawi et al., 2024). This perception is misleading. AI models function by aggregating data from the past, and algorithms identify recurring patterns rather than emergent dynamics. Thus, reducing history to a set of probabilistic relationships can ignore non-quantifiable factors such as contingency, human improvisation, unpredictable political action, or subtle cultural influences. In this way, AI

can create the illusion of a "mathematized history" that sacrifices the complexity of phenomena in favor of simplified interpretations.

Furthermore, algorithmic determinism can lead to the erosion of history's hermeneutic dimension, as emphasis shifts to statistical results rather than critical interpretation (Cotta, 2026). Students may come to believe that AI models "prove" a certain version of the past, ignoring the fact that any algorithmic analysis depends on data selection, preprocessing methods, and model-optimization criteria. This dependence on available data risks implicitly reproducing cultural biases, archival gaps, or geographic imbalances, transforming the algorithm into a mechanism that reinforces dominant narratives. To prevent these distortions, it is essential for teachers and researchers to emphasize the probabilistic, limited, and contextual nature of AI models, as well as the necessity of correlating algorithmic results with traditional qualitative analysis. Only in this way we can help AI become an epistemic partner rather than an absolute substitute for historical interpretation.

6. AI and the Critical Processing of Historical Sources

In my view, one of the most promising advantages of artificial intelligence in history education is its ability to support source verification and comparative textual analysis. AI can examine documents from different periods, translations, or authors, identifying variations in language, tone, and structure that may indicate inconsistencies, interpolations, or potential forgeries. This enhances both research and teaching by helping students understand the complexity of historical sources and the importance of contextual interpretation.

Moreover, AI enables large-scale comparative analysis, processing vast datasets to reveal recurring patterns across regions and time periods, thus fostering a deeper, transversal understanding of historical phenomena (Madanchian & Taherdoost, 2025). It also plays a crucial role in combating historical misinformation by rapidly cross-referencing claims with reliable sources and detecting inaccuracies or manipulative narratives (Ye et al., 2025). In this way, AI supports the development of critical historical literacy and informed, analytical thinking.

In my opinion, the most important aspect here is that by learning to use AI to detect falsehoods, we can improve our own ability to more easily identify such falsehoods when we encounter them online. In addition to identifying fakes, AI can contribute to the education of historical-digital literacy, helping students recognize discursive patterns specific to fake news: excessive simplifications, emotional appeals, unjustified generalizations, or references to non-existent "sources." (Stanescu, 2026) By generating clearly structured explanations, AI can show why a historical claim is problematic, what evidence it lacks, what distortions it involves, and what alternative perspectives exist in academic research. This is how technology becomes not only a verification tool but also a vector for fostering critical thinking, encouraging students to adopt a reflective stance toward information. As I stated, we live in an era in which history is often politicized or instrumentalized by the media and that is why AI offers a pedagogical framework in which students learn not only "what happened," but also how to evaluate truth, identify manipulation, and distinguish between legitimate interpretation and deliberate falsification of the past.

7. Narrative and Storytelling: History as Participatory Experience

One of the most fertile applications of artificial intelligence in history education is interactive historical storytelling, which transforms students from passive recipients into active agents of knowledge construction. Through generative models, learners can engage in simulated dialogues with historical figures, formulate questions, and explore multiple perspectives, fostering both factual understanding and critical thinking (Azevedo, 2024). Such interactions also cultivate historical empathy by encouraging students to consider the motivations, values, and constraints shaping past actors.

AI-driven branching narratives further enhance learning by allowing students to make decisions within historical contexts and observe their consequences, thereby deepening their understanding of causality and complexity (Doroudi, 2023). From a cognitive perspective, narrative-based learning activates emotional and episodic memory systems, enabling students to internalize historical experiences more effectively (Rugg & Renoult, 2025; Keller et al., 2024).

Moreover, AI supports a pedagogy of historical creativity, where students co-construct knowledge by generating alternative scenarios, composing narratives, and comparing interpretations (Adamakis & Rachiotis, 2025; Svabo et al., 2025). In doing so, it promotes interpretive plurality and a nuanced understanding of history as a dynamic and multifaceted process (Perkins & Stengel, 2025).

8. Limits, Risks, and Epistemological Dilemmas

One of the most discussed risks associated with the use of artificial intelligence in history education is the potential for visual distortion of the past. Generative models are capable of producing images with remarkable aesthetic accuracy, but which do not always reflect documented realities. These representations may include erroneous, amalgamated, or stylized architectural, clothing, or social elements, since AI operates through probabilities rather than historiographical verification (Hughes-Warrington, 2025). Students, who do not always have the necessary training to distinguish between an authentic source and an algorithmic reconstruction, may confuse the generated image with a validated historical reality, leading to the formation of mistaken conceptions. Thus, the visual dimension becomes a sensitive area in the pedagogy of history, especially for disciplines that rely on iconography, artifacts, or archaeological reconstructions.

Moreover, AI's ability to generate "realistic" images can create an illusion of visual authority, in which students grant an image the status of "evidence" simply because it appears aesthetically credible (Lima, 2024). This artificial credibility can undermine the critical process necessary for historical interpretation, reducing the complexity of the past to a singular and potentially manipulated representation. In the absence of a reflective pedagogy (Navaneedhan, 2006), students may internalize this representation as the "true" version, ignoring the fact that any reconstruction—including the one generated by AI—is a possible interpretation, not a definitive description. Therefore, teachers must accompany the use of AI-generated imagery with clear explanations about the probabilistic nature of visual generation and encourage students to compare images with authentic historical sources, in order to develop a critical visual literacy that is essential in contemporary education.

Another important risk in integrating artificial intelligence into the study of history is the emergence of a subtle form of cognitive dependence, in which students come to rely excessively on algorithms to interpret, synthesize, and evaluate historical information. In a world where AI rapidly offers summaries, explanations, and seemingly coherent connections, students may tend to substitute their own intellectual effort with automatically generated answers (Santamaria-Velasco et al., 2025). In the absence of appropriate pedagogical intervention, students risk no longer distinguishing between their own interpretation and the algorithm-mediated one, unconsciously internalizing the model's biases and abandoning the process of individual problematization.

Furthermore, cognitive dependence can affect the development of fundamental historical competences, such as working directly with sources, examining divergent perspectives, identifying the intentions behind texts, or constructing evidence-based arguments. If AI is used as a system that "delivers the final interpretation," students may perceive historical analysis as a mechanical process, reducing it to simply reading the conclusions provided by the algorithm. Also we have to teach students to use AI as a support tool, not as a substitute for their own thinking.

A major risk associated with the use of artificial intelligence in history education is the phenomenon of overconfidence in models, whereby students may come to perceive AI as a supreme epistemic authority capable of delivering the "objective truth" about the past. This mistaken perception stems from the illusion of precision offered by language models: coherent formulations, well-structured arguments, and a discursive style that mimics historiographical expertise (Madanchian & Taherdoost, 2025). Students' overconfidence in these algorithmic outputs can erode their criteria for critically evaluating sources and lead to the unproblematic acceptance of generated conclusions.

In addition, this overconfidence can have profound epistemological consequences for the formation of historical thinking, since history is not a discipline of certainties but one of interpretations. If AI is perceived as an absolute provider of explanations, students may ignore the plural and contested character of historical narratives. A form of "algorithmic determinism" may set in, where the complexity of historical processes is reduced to the model's version, and tensions between different perspectives are flattened (Qin, Zi & Ge, 2026).

Another side effect of uncritical use of artificial intelligence in the study of history is the potential erosion of intellectual effort, as the technology offers rapid, simplified solutions that are accessible without substantial cognitive engagement. History, as a discipline, presupposes a complex analytical process: identifying sources, evaluating their credibility, comparing conflicting perspectives, formulating hypotheses, and constructing evidence-based arguments.

In the long term, such a practice may result in a form of superficial learning, in which students accumulate ready-made results but do not develop robust cognitive structures. The ability to construct rigorous argumentation, to understand contextual subtleties, and to work directly with historical sources can be diminished if AI is perceived as a sufficient source of interpretation (Al-kfairy et al., 2024). To prevent this erosion, AI must be integrated into an educational framework in which emphasis is placed on process rather than outcome: students must be guided to use AI as a support tool, not as a substitute for their own analysis. By promoting a reflective pedagogy that values intellectual effort, teachers can transform technology into an ally of deep learning, rather than a shortcut that undermines cognitive autonomy.

9. Practical Examples of AI Integration in History Learning

Regarding the typology of AI-based approaches for optimizing history teaching and learning for the new generation, I would like to highlight several concrete examples. First, an effective method would be asking pupils/students to research a specific historical event. This would involve documenting the context, the actors involved, the unfolding of the event, and its consequences. All the gathered information would then be provided to an AI system, and the students would request it to generate, based on the data, either a short video or a series of representative images.

This exercise contributes to developing historical reasoning, enhancing digital literacy, and fostering the ability to transform factual information into visual, narrative, or multimodal representations that support deeper comprehension. Another possibility is to select a historical figure or event and stage a mock trial. The pupil/student must prepare both pro and contra arguments. These arguments are then introduced into an AI system, which is asked to deliver a verdict based on the evidence, as if it were a judge.

Such an exercise contributes to strengthening argumentation skills, encouraging multiperspectivity, and cultivating critical evaluation of historical evidence and interpretations.

A further approach involves asking both the pupil/student and the AI system to create an illustration based on a set of information provided by the teacher. The two drawings are then uploaded on social media to observe which representation receives more appreciation/views.

This type of activity contributes to understanding contemporary dynamics of digital visibility, promoting creativity, and enabling students to reflect on how historical narratives are visually constructed and socially validated in online environments.

Another approach is having the pupil/student write an essay about their personal history. Afterwards, the AI is asked to analyze how this individual story fits within broader global or national historical frameworks.

This exercise contributes to fostering historical consciousness, connecting micro-history with macro-history, and helping students understand how personal narratives intersect with collective processes and temporalities.

10. Conclusion

AI represents a profound transformation in the way history can be taught, understood, and accessed. It does not replace historical research; instead, it extends the interpretive field and facilitates democratic access to knowledge. Instead of a history understood as a succession of data, AI offers a history viewed as a complex system of causalities, behaviors, structures, and narratives.

The future of history education depends on the ability of teachers and researchers to use AI as an instrument of critical thinking, not as a substitute for reflection. In this sense, AI becomes an ally of history—not by changing the past, but by helping us to understand it. At the same time, if we learn to use AI correctly, we will be less exposed to the risk of believing in false information.

References:

Adamakis, M., & Rachiotis, T. (2025). Artificial Intelligence in Higher Education: A State-of-the-Art Overview of Pedagogical Integrity, Artificial Intelligence Literacy, and Policy Integration. *Encyclopedia*, *5*(4), 180. https://doi.org/10.3390/encyclopedia5040180

Al-kfairy, M., Mustafa, D., Kshetri, N., Insiew, M., & Alfandi, O. (2024). Ethical Challenges and Solutions of Generative AI: An Interdisciplinary Perspective. *Informatics*, *11*(3), 58. https://doi.org/10.3390/informatics11030058

Almalawi, A., Soh, B., Li, A., & Samra, H. (2024). Predictive models for educational purposes: A systematic review. *Big Data and Cognitive Computing, 8*(12), 187. https://doi.org/10.3390/bdcc8120187

Azevedo, L. V. de . (2024). Revolutionizing History Teaching with AI: A Journey with ChatGPT. https://doi.org/10.5281/zenodo.12611810

Bazanis, V., Bilali, A., Karatziki, Z., Katsarou, A., & Nikolaou, G. (2025). *The contribution of artificial intelligence to the learning and teaching of history in secondary education*. *European Journal of Education Studies, 12*(12). https://doi.org/10.46827/ejes.v12i12.6423

Bonsu, N. O., Zagami, J., Pendergast, D., & Boadu, G. (2025). Virtual reality utilisation in history education: Discovery through a systematic quantitative literature review. *Issues and Trends in Learning Technologies, 12*(2). https://doi.org/10.2458/itlt.5995

Camps-Valls, G., Fernández-Torres, MÁ., Cohrs, KH. *et al.* Artificial intelligence for modeling and understanding extreme weather and climate events. *Nat Commun* **16**, 1919 (2025). https://doi.org/10.1038/s41467-025-56573-8

Cotta, M. (2026) Converse Cave and Embodied Entelechia: an Integrated Philosophy of Virtuality Beyond Technological Determinism. *Philos. Technol.* **39**, 26 https://doi.org/10.1007/s13347-025-01030-z

Dong, T., Yau, K.W., Chai, C.S. *et al.* (2025), A phenomenographic approach to students' conceptions of learning artificial intelligence (AI) in secondary schools. *Educ Inf Technol* **30**, 24965–24989 https://doi.org/10.1007/s10639-025-13724-0

Doroudi, S. The Intertwined Histories of Artificial Intelligence and Education. *Int J Artif Intell Educ* **33**, 885–928 (2023). https://doi.org/10.1007/s40593-022-00313-2

Hughes-Warrington, M. (2025). *Artificial intelligence and historians' codes of ethics*. *History of Education Review*. Advance online publication. https://doi.org/10.1080/14490854.2025.2570451

Issayev, M., & Apendiyev, T. (2025). Teaching history with the help of information and digital technologies. *E-Learning and Digital Media 0*(0). https://doi.org/10.1177/20427530251379080

Jamarani, A., Haddadi, S., Sarvizadeh, R. *et al.* Big data and predictive analytics: A systematic review of applications. *Artif Intell Rev* **57**, 176 (2024). https://doi.org/10.1007/s10462-024-10811-5

Keller, T.A., Mason, R.A., Legg, A.E. *et al.* The neural and cognitive basis of expository text comprehension. *npj Sci. Learn.* **9**, 21 (2024). https://doi.org/10.1038/s41539-024-00232-y

Kulbayeva, T. A. (2025). *Artificial intelligence in history lessons: Pedagogical opportunities and advantages*. *Eurasian Science Review: An International Peer-*

Reviewed Multidisciplinary Journal, *2*(Special Issue), 2391–2402. https://doi.org/10.63034/esr-302

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press. https://doi.org/10.1017/CBO9780511815355

Lima, E. AI art and public literacy: the miseducation of Ai-Da the robot. *AI Ethics* **4**, 841–854 (2024). https://doi.org/10.1007/s43681-024-00488-5

Linden, K., Hachem, H.-H., & Kondyli, V. (2025). *Homo Promptus: Predicting the impact of generative AI on human memory and creativity*. *Memory, Mind & Media, 4*, Article e15. https://doi.org/10.1017/mem.2025.10012

Madanchian, M., & Taherdoost, H. (2025). *The impact of artificial intelligence on research efficiency*. Results in Engineering, 25, 104743. https://doi.org/10.1016/j.rineng.2025.104743

Mirea C-M, Bologa R, Toma A, Clim A, Plăcintă D-D, Bobocea A. Transforming Learning with Generative AI: From Student Perceptions to the Design of an Educational Solution. *Applied Sciences*. 2025; 15(10):5785. https://doi.org/10.3390/app15105785

Naidin, D. (2025). The Importances of Behavioral Anthropology in Class Learning Efficiency. *Revista de Științe Politice. Revue des Sciences Politiques*, (86), 9-17.

Naidin, D. (2026). Behavioural Anthropology Analysis on BookTok Community. *Journal of Applied Linguistics and Information Systems*, *2026*(6), 78-87.

Navaneedhan, C. G. (2006). *Reflective teaching pedagogy as innovative approach in teacher education through open and distance learning*. Commonwealth of Learning.

Osiac, D. (2018). Teaching students from pedagogy of primary and pre-school education to appreciate history. In V. Chis & I. Albulescu (Eds.), *Education, Reflection, Development – ERD 2017* (Vol. 41, pp. 566–571). *European Proceedings of Social and Behavioural Sciences*. Future Academy. https://doi.org/10.15405/epsbs.2018.06.66

Perkins, H., Stengel, B. Relational (Re)Organization: A Case for a Relational Reading of Relational Pedagogy. *Stud Philos Educ* (2025). https://doi.org/10.1007/s11217-025-10032-5

Qin R., Zi X. & Ge X. Digital twin-based intelligent risk assessment and decision support system for university student entrepreneurial projects. Sci Rep (2026). https://doi.org/10.1038/s41598-026-36111-2

Rugg, M. D., & Renoult, L. (2025). *The cognitive neuroscience of memory representations*. *Neuroscience & Biobehavioral Reviews, 179*, 106417. https://doi.org/10.1016/j.neubiorev.2025.106417

Santamaria-Velasco, J., Núñez-Naranjo, A., & Morales-Urrutia, X. (2025). Critical thinking and AI: Enhancing history teaching through ChatGPT simulations. *International Journal of Innovative Research and Scientific Studies*, *8*(1), 564–575. https://doi.org/10.53894/ijirss.v8i1.4403

Smith, C. (2025). *AI applications for ancient art history education*. *AI & Antiquity: Journal of Teaching and Technology in Ancient Studies, 1*(1), 67–92. doi: 10.64946/aiantiquity.v1i1.004

Stănescu, G. C. (2026). Artificial Intelligence and the Transformation of the Media System. *Encyclopedia*, *6*(2), 45 https://doi.org/10.3390/encyclopedia6020045

Svabo, C., Shanks, M., Zhou, C., Carleton, T., Characiejiene, G. (2025). Creative Pragmatics for Active Learning in STEM Education. In: Svabo, C., Shanks, M., Zhou, C., Carleton, T. (eds) Creative Pragmatics for Active Learning in STEM Education. Contributions from Science Education Research, vol 14. Springer, Cham. https://doi.org/10.1007/978-3-031-78720-1_1

Taber KS. Educational Constructivism. *Encyclopedia*. 2024; 4(4):1534-1552. https://doi.org/10.3390/encyclopedia4040100

Torres-Morales, C., Cansino, S. Brain representations of space and time in episodic memory: A systematic review and meta-analysis. *Cogn Affect Behav Neurosci* **24**, 1–18 (2024). https://doi.org/10.3758/s13415-023-01140-1

Ye, Y., Zhang, Z., Ma, T., et al. (2025). *LLMs4All: A review of large language models across academic disciplines* (arXiv:2509.19580v5). arXiv. https://doi.org/10.48550/arXiv.2509.19580

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ORIGINAL PAPER

Biblical Idioms Used in Travel-Related Contexts

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Abstract:
This article analyzes 41Biblical idioms used in travel-related contexts using the British National Corpus, blogs and social media. It, also, emphasizes both their historical (biblical) meaning which is sometimes completely forgotten and the way their meaning has shifted in modern language, namely travelling situations.
Each idiom mentioned in the paper stem from the Bible and with newly derived and synchronic meanings which can be employed in new contexts, namely travel-related ones, that are not just religious.
Aware of the significance of a corpus linguistic research for a better understanding of idiom use, this work will, therefore, examine the function of a series of Bible idioms in the British National Corpus, narrowing their usage to travel-related contexts. In texts that deal with travelling, Bible idioms have a more marked interpersonal function, writers employ the idioms to express their ideas in an almost euphemistic manner, in the hope of influencing their readers' opinions, too. As a result, Bible idioms in this context carry a dual function, on the one hand they have a striking and influential effect upon readers, on the other hand, they allow writers to deliver personal opinions in an impersonal manner conveyed by the idiom.

Keywords: a *different approach, dual function, unexpected syntactic-layout, flexible frame of reference, new connotations, etc.*

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1. Introduction

Biblical idioms are common expressions in English (and many other languages) whose wording or imagery originates from stories, characters or teachings in the Bible. Their meanings usually go beyond literal biblical reference and have become part of everyday speech. They are *figurative expressions* whose roots trace back to passage in the Bible but today they are often used by people regardless of religious background. They not only add colorful metaphorical meaning to travelling vocabulary but also carry moral lessons or vivid imagery. In the last decades phraseological researches in contemporary corpora have provided insight into such facts as the frequency and the use of idioms that have surprised experts and laymen alike. Contrary to general opinion Moon (The Distribution of Idioms in English, p.34) has shown that the distribution of idiomatic expressions in the English language is rather low and that the idioms are used more frequently in written texts than in spoken discourse.

Laura Pinnavaia (2012, p. 46) mentions the fact that: "it has been seen that in each text-type these Bible idioms are used in such a way as to foreground one of the three macro-functions of language *referential, interpersonal or textual* complying their communicative purpose".

According to Geanã (Idioms which originate in the Bible,2018:67)" it is important to underline the fact that a great deal of idioms might be used outside the religious frame, often with a change of meaning from their original biblical sense" this aspect has risen my interest for this research.

2. Materials and Methods

For this paper a large number of materials were retrieved from British National Corpus, travelling blogs, tourism websites, etc. The outcomes of this research, on one hand will contribute to a better understanding of Biblical idioms but also, they will be helpful for further studies in this field. The article has a practical direction firstly by offering a list of Biblical idioms (with Biblical meaning added) and secondly it will also provide examples of how they fit or can be adapted to travel-related contexts.

3. Practical Approach

Here are some Bible-origin idioms that can be used naturally in the context of travelling so that to be given a practical line of study in this sphere. The material has been split up in various sections and comprises both Old Testament and New Testament idioms.

I. General travelling-related examples

1."**The blind leading the blind**" (*origin Matthew 15:14) and the meaning is people without knowledge leading others"*
travel-related example:
We have wandered around Venice without a guide-just the blind leading the blind.

2."Go the extra mile" (*origin Matthew 5:41) and the meaning is "to make an extra effort.*
travel-related example:
Our tour guide really went the extra mile and showed us hidden local markets.

3."A drop in the bucket" (origin Isaiah 40;15) and the meaning is a small, insignificant amount

travel-related example:
That tiny gelato shop was just a drop in the bucket compared to all the food we tried in Rome.

4.“**Eat, drink and be merry”** (*origin Ecclesiastes 8:15, Luke 12:19) and the meaning is “to enjoy life”*
travel-related example:
On our holiday we all put up our feet, just eat, drink and be merry”

5.“**By the skin of your teeth**” (origin *Matthew 19:20) and the meaning is to barely managing something*
travel-related example:
We have caught our train by the skin of our teeth”

6. **“Nothing new under the sun**” (*origin Ecclesiastes1:9) and the meaning “everything has already happened before”*
travel-related example:
Travelers have been coming to this village for centuries- nothing new under the Sun.

7.“**A land flowing with milk and honey”** *(origin Exodus 3:8 and the meaning is “ a place of abundance and beauty”*
travel-related example:
When we reached Scotland, it truly felt like a land flowing with milk and honey.

8. “**The powers that be**” (*origin Romans 13:1 and the meaning is “authorities or officials”)*
travel-related example:
The powers that be at the airport, wouldn’t let us board early.

9. **“The writing on the wall “**(*origin Daniel 5, having a meaning as warning sign)*
Travel-related example:
When we all the flights were being delayed, we noticed the writing on the wall and booked a hotel room.

10.**” A good Samaritan” (***origin Luke 10:25 and the meaning is: a very helpful stranger”*
travel-related example:
A good Samaritan helped us jump start our rental car.

11. **“a land of milk and honey” (**Exodus 3, having the meaning of a place where living conditions are good)
travel-related example:
Xiuzhan is called a land of milk and honey, the hometown of silk.

12. “**new wine in old bottles”** (*Luke 5: 36-39, the idiom comes from a teaching of Jesus, warning that fermenting “new wine” would cause “old wineskins (rigid, traditional or legalistic mindsets) to burst; something new added to or imposed upon an old established order*

travel-related example:
Trying to run a high-speed, paperless ticketing system on the city's crumbling 19th century rail infrastructure is like putting new wine in old bottles!

II. (related to transport)

13." **A road to *Damascus* moment" (***origin: Paul's conversion on the road to Damascus (act9) and the meaning is: the moment when someone has a sudden realization while travelling/driving)*

travel-related example:
On the long drive home, I had a real road-to- Damascus moment and I decided to book another trip.

14. "**Lost sheep"** *(origin Luke 15: 1-7 – the parable of the lost sheep and the meaning is a "driver /traveler who got separated or lost"*
travel-related example:
We had to double pack for the lost sheep in the other car".

15. "**Walk the straight and narrow"** (origin Matthew 72: 12) *and the meaning is: "the narrow way"*
travel-related (transport/applied to disciplined driving) staying precisely within lanes:
On this icy road you need to stay on the straight and narrow!

16. "**A voice crying in the wilderness"** (origin Isaiah 40:2) *and the meaning is when someone shouts directions that no one follows in a noisy vehicle or chaotic travel situation.*
travel-related example:
I kept telling them to exit, but I was a voice crying in the wilderness!

17. "**A journey of forty days "***(origin Elijah's 40 -day journey) and the meaning is to meant to describe (jokingly) a very miserable trip*
travel-related example:
That bus ride felt like forty days in the wilderness.

18. "**My cup runneth over"** *(origin Psalms 23:5) and the meaning is (humorously) when a vehicle is overloaded with luggage and passengers"*
travel-related example:
With all this cargo, our trunk runneth over.

(flying)

19. "**On wings like eagles"** *(origin Isaiah 40:31) and the meaning is of describing a smooth, effortless flying*
travel-related example:
The plane took off on wings like eagles and here we were above the clouds!

20. "A **thorn in the flesh "(***origin Corinthians 12:7) with the meaning of persistent flying issues- turbulence delays, dry air, etc.*

travel-related example:
These flight delays are a thorn in my flesh.

21. **"Peace that passes understanding"** *(origin Philippians 4:7) used to describe an unexpectedly calm flight or passenger.*
travel-related example:
Everyone panicked during turbulence except her- she had peace that passes understanding.

(sailing/boating)

22. **"Cast your bread upon waters"** *(origin Ecclesiasts 11:1) and having the meaning to take*
A chance (on a trip or on a voyage)
travel-related example:
Booking a boat tour in storm season? You're casing your bread upon waters.

23. **"Anchor the soul"** *(origin Hebrews 6: 19) and the meaning is of stability on rough waters or docking securely"*
travel-related example:
Once we reached the shore, I could anchor my soul and finally felt steady.

24. "**Peace be still** *(Mark 4: 39 when Jesus calmed the storm) and the meaning is (humorously) during choppy waters or an unsteady boat ride.*
travel-related example:
Waves hit the canoe and he shouted:" Peace, be still!"

25. "**Into the deep"** *(Psalm 107: 24, Luke 5:4) and the meaning is of heading into deeper waters or beginning a long voyage"*
travel-related example:
We steered out of the harbour and into the deep".

(**trains) (**This category work metaphorically as trains didn't exist in the biblical world)

26. **"All aboard the ark"** *(Genesis 6-8 Noah's Ark) with the meaning of getting everyone onto a train especially in a rush*
travel-related example:
Come on, everyone- time to get aboard the ark before the doors close!

27." **in the fullness of time"** *(origin Galatians 4:4) with the meaning of waiting for a delayed or slow train*
travel-related example:
The train will arrive- in the fullness of time!

28. "**the last trumpet**" (*origin Corinthians 15: 25) with the meaning of final whistle before the train departs*
travel-related example:
When you hear the trumpet, the train has already pulled away.

III. (related to accommodation)

29. **"no room at the inn"** (*origin Luke 2:7 used when a hotel is fully booked)*
travel-related example:
We have tried three hotels so far- no room at the inn for us tonight.

30. "a **place to rest your head"** *(origin Luke 9: 58 "the Son of Man has nowhere to lay his head; with the modern usage of finding somewhere to sleep even if simple or make shift)*
travel-related example:
It's not fancy, but it is a place to rest your head for the night!

31. "**a house built on sand/ a house built on rock"** *(Matthew 7:24-27 used to describe an unstable or unreliable accommodation)*
travel-related example:
That flimsy cabin is a house built on sand"

32. "**under one roof"** *(origin Hebrew 13: 2 the meaning is offering hospitality to guests and strangers)*
travel-related example:
We took in some travellers- we might be entertaining angels unawarenes"

33. **"a house divided cannot stand"** *(Mark 3: 25 and is having as modern usage the meaning when a group sharing a cabin or room is arguing)*
travel-related example:
This Airbnb is a totally chaos- a house divided cannot stand!

34. "**Go into your closet/ prayer closet"** *(origin Matthew 6:6 having as modern usage finding a quiet private corner in a crowded accommodation)*
travel-related example:
I hid in the laundry room -my prayer closet- just for the sake of peace and quiet!

35. "**The widow's oil"** *(origin 2 Kings 4-1:7 having the modern usage the situation when the hotel toiletries or supplies seem endless/ or ironically run out too fast)*
travel-related example:
This guesthouse keeps refilling soap like widow's oil!

36. " **tabernacle/ pitch your tent** *(origin Exodus/ wilderness, wandering with the modern usage used for camping, temporary lodging, rough accommodation)*
travel-related example:
We'll tabernacle here for the night as the scenery is gorgeous!

37. "**hospitality without grumbling" (***origin 1 Peter 4:9 and the meaning is remaining hosts not to complain about guests)*
travel-related example:
They're staying for another night- show hospitality without grumbling.

IV. Emotion/ risk or safety

38. **"walk in the light** *(John 1:7 with the meaning of moving slowly, without stumbling or danger)*
travel-related example:
We need to walk in the light to avoid the trouble in this matter!

39." the **pillar of cloud by day and fire by night"** ***(origin*** *Exodus 13:21 having the meaning of God's guidance and visible protection on a journey.*
travel-related example:
On this long trip we asked God to lead us like the pillar of cloud and fire!

40. "**safe in the deft of the rock"** *(origin Exodus 33:22 having the meaning of sheltering in dangerous conditions)*
travel-related example:
When the hailstorm hit the highway we pulled over and felt safe in the deft of the rock!

41. "**prepare a room (***origin 2 Kings 4: 10 when Shunammite woman prepare a guest room for Elisha and having the meaning of getting a guest room ready)*
travel-related example:
We prepared a room for our visitors just like Shunammite woman did.

4.Results and discussion

In the light of the aspects discussed above it has been seen the fact that idioms are predominantly used to secure textual coherence and cohesion in travelling related contexts so that they should instill new ideas in the readership whereas in the religious texts they usually convey an informational function. For example, all encompassing meaning of the idiom "*new wine in old bottle* "explains why it has become popular in travelling contexts, as it can be found in texts that range from leisure/ commerce to natural and social sciences. In all these contexts the idiom is used to startle the readership, by its unexpected syntactic layout. Idioms that serve to manipulate the thoughts and opinions of readers are in turn often manipulated by writers. For example, the idiom "*a land of milk and honey "*has a negative polarity, even though it is normally used in its affirmative form.

The number of Biblical idioms used in travel-related contexts is 41 (general travelling- 12 examples, transport- 16 examples, to the accommodation category belong 8 examples and to emotion/ risk or safety only 4).

Conclusion

Idioms are not generally frequent in English and especially not in spoken discourse and the majority of Biblical idioms used in travel-related contexts can be found in written texts. It has been interesting to notice that these idioms are usually used with one prevailing purpose, to further the narration not only, to entertain the readers but also, to teach the religious meaning so that to persuade and cajole in travelling texts.

Moreover, Bible idioms convey an enormous communicative potential and broad scope of use and there can be no denying that, unlike most other idiomatic expressions those with Biblical origin have the Fortune to have two standard metaphoric meanings: one historical meaning and a synchronic one which can be easily adapted to travelling-

related contexts. Having considered the communicative functions of biblical idioms used in travelling the information gathered above will serve as working ground for future observations.

References:

BNC-British National Corpus. www.nat.corp@oucs.ox.ac.uk
Collins, V.H. (1962). Book of English Idioms, vol. I Bristol, Longman
Collins, V.H. (1963). Book of English Idioms, vol. II Bristol, Longman
Collins, V.H. (1964). Book of English Idioms, vol. III Bristol, Longman
Corina-Mihaela Geanã (2018)-Idioms which originate in the Bible, Studii şi cercetări de Onomasticã şi Lexicologie, No. 11
Cristina Gabriela Marin (2025) – Dictionary of Words, Expressions and Idioms Used in Travelling and Tourism, Generis Publishing, Chişinău , Republic of Moldova
Moon R. (2018)– The Distribution of Idioms in English, Routledge
Laura Pinnavaia (2012)- Yestersday's Idioms Today, Euralex Publications
The Companion Bible, King James Version 1990. Grand Rapids: Kregel Publications
Online sources:
https://www.merriam-webster.com/
https://www.oxfordlearnersdictionaries.com/
https://generis-publishing.com/book.php?title=strong-dictionary-of-words-expressions-and-idioms-used-in-travelling-and-tourism-strong-2902

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ORIGINAL PAPER

Green Technologies and Sustainable Global Business Practices

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Abstract:
In an era marked by climate change, resource depletion, and growing environmental concerns, businesses across the globe are under increasing pressure to adopt sustainable practices. Green technologies ranging from renewable energy systems and eco-friendly manufacturing processes to sustainable supply chains and digital innovationsare driving a paradigm shift in global business. This paper analyses the integration of green technologies into international business operations, explores their role in enhancing competitiveness, and examines the challenges firms encounter in transitioning to sustainable models. The discussion further highlights future directions and the importance of collaborative efforts among governments, corporations, and consumers in advancing sustainable global business practices.

Keywords: *renewable energy, international business, climate change, resource depletion, sustainable global business practices, green technologies.*

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1. Introduction

Globalization has interconnected economies, cultures, and industries, enabling businesses to expand beyond borders and access new markets. However, this expansion has also intensified environmental challenges such as climate change, resource depletion, pollution, and biodiversity loss. As global trade and industrial activities grow, the responsibility of businesses to operate sustainably becomes increasingly significant. In this context, green technologies have emerged as a transformative force that allows companies to align economic growth with ecological responsibility.Green technologies refer to innovations and processes designed to reduce environmental impact, improve energy efficiency, and promote the sustainable use of natural resources. They encompass renewable energy systems, eco-friendly manufacturing practices, waste management techniques, sustainable logistics, and digital solutions that enhance environmental monitoring and accountability. By integrating these technologies, global businesses are rethinking traditional practices and embracing models that prioritize both profitability and sustainability.The adoption of green technologies in global business practices is not solely driven by environmental concerns. It is also a response to shifting consumer preferences, stricter international regulations, and growing awareness of the risks associated with unsustainable development. Multinational corporations are increasingly investing in renewable energy, sustainable supply chains, and circular economy initiatives to maintain competitiveness and comply with global environmental standards. Moreover, advancements in artificial intelligence, blockchain, and the Internet of Things (IoT) are accelerating the transition toward greener and more transparent business operations.

In essence, green technologies are reshaping the landscape of global business by making sustainability an integral part of corporate strategies. They not only help mitigate environmental challenges but also open new opportunities for innovation, market expansion, and long-term resilience. As the world moves toward a greener economy, businesses that embrace sustainable practices will be better positioned to thrive in a competitive, globalized marketplace.

2. Review of Literature

Scholars and practitioners have widely studied the intersection of sustainability and business. Porter and Kramer’s (2011) concept of "shared value" underscores the notion that businesses can achieve competitive advantage while addressing social and environmental needs. Hart (1995) highlights the "natural-resource-based view" of the firm, suggesting that sustainable practices can be a source of strategic capability. Recent research by the World Economic Forum (2023) emphasizes how technologies like AI, blockchain, and renewable energy are accelerating sustainable business transitions globally. Studies also indicate that consumer preference for eco-friendly brands is reshaping global marketing strategies (Nielsen, 2019). Together, the literature suggests that green technologies are not just ethical choices but also engines of innovation and market expansion. Dr.D.Renukadevi (2022) The international dissemination of familiarity and expertiseproducesconstructivesystemproperties through cross-pollination, as it empowers technology gettingnations to early payment their own explore and expansion.

3. Objectives

1. To analyze the role of green technologies in advancing sustainable global business practices.
2. To examine the impact of sustainability-driven innovations on competitiveness and profitability.
3. To identify challenges faced by businesses in adopting eco-friendly technologies.
4. To explore future prospects of sustainable globalization through technological transformation.

4. Green Technologies in Global Business

Renewable Energy Integration: Solar, wind, and hydropower are decreasing reliance on fossil fuels across global industries. Companies such as Apple, Google, and Microsoft are utilizing renewable sources to power their data centers.

Sustainable Manufacturing: Environmentally friendly buildings, energy-efficient machinery, and techniques for minimizing waste are reshaping industrial environments.

Circular Economy Practices: Recycling, upcycling, and designing products for durability are becoming increasingly popular. Brands like IKEA and H&M have adopted circular economy models.

Digital Green Technologies: Blockchain technology facilitates transparent supply chains, while artificial intelligence enhances energy efficiency in logistics and production processes. **Eco-Friendly Transportation:** Electric vehicles (EVs) and sustainable shipping technologies are transforming mobility and trade logistics**.**

4.1 Benefits for Global Business

Market Expansion and Increased Sales

By entering international markets, companies can tap into a broader customer base, thereby enhancing potential sales and revenue streams. This strategy also mitigates reliance on a single market.

Economies of Scale

Conducting operations on a global scale enables organizations to manufacture goods and services more effectively, lowering per-unit costs through mass production, shared resources, and uniform processes.

Access to Resources

Engaging in global business allows firms to procure raw materials, technology, and skilled labor from various regions, often at reduced costs or superior quality compared to locally sourced resources.

Diversification of Risk

International operations assist in distributing business risks across multiple countries and markets, thereby lessening the effects of regional economic downturns, political instability, or natural disasters.

Innovation and Knowledge

Transfer Exposure to global markets stimulates innovation as businesses adjust to varied customer requirements. The exchange of knowledge among international branches promotes new ideas, technologies, and management practices. ‘

Enhanced Competitiveness

Competing on a global scale compels firms to enhance product quality, operational efficiency, and customer service, thereby boosting overall competitiveness in the marketplace.

Improved Brand Recognition

A global presence increases brand visibility and credibility, aiding companies in establishing a more robust reputation and earning consumer trust across various regions.

Access to Investment and Funding Opportunities

International operations can draw foreign investments, joint ventures, and partnerships, supplying capital for growth, research, and expansion.

Learning and Cultural Exchange Businesses acquire insights into international consumer behaviour, cultural diversity, and global business practices, which can enhance strategic decision-making.

Contribution to Economic Development

Global business operations generate employment, invigorate local economies, and facilitate technology transfer, thereby contributing to the advancement of host countries.

4.2 Challenges in Adoption

Significant Upfront Costs: Shifting to renewable energy and environmentally friendly technologies necessitates a considerable initial investment.

Technological Deficiencies: Many developing nations frequently lack the necessary infrastructure and expertise for widespread implementation.

Variations in Regulations: Discrepancies in environmental regulations among countries obstruct the establishment of standardized practices.

Consumer Attitudes: Although awareness of environmental issues is increasing, sensitivity to pricing continues to influence consumer demand for sustainable goods.

Complexity of Global Supply Chains: Achieving sustainability throughout multinational supply chains poses challenges due to differing levels of regulatory enforcement.

4.3 Future Prospects

The future of international business is closely linked to the extensive implementation of green technologies and the commitment to sustainability-focused strategies. As concerns regarding climate change escalate and global regulations become more stringent, companies will increasingly depend on innovation to harmonize profitability with environmental responsibility. Several significant prospects are anticipated to shape the future landscape: **Expansion of Renewable Energy Use**

Renewable energy is set to remain at the forefront as businesses aim to lower their carbon emissions and adhere to climate agreements. Advances in solar, wind, hydrogen fuel, and bioenergy are expected to become commonplace, reducing industries' reliance on fossil fuels. **Rise of Green Financing and ESG**

Investments Investors are progressively emphasizing Environmental, Social, and Governance (ESG) criteria. Green bonds, carbon credit trading, and sustainable investment portfolios will form the financial foundation of global enterprises. Companies that exhibit strong environmental commitments will garner greater investment and consumer confidence.

Digital Technologies Driving Sustainability

Artificial intelligence, blockchain, and the Internet of Things (IoT) will increasingly contribute to optimizing resource utilization, improving transparency, and facilitating real-time environmental monitoring. Smart grids, AI-enhanced energy

optimization, and blockchain-enabled supply chains will establish new benchmarks for global sustainability practices. **Circular Economy Integration**

The transition from a "take-make-dispose" approach to a circular economy will gain prominence. Businesses will progressively design products for reuse, recycling, and upcycling. This shift will reduce waste, prolong product lifecycles, and create opportunities in secondary markets.

Green Innovation in Logistics and Transportation The rise of electric vehicles (EVs), autonomous green fleets, and carbon-neutral shipping will revolutionize global trade and supply chain management. Logistics firms will implement clean energy solutions to meet.

Consumer-Driven Transformation

With rising awareness, consumers will increasingly demand sustainable products, ethical sourcing, and transparent operations. Businesses that fail to meet these expectations risk reputational damage, while those that innovate will gain competitive advantage in global markets.

Collaboration and Knowledge Sharing

Global partnerships between corporations, governments, and NGOs will expand, fostering the exchange of green technologies and best practices. Such collaboration will accelerate the transition to sustainability, particularly in developing economies.

5. Conclusion

Green technologies are no longer optionalthey represent the foundation of sustainable global business practices. By integrating renewable energy, circular economy models, and digital innovations, companies can align competitiveness with environmental stewardship. Although challenges such as investment costs and regulatory inconsistencies remain, the long-term benefits far outweigh the barriers. As globalization advances, businesses that embrace sustainability will not only secure profitability but also contribute meaningfully to global climate goals. The future of global business is inseparable from the pursuit of green technologies and sustainability-driven innovation.

Authors' Contributions:

The authors contributed equally to this work.

References:

Hart, S. L. (1995). A Natural-Resource-Based View of the Firm. The Academy of Management Review, 20(4), 986–1014. https://doi.org/10.2307/258963.

Porter, M. & Kramer, M. (2011). Creating shared value. Harvard Business Review.

Nielsen. (2019). The Sustainability Imperative: New Insights on Consumer Expectations.

Santhanakrishnan, D., Renukadevi, D., Manochithra, P., Sathyapriya, M. (2022), An analysis of technology trends and their impact on the globalisation of business, International Journal of Early Childhood Special Education (INT-JECS), ISSN: 1308-5581 Vol 14, Issue 03 2022, DOI: 10.9756/INT-JECSE/V14I3.905.

World Economic Forum. (2023). *Global Risks Report*.

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ORIGINAL PAPER

Artificial Intelligence vs. Human Factor in Applied Behavior Analysis: A Comparative Analysis for Future Integration in Behavioral Sciences

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Abstract:
This paper explores the growing intersection between Artificial Intelligence (AI) and human-driven interventions in Applied Behavior Analysis (ABA). It seeks to critically analyze the roles and contributions of AI and human professionals in the delivery of ABA services, particularly in the context of clinical practice, educational settings, and research. Drawing on recent advancements in AI technologies, the paper evaluates both the strengths and limitations of AI-based interventions, such as machine learning, natural language processing, and robotics, in comparison to human expertise, emotional intelligence, and ethical considerations. The paper also discusses the potential for collaborative synergy between AI systems and human practitioners, proposing guidelines for integrating AI into ABA practices while maintaining the critical human element. Finally, the paper addresses ethical concerns, social implications, and future research directions necessary for a balanced approach to ABA interventions in the age of AI. A case study is presented to highlight real-world applications and outcomes. The discussion considers ethical, practical, and clinical implications of incorporating AI into ABA practices, and future directions for research in this domain are proposed.

Keywords: *Artificial Intelligence, Applied Behavior Analysis, Autism Spectrum Disorder, Ethical Considerations, Human Factors, Data-Driven Interventions.*

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1. Introduction

Applied Behavior Analysis (ABA) is a well-established therapeutic approach used to improve social, communication, and learning skills in individuals, particularly those with autism spectrum disorder (ASD). ABA involves the systematic application of principles of learning theory to modify behavior, relying primarily on human expertise to assess and design individualized interventions.

Applied Behavior Analysis (ABA) has long been a cornerstone in the treatment of individuals with developmental disabilities, particularly autism spectrum disorder (ASD). Through the use of evidence-based methods such as reinforcement schedules, discrete trial training, and behavior modification techniques, ABA has been pivotal in improving the quality of life for individuals and families. The emergence of artificial intelligence (AI) and machine learning (ML) technologies has raised new possibilities for enhancing the efficiency, consistency, and scalability of ABA interventions.

With advancements in artificial intelligence (AI), there has been increasing interest in the potential to use technology to assist, augment, or even replace certain aspects of ABA. AI's capabilities in data processing, pattern recognition, and real-time feedback have opened new possibilities for the field. However, the question arises: can AI effectively replicate the nuanced understanding and empathy of human clinicians? What role will human clinicians play in the future of ABA practice, and how will AI reshape the clinical landscape?

However, as AI continues to play a more prominent role in various sectors, the question arises: can AI truly replace human practitioners in ABA, or is the human factor irreplaceable due to its unique capabilities in fostering relationships, understanding emotions, and exercising ethical judgment? (Goh & Smith) This paper aims to address this question by exploring the respective roles of AI and human professionals in ABA, analyzing the potential advantages and disadvantages of each, and proposing a framework for integrating these elements in a complementary manner.

This paper examines the use of AI in ABA, comparing its effectiveness to that of human clinicians. A case study will demonstrate the strengths and limitations of AI-based interventions, with a focus on how both AI and human involvement can complement each other.

2. Background

2.1. Overview of ABA

ABA is a therapeutic approach grounded in the principles of operant conditioning, developed to modify behaviors by reinforcing desirable actions and decreasing undesirable ones. It is an evidence-based practice used extensively in the treatment of autism spectrum disorder (ASD) and other developmental disabilities. ABA interventions are individualized, requiring clinicians to assess the unique needs of each client and design personalized behavior intervention plans (BIPs).

The application of AI in ASD diagnosis has the potential to reduce diagnostic times, improve accuracy, and offer individualized assessments that could cater to the diversity of symptoms within the autism spectrum (Liggett, et all, 2018).

The integration of AI in autism care represents a groundbreaking approach to meeting the diverse needs of individuals on the spectrum. AI technologies, when combined with human expertise, can create a supportive environment that enhances

communication and learning. This synergy not only fosters independence but also opens up new avenues for understanding and addressing the unique challenges faced by those with autism.

2.2. Autism diagnostic and therapy

Autism, scientifically known as autism spectrum disorder (ASD), is a neurodevelopmental condition characterized by a wide range of challenges in social communication, language, behavior, and social interaction. The manifestations of autism vary widely, giving rise to the concept of the "spectrum", which includes individuals with mild to severe symptoms. Signs of autism can emerge from early childhood but are often identified in preschool or school age, when they become more evident. Symptoms include difficulty with verbal and nonverbal communication, difficulty interacting with others, repetitive and restricted interests and activities, and increased or decreased sensory sensitivity. To diagnose autism, a multidisciplinary approach is used. Specialists, such as psychologists, child psychiatrists, and pediatricians, conduct interviews and observations to evaluate the individual's behavior, language, social skills, and cognitive abilities. Diagnosis is often completed through structured questionnaires, developmental assessments, and assessments of communication skills. In addition to behavioral assessments and questionnaires, genetic analysis can be an integral part of the diagnosis of autism since there is a genetic component to its etiology. Blood tests and genetic tests can identify genetic abnormalities associated with autism. Also, imaging can have a strategic role, as in the case of functional magnetic resonance, which is also integrated with AI (Wooldridge, 2019). Therapy is crucial in autism, providing specialized support to address the cognitive, communication, and behavioral challenges associated with the disorder. Through targeted therapeutic interventions, individuals with autism can develop social, communication, and adaptation skills, improving their quality of life and promoting greater inclusion in society. Therapy represents an essential foundation for promoting the progress and well-being of people with autism. Multidisciplinary approaches in autism involve different professionals, such as psychologists, occupational therapists, speech therapists, and pediatricians, who collaborate to provide holistic treatment targeted to the specific needs of each individual with autism. This synergy between experts contributes to a more complete, personalized, and effective intervention, addressing cognitive, communicative, and behavioral challenges in an integrated way and optimizing the progress and well-being of patients. Assistive technology (AT) tools provide personalized technological solutions for people with autism, helping them overcome communication barriers and adapt to their specific needs. These tools amplify skills and improve independence, significantly contributing to the quality of life of people with autism (Davenport & Kalakota, 2019).

2.3. AI in Behavioral Sciences

Artificial Intelligence refers to the use of machines or computer systems to perform tasks that traditionally require human intelligence. In the context of behavioral sciences, AI tools can analyze large datasets, predict behavioral patterns, and even assist in designing interventions. AI has already found applications in diagnostic tools, treatment recommendations, and even real-time behavioral monitoring.

The idea of using AI in ABA has emerged as part of the broader trend of technological innovation in therapeutic fields. AI-powered systems can monitor progress,

offer data-driven recommendations, and adjust interventions on the fly, potentially increasing the efficiency and scalability of ABA practices (Dallery, et all, 2015).

2. **The Role of the Human Factor in ABA**

Human practitioners have traditionally played an indispensable role in ABA due to their deep understanding of behavior, ethical considerations, and social interaction.

2.1 **Human Intuition and Empathy**

One of the defining features of human practitioners is their ability to intuitively understand and respond to the emotional and psychological states of clients. Human behavior analysts can recognize subtle cues, such as changes in body language or facial expressions, that AI systems may struggle to detect. This emotional intelligence enables practitioners to tailor interventions to the unique needs of each client, which is particularly crucial in the context of individuals with autism, who may communicate non-verbally or have difficulties with social interactions.

2.2 **Ethical Judgment and Complex Decision-Making**

ABA interventions often require ethical decision-making that takes into account the well-being of clients, the context of the intervention, and long-term outcomes. Human practitioners can navigate complex ethical dilemmas that may arise in treatment, such as the need to balance behavior modification with the autonomy and dignity of clients. AI, by contrast, operates within the confines of predefined algorithms, which may not always be sensitive to the ethical nuances of a given situation.

2.3 **Cultural Sensitivity and Contextual Adaptation**

Human practitioners bring cultural awareness and sensitivity to their work, adapting interventions to fit the diverse backgrounds and experiences of their clients. This cultural competence is vital when working with individuals from various social, ethnic, or socioeconomic groups. AI systems, on the other hand, may struggle to fully comprehend cultural contexts or adapt interventions in a way that aligns with a client's cultural identity.

2.4 **Supervision and Collaboration**

Although AI systems can support ABA interventions, they are unlikely to replace the need for human oversight. Human clinicians are required to supervise AI-driven interventions, making critical judgments about the appropriateness of suggested interventions, ensuring the client’s well-being, and adjusting interventions when necessary. This collaborative approach can provide a balanced integration of AI’s data-driven strengths with the human clinician’s relational and ethical expertise

3. AI in ABA: Capabilities and Applications

3.1. AI-Driven Data Collection and Analysis

One of the most promising applications of AI in ABA is in the collection and analysis of behavioral data. Traditional ABA data collection involves manually recording observations, which can be time-consuming and prone to human error. AI-powered tools, such as machine learning algorithms, can automate the process by analyzing video

recordings, sensor data, and other real-time inputs to identify patterns and trends in behavior.

For example, AI can be trained to detect specific behaviors (e.g., repetitive motions or vocalizations) and quantify their frequency or intensity. This can lead to more accurate and objective data, which are critical in assessing the effectiveness of ABA interventions.

3.2. AI in Behavioral Intervention and Decision-Making

AI can also play a role in the decision-making process for behavioral interventions. Through machine learning, AI systems can identify correlations between interventions and client responses, enabling the system to suggest adjustments to behavior plans in real time. For example, if a child with autism responds well to a particular reinforcement schedule, an AI system can adjust future interventions based on this data.

Moreover, AI can be used to provide personalized treatment suggestions based on the client's specific behavioral profile, increasing the precision of ABA practices. Some AI tools are even capable of adapting interventions to the client's changing needs, ensuring a dynamic, evolving treatment process.

3.3. AI in Speech and Communication Therapy

One of the most promising applications of AI is in speech and communication therapy. AI-driven speech therapy platforms can analyze a child's speech patterns, providing instant feedback and personalized exercises to improve articulation and fluency. AI tools can also offer interactive sessions that encourage practice in a safe and engaging environment. With these tools, therapists can track progress, adjust strategies, and celebrate milestones with their clients. Furthermore, these platforms can incorporate gamification elements, making learning fun and motivating for children. By using engaging avatars or animated characters, children may feel more inclined to participate actively in their therapy sessions, thereby enhancing their overall learning experience.

3.4. Behavioral Therapy Aided by AI

In behavioral therapy, AI can play a significant role in monitoring behaviors and reinforcing positive changes. AI algorithms can observe interactions, identify triggers for specific behaviors, and suggest appropriate interventions based on individual patterns. This aids therapists in tailoring their strategies to meet the client's needs more accurately. Additionally, AI can provide therapeutic resources that can be accessed at home, allowing for continuous support outside of clinical settings. These resources may include mobile applications that guide parents and caregivers in implementing behavioral strategies and tracking their child's progress. By fostering a collaborative approach between therapists, families, and AI tools, the therapy process can become more holistic, ensuring that children receive consistent support across different environments. This integration not only empowers families but also enhances the overall effectiveness of therapeutic interventions (Dufour, et all, 2020).

4. AI vs. Human Factor: A Comparative Analysis

In comparing AI and human practitioners, several key differences emerge:

Factor	AI	Human Practitioner
Data Processing	Superior in processing large datasets, identifying trends.	Limited by capacity; relies on clinical judgment.
Consistency	Can deliver 100% consistency in interventions.	May experience variability due to emotional or contextual factors.
Adaptability	Can adapt based on data, but lacks understanding of context.	Highly adaptable, especially in complex or changing environments.
Emotional Intelligence	Limited capacity for emotional understanding.	High emotional intelligence, understanding non-verbal cues.
Ethical Decision-Making	May struggle with ethical dilemmas that require judgment.	Capable of nuanced ethical decision-making.
Cultural Sensitivity	Limited by programmed understanding of cultural contexts.	Can understand and adapt to diverse cultural backgrounds.

4.1. Synergy between AI and Human Practitioners

While AI presents exciting possibilities in terms of data analysis, scalability, and consistency, it is clear that human practitioners bring invaluable qualities to ABA. Rather than viewing AI and human professionals as competing forces, the future of ABA lies in integrating both elements for a more holistic approach.

4.1.1. **AI as a Tool for Support**

AI can be leveraged to support human practitioners by providing real-time data analysis, identifying potential areas for intervention, and offering a more objective measure of client progress. Human practitioners, in turn, can use this information to adjust interventions based on their expertise, intuition, and emotional intelligence.

4.1.2. **Augmented Reality and Virtual Interventions**

Augmented reality (AR) and virtual reality (VR) systems powered by AI can also serve as a bridge between human practitioners and clients. These technologies can create immersive environments that help clients practice social and cognitive skills while under the guidance of a trained ABA professional.

5. **Case Study: AI-Enhanced ABA Intervention**

5.1. Case Description

A case study was conducted with a 5-year-old child diagnosed with autism spectrum disorder. The child exhibited repetitive behaviors (e.g., hand-flapping) and struggled with social communication skills. The intervention involved a combination of traditional ABA methods and AI-powered tools for real-time data analysis and feedback.

The AI system used video cameras and wearable sensors to monitor the child's behavior continuously. Machine learning algorithms processed the data to identify patterns and suggested adjustments to the intervention plan. For example, when the AI detected an increase in hand-flapping behavior, it recommended reinforcing alternative behaviors and adjusting the reinforcement schedule.

5.2. Results and Discussion

The results of the case study were promising. The AI system significantly improved the efficiency of data collection and provided real-time insights into the child's behavior. However, the success of the intervention was ultimately dependent on the human clinician's ability to interpret the data in the context of the child's emotional state and family dynamics. The child responded positively to the interventions, but the clinician's judgment was critical in making adjustments to the treatment plan.

This case study illustrates the potential for AI to enhance ABA practices, but also highlights the irreplaceable value of human expertise in interpreting and implementing behavioral interventions.

6. Discussions

6.1. The Complementary Roles of AI and Human Clinicians

The case study and broader research suggest that AI has the potential to significantly enhance ABA practices by streamlining data collection, providing real-time feedback, and personalizing interventions. However, AI is most effective when used as a complement to, rather than a replacement for, human clinicians. The nuanced understanding, empathy, and judgment provided by human therapists remain essential components of ABA therapy.

6.2. Ethical Considerations

The integration of AI in ABA also raises important ethical concerns. AI systems must be transparent, explainable, and accountable, especially when making decisions about treatment adjustments. Clinicians must ensure that AI tools do not inadvertently lead to biased or inappropriate interventions, and that they maintain a central role in ensuring the well-being of clients.

6.3. Future Directions

The future of ABA will likely see increased collaboration between AI and human clinicians. Research should focus on refining AI algorithms to improve their ability to understand complex social and cultural contexts. Additionally, more studies are needed to assess the long-term effects of AI-enhanced interventions on client outcomes and satisfaction.

7. Conclusion

As AI technology continues to evolve, it is critical to address the ethical implications of its integration into ABA. Issues of data privacy, the potential for dehumanization of interventions, and the risk of over-reliance on AI systems must be carefully considered. Future research should focus on developing guidelines for the ethical use of AI in behavioral interventions, ensuring that the technology complements, rather than replaces, the human factor in therapy. AI has the potential to revolutionize ABA practices by improving the efficiency, scalability, and personalization of interventions. However, human clinicians remain integral to the success of ABA therapy, providing the emotional intelligence, ethical oversight, and contextual understanding that AI currently cannot replicate. The future of ABA lies in a collaborative approach that leverages the strengths of both AI and human clinicians to provide the most effective and compassionate care for clients with autism and other behavioral disorders (Robison & Hamaker, 2020).

Artificial intelligence holds significant promise for enhancing the diagnosis of autism spectrum disorder. The application of machine learning, deep learning, natural language processing, and computer vision technologies to behavioral, neuroimaging, and

physiological data offers a multifaceted approach to autism diagnosis. Although challenges remain, particularly in terms of data quality, model interpretability, and ethical considerations, the continued development and integration of AI into clinical practice could revolutionize how ASD is identified and treated, ultimately improving outcomes for individuals with autism. Further research is needed to refine these technologies, address their limitations, and ensure their effective implementation in diverse clinical settings (Klein, 2022; Wooldridge, 2019).

As we look towards the future, it is crucial to continue addressing ethical considerations while harnessing the power of AI to create a more inclusive and supportive world for individuals on the autism spectrum.

References:

Abbas, H., Garberson, F., Liu-Mayo, S., Glover, E., & Wall, D. P. (2020). Multi-modular AI approach to streamline autism diagnosis in young children. *Scientific Reports*, 10(1), 1–8.

Baer, D. M., Wolf, M. M., & Risley, T. R. (1968). Some applications of behavior analysis to child development. *Child Development, 39*(1), 85-101.

Bailey, J. D., Baker, J. C., Rzeszutek, M. J., & Lanovaz, M. J. (2021). Machine learning for supplementing behavioral assessment. *Perspectives on Behavior Science*, 44, 605–619.

Baum, W. M. (2017). *Understanding Behaviorism: Science, Behavior, and Culture*. Wiley-Blackwell.

Choi, E. S., Yoo, H. J., Kang, M. S., & Kim, S. A. (2020). Applying artificial intelligence for diagnostic classification of Korean autism spectrum disorder. *Psychiatry Investigation,* 17(11), 1090–1095.

Dallery, J., Kurti, A., & Erb, P. A. (2015). New frontier: Integrating behavioral and digital technology to promote health behavior. *The Behavior Analyst*, 38, 19–49.

Davenport, T., & Kalakota, R. (2019). The potential for artificial intelligence in healthcare. *Future Healthcare Journal*, 6(2), 94–98.

Dawson, G., & Burner, S. (2011). Behavioral interventions in autism. *Neuropsychology Review, 21*(2), 145-160.

Dufour, M. M., Lanovaz, M. J., & Cardinal, P. (2020). Artificial intelligence for the measurement of vocal stereotypy. *Journal of the Experimental Analysis of Behavior*, 114(3), 368–380.

Goh, A. T., & Smith, R. L. (2020). Artificial Intelligence in Behavioral Research: Opportunities and Challenges. *Journal of Applied Behavioral Analysis*, 53(4), 741-760.

Klein, S. (2022). The Intersection of AI and Human Behavior: Navigating Ethical and Practical Challenges. *Behavioral Sciences Review*, 14(3), 334-349.

LeBlanc, L. A., & Brady, N. C. (2008). Applied behavior analysis and autism spectrum disorder: A guide for practitioners. *Behavioral Interventions, 23*(4), 1-23.

Liggett, A. P., Nastri, R., & Podlesnik, C. A. (2018). Assessing the combined effects of resurgence and reinstatement in children diagnosed with autism spectrum disorder. *Journal of the Experimental Analysis of Behavior,* 109(2), 408–421.

Robison, J., & Hamaker, C. (2020). Machine learning in applied behavior analysis: Opportunities and challenges. *Behavior Analysis in Practice, 13*(3), 45-57.

Wooldridge, C. (2019). Artificial intelligence and behavior analysis: What's next? *Journal of Behavioral Education, 28*(4), 215-229.

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ORIGINAL PAPER

Exploring the Impact of Privacy, Security, and Ethical Considerations on Consumer Trust in E-Commerce

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Abstract:
This study explores the pivotal influence of privacy, security, and ethical practices on consumer trust in the e-commerce sector. As online shopping continues to expand rapidly, concerns over data breaches, unethical practices, and opaque privacy policies have become increasingly significant. The research examines how these factors shape trust and subsequently impact consumer purchasing behavior. By analyzing quantitative data collected from online shoppers, the study employs statistical techniques to identify the

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primary drivers of trust and offers practical recommendations for e-commerce businesses to strengthen customer confidence and foster loyalty.

Keywords: *E-commerce, Consumer Trust, Privacy, Security, Ethical Concerns, Data Protection, Online Shopping Behavior*

Introduction

The rapid expansion of e-commerce has transformed consumer shopping behavior by offering unparalleled convenience, variety, and accessibility. However, this growth has also brought forth significant challenges, especially concerning privacy, security, and ethical business practices. As online transactions frequently involve sharing sensitive personal and financial data, consumers have become increasingly cautious about how their information is collected, stored, and used. These concerns play a crucial role in shaping their trust toward e-commerce platforms. Trust, in turn, is fundamental to the long-term success and sustainability of online businesses. When trust is compromised, consumers may reduce their engagement with digital marketplaces or abandon them entirely, adversely impacting business performance. Additionally, unethical practices—such as deceptive advertising, lack of transparency in data management, and inadequate security protocols—further erode consumer confidence. Hence, addressing these issues is essential for companies striving to build and maintain lasting customer relationships. This study explores the intricate relationship between privacy, security, and ethical considerations, and their collective impact on consumer trust in e-commerce. By gaining deeper insights into these factors, businesses can develop effective strategies to protect customer data, ensure ethical conduct, and reinforce consumer confidence and loyalty.

Statement of the Problem

Despite advancements in technology, many e-commerce consumers remain skeptical about the safety of their personal and financial information, leading to reduced trust and lower engagement with online platforms. Ethical concerns, including misleading advertising and opaque data usage policies, contribute to consumer distrust, impacting their willingness to shop online.

Objectives of the Study

1. To examine the impact of privacy and security practices on consumer trust in e-commerce platforms.
2. To evaluate how ethical considerations influence consumer perceptions and behavior in online shopping environments.

Research Methodology

Research Design

This study adopts a quantitative research design to examine the influence of privacy, security, and ethical considerations on consumer trust in e-commerce. Data were collected using a structured questionnaire administered to a sample of 500 online shoppers, ensuring both representativeness and reliability of the findings.

Sample Size and Sampling Technique

The study surveyed 500 respondents, selected through simple random sampling to minimize selection bias and provide each individual in the target population an equal

opportunity to participate. Participants were e-commerce users aged 18 and above, representing diverse demographic profiles including gender, age, education, and income levels.

Data Collection

Data were gathered via an online survey platform using a self-administered questionnaire consisting of close-ended items rated on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). The questionnaire was designed to capture three main dimensions: privacy concerns, security perceptions, and ethical considerations, along with respondents' levels of trust in e-commerce platforms.

Variables

- **Independent Variables:** Privacy Concerns, Security Perceptions, Ethical Considerations
- **Dependent Variable:** Consumer Trust in E-Commerce

Hypotheses

To guide the analysis, the following hypotheses were formulated:

- **H1:** There is a significant difference in consumer trust levels based on varying degrees of privacy concerns.
- **H2:** There is a significant difference in consumer trust levels based on different perceptions of security.
- **H3:** There is a significant difference in consumer trust levels influenced by ethical considerations.

Data Analysis Technique

To test these hypotheses, **One-Way Analysis of Variance (ANOVA)** will be applied. ANOVA is chosen because it allows comparison of the means of consumer trust across different groups categorized by levels of privacy concerns, security perceptions, and ethical considerations.

- The responses will be grouped into categories (e.g., low, medium, high concern/perception) based on their scores.
- ANOVA will determine whether there are statistically significant differences in mean trust scores across these groups.
- A significance level (α) of 0.05 will be used to accept or reject the hypotheses.
-

Limitation:

The study relies on self-reported data collected through online surveys

Review of literature

1. Gefen's study highlights the importance of trust in online shopping, showing that familiarity with the website or vendor increases consumer confidence. Privacy and security assurances help reduce perceived risks. The research stresses that trust directly influences consumers' willingness to make online purchases. Without trust, consumers are likely to abandon e-commerce platforms. This study underlines trust as a cornerstone of successful e-commerce.
2. Kim conducts research introduces a model explaining how perceived risk and uncertainty affect trust in e-commerce. It emphasizes that security concerns, particularly fear of data breaches, negatively impact consumer trust. Transparent privacy policies and ethical behavior can mitigate these fears. The study shows

that trust mediates the relationship between risk perception and purchase intention. It suggests companies must prioritize security and ethics to maintain consumer trust.

3. McKnight et al. provide a framework for measuring trust in online settings, focusing on privacy, security, and ethics. The research stresses trust as multi-dimensional, involving belief in a company's competence, integrity, and benevolence. Ethical business practices and strong security measures are essential to foster long-term trust. The study validates scales to assess these components accurately. It confirms that trust-building requires consistent ethical behavior.
4. Culnandiscusses the conflict between business interests in data collection and consumers' privacy rights. It argues that respecting consumer privacy is an ethical imperative that influences trust. Consumers' perceptions of fairness regarding data use impact their loyalty to e-commerce platforms. The study calls for transparent and just data practices to maintain consumer trust. It highlights the ethical challenges of balancing profitability and privacy.
5. Koufaris and Hampton-Sosa explore how new customers form initial trust with e-commerce companies. The study finds that clear communication about privacy and security policies builds early trust. Ethical transparency and secure systems reduce perceived risk for first-time buyers. The research highlights the critical role of trust in customer acquisition and retention. It emphasizes that e-commerce firms should prioritize transparency to foster consumer confidence.

Data Analysis and Interpretation

Source of Variation	Sum of Squares (SS)	Degrees of Freedom (df)	Mean Square (MS)	F-value	p-value
Privacy Concerns	245.67	2	122.83	15.62	<0.001
Within Groups (Error)	3906.45	497	7.86		
Security Perceptions	360.23	2	180.12	22.89	<0.001
Within Groups (Error)	3906.45	497	7.86		
Ethical Considerations	196.87	2	98.44	12.45	<0.001
Within Groups (Error)	3906.45	497	7.86		

The ANOVA results in Table 1 indicate that **privacy concerns, security perceptions, and ethical considerations** each have a statistically significant impact on consumer trust in e-commerce platforms.

- For **privacy concerns**, the F-value is 15.62 with a p-value less than 0.001, which means there is a significant difference in consumer trust across different levels of privacy concerns. This suggests that as privacy concerns vary, consumer trust significantly changes, typically decreasing with higher privacy concerns.
- Regarding **security perceptions**, the F-value of 22.89 and p-value less than 0.001 show a highly significant effect on consumer trust. Consumers who perceive

higher security measures report greater trust in e-commerce platforms, underscoring the importance of strong security protocols.

- For **ethical considerations**, an F-value of 12.45 with $p < 0.001$ also confirms a significant difference in trust based on consumers' perceptions of ethical practices. Positive ethical perceptions enhance trust, emphasizing the role of transparency and fairness in online business conduct.

Findings

1. **Privacy Concerns:** The study found a significant negative impact of privacy concerns on consumer trust. Consumers with higher levels of privacy concerns tend to exhibit lower trust in e-commerce platforms, indicating that privacy risks are a major barrier to building trust.
2. **Security Perceptions:** Security perceptions have a strong positive effect on consumer trust. Respondents who perceive e-commerce platforms as secure demonstrate significantly higher trust levels, highlighting the importance of effective security measures in encouraging online purchases.
3. **Ethical Considerations:** Ethical business practices also significantly influence consumer trust. Consumers who believe that e-commerce platforms adhere to ethical standards, such as transparency and fairness, are more likely to trust and engage with these platforms.

Suggestions

1. **Enhance Privacy Policies:** E-commerce platforms should develop and clearly communicate comprehensive privacy policies. Transparency about data collection, usage, and protection will help alleviate consumer privacy concerns and build trust.
2. **Strengthen Security Measures:** Investing in advanced security technologies such as SSL encryption, two-factor authentication, and regular security audits will reassure consumers about the safety of their transactions and personal information.
3. **Promote Ethical Practices:** Companies should foster ethical behavior by maintaining honesty in advertising, respecting consumer rights, and ensuring fair business practices. Ethical certifications or third-party audits could further enhance credibility.
4. **Educate Consumers:** Providing educational resources on privacy and security can empower consumers to make informed decisions, improving their confidence in e-commerce platforms.
5. **Continuous Monitoring:** Regularly assessing consumer perceptions through feedback and surveys will help businesses identify trust gaps and adapt their strategies accordingly.

Conclusion

This study highlights the pivotal role of privacy, security, and ethical practices in shaping consumer trust within e-commerce platforms. The findings reveal that consumers' trust significantly fluctuates based on their concerns about privacy, perceptions of security, and the ethical standards upheld by online retailers. Specifically, lower privacy concerns, stronger security assurances, and positive ethical considerations are associated with higher levels of consumer trus. Given the competitive nature of the digital marketplace, e-commerce businesses must prioritize safeguarding consumer data through transparent privacy policies and robust security measures. Equally important is the commitment to ethical conduct, which fosters a trustworthy environment that encourages repeat purchases and long-term loyalty. By addressing these critical factors, e-commerce platforms can not only enhance consumer confidence but also secure sustainable growth and a competitive advantage in the evolving online retail landscape. In conclusion, building and maintaining consumer trust is essential for the success of e-commerce, and this trust can only be achieved through comprehensive privacy protections, stringent security protocols, and ethical business practices.

Authors' Contributions:

The authors contributed equally to this work.

References:

Gefen, D. (2000). E-commerce: The role of familiarity and trust. Omega, 28(6), 725–737. https://doi.org/10.1016/S0305-0483(00)00021-9

Kim, D. J., Ferrin, D. L., & Rao, H. R. (2008). A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk, and their antecedents. Decision Support Systems, 44(2), 544–564. https://doi.org/10.1016/j.dss.2007.07.001

McKnight, D. H., Choudhury, V., & Kacmar, C. (2002). Developing and validating trust measures for e-commerce: An integrative typology. Information Systems Research, 13(3), 334–359. https://doi.org/10.1287/isre.13.3.334.81

Culnan, M. J., & Bies, R. J. (2003). Consumer privacy: Balancing economic and justice considerations. Journal of Social Issues, 59(2), 323–342. https://doi.org/10.1111/1540-4560.00067

Koufaris, M., & Hampton-Sosa, W. (2004). The development of initial trust in an online company by new customers. Information & Management, 41(3), 377–397. https://doi.org/10.1016/j.im.2003.08.004

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ORIGINAL PAPER

Responsibility as a Lost Value: Bioethical Consequences of Ideological Polarization

Tereza Bazgierová[1)]

Abstract:
This paper examines ideological polarization in post-communist societies as a crisis of public responsibility rather than merely a clash of political positions. Its objective is to offer a normative analysis of how generational discontinuity, technological acceleration, and democratic disillusionment contribute to the erosion of responsibility as a civic virtue. Methodologically, the paper adopts a conceptual and philosophical approach, drawing on the works of Hannah Arendt, Alasdair MacIntyre, Hans Jonas, Charles Taylor, and Gregory Bateson to clarify the ethical dimensions of polarization. The analysis argues that polarization intensifies through processes of schismogenesis and reshapes individual moral experience by fostering moral fatigue, identity defensiveness, and selective responsibility. As civic responsibility weakens, public discourse contracts into ideological loyalty, reducing the space for dialogical engagement. The paper further explores how this civic fragility affects bioethical deliberation, transforming principled moral reasoning into symbolic political positioning. It concludes that rebuilding responsibility as a public virtue—understood as conscious participation in the formation and maintenance of shared social frameworks—is essential for stabilizing democratic coexistence. Without such renewal, democratic institutions risk remaining formally intact yet ethically fragile.

Keywords: *public responsibility, ideological polarization, post-communist societies, civic virtue, bioethics, democratic fragility.*

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Introduction

Post-communist societies are not merely experiencing political disagreement; they are confronting a crisis of public responsibility. The rapid transition from enforced ideological unity to pluralistic democracy did not allow sufficient time for the cultivation of stable civic habits. Instead of gradual normative development, many societies entered a period of accelerated transformation marked by generational discontinuity, technological disruption, and democratic disillusionment.

The resulting polarization is not simply ideological diversity. It manifests as distrust, mutual delegitimization, and the weakening of dialogue. As Hannah Arendt (1958) reminds us, political life depends upon the existence of a shared world in which individuals appear before one another as interlocutors rather than adversaries. When this shared world fragments, plurality turns into antagonism.

The analysis offered here is conceptual rather than empirical; it seeks to clarify normative dynamics rather than measure them statistically.

This paper approaches the phenomenon normatively rather than descriptively. It does not seek to provide a comprehensive political analysis of post-communist transformation. Instead, it argues that polarization reflects a deeper erosion of responsibility as a civic virtue. When individuals, institutions, and political actors cease to perceive themselves as co-creators of shared social frameworks, fragmentation intensifies.

The aim of this paper is to hold up a mirror to this condition. It suggests that rebuilding responsibility as a public virtue—rather than merely as a private moral disposition—is foundational for restoring meaningful dialogue and stabilizing democratic life. Bioethics, situated within this broader moral climate, inevitably reflects the health or fragility of the public sphere in which it operates.

Generational Discontinuity and Civic Fragility

The democratic transition in post-communist societies was marked by rapid institutional reform but slower moral consolidation. Parliaments, constitutions, and electoral systems were established within a relatively short period of time. Yet the cultivation of civic virtues—trust, dialogical patience, long-term orientation—requires generational continuity rather than legislative speed.

The result has been a structural asymmetry between institutions and habits. Formal democratic mechanisms exist, but the ethical culture necessary to sustain them remains uneven. Public trust in institutions is frequently low, political participation oscillates between apathy and emotional mobilization, and public debate often shifts quickly from disagreement to moral condemnation.

This instability becomes especially visible in generational relations. Older generations, having lived within a system of imposed ideological certainty, often interpret rapid cultural change as loss of orientation. Younger generations, shaped by digital acceleration and global narratives, may perceive inherited norms as restrictive or irrelevant. The gap is not merely a matter of taste or lifestyle; it concerns divergent understandings of authority, responsibility, and social obligation.

Intergenerational dialogue therefore becomes strained. Instead of serving as a space of transmission, it increasingly functions as a space of mutual incomprehension. The absence of shared narratives weakens the continuity through which civic

responsibility is cultivated. Responsibility ceases to be a practice learned through example and becomes instead an abstract expectation.

Technological acceleration intensifies this divide. Digital environments reward immediacy, visibility, and emotional resonance. Public positioning becomes rapid and performative, often detached from sustained reflection. Algorithms reinforce existing preferences, narrowing exposure to alternative perspectives. Under such conditions, disagreement easily transforms into moral polarization.

These developments are observable not only in electoral behavior but in everyday communication: the shortening of argumentative exchange, the preference for declarative certainty over dialogical uncertainty, and the growing suspicion toward institutions and media. The cumulative effect is a civic environment in which responsibility is no longer experienced as a shared orientation toward common life, but as selective loyalty within ideological boundaries.

In addition to generational misunderstanding, post-communist societies face a deeper challenge: democratic disillusionment. The initial enthusiasm of the early transformation period was often followed by economic instability, corruption scandals, and uneven institutional development. For many citizens, democracy became associated not with shared empowerment but with unpredictability and disappointment. This experience has ethical consequences. When political structures fail to deliver perceived fairness or stability, trust erodes not only in institutions but in the very possibility of common orientation.

Trust is not merely a psychological disposition; it is a normative condition of civic life. It presupposes the expectation that others will act within shared boundaries of accountability. In societies marked by historical rupture, this expectation is fragile. The collapse of one ideological system did not automatically generate a new, coherent moral framework. Instead, many communities entered what may be described as a normative vacuum—a space in which inherited certainties had lost authority while new norms had not yet achieved legitimacy.

Charles Taylor (2004) emphasizes that social imaginaries provide the background understandings through which common practices become meaningful. Where these imaginaries fracture, individuals struggle to interpret public life as a cooperative project. In post-communist contexts, rapid exposure to global narratives, market individualism, and digital acceleration has often outpaced the gradual formation of shared civic meaning. The result is not pluralism grounded in mutual recognition, but parallel moral vocabularies competing for dominance.

This condition intensifies generational asymmetry. Older citizens may interpret democratic instability as proof that normative cohesion is unattainable, while younger generations may perceive inherited caution as moral stagnation. The absence of sustained intergenerational dialogue transforms historical memory into suspicion rather than into resource. Democratic fragility thus emerges not solely from institutional weakness but from the incomplete transmission of civic responsibility across time.

Polarization as Escalation: The Logic of Schismogenesis

Polarization does not arise solely from disagreement; it intensifies through patterns of reciprocal reinforcement. Gregory Bateson (1972) described such processes as schismogenesis—situations in which opposing behaviors escalate in response to one another, generating widening differentiation rather than correction.

In polarized post-communist societies, ideological camps increasingly define themselves not only by their own commitments but by opposition to the perceived excesses of the other. Each side interprets the other's rhetoric as confirmation of threat. Defensive reactions are read as aggression; calls for protection are heard as exclusion. The cycle reinforces itself.

This dynamic shifts public engagement from deliberation to positionality. Arguments are framed less as attempts at mutual understanding and more as declarations of alignment. The moral vocabulary of public life becomes simplified: complex ethical questions are translated into binary categories of loyalty and betrayal.

Such escalation reflects moral immaturity rather than moral strength. It privileges intensity over reflection and certainty over responsibility. What appears as firm conviction often masks the inability to tolerate ambiguity or to remain present within disagreement.

The logic of escalation narrows the space for reflective self-critique. To question one's own camp risks internal suspicion; to acknowledge nuance risks perceived weakness. Responsibility gradually shifts from orientation toward shared coexistence to strategic defense of group identity.

This transformation directly affects fields of applied ethics, including bioethics. When public discourse is governed by escalation rather than deliberation, bioethical debates risk becoming extensions of ideological struggle. Questions concerning life, autonomy, or justice are no longer approached as shared moral problems but as symbolic markers of political allegiance.

The erosion of dialogue is therefore not accidental but structural. When public interaction becomes governed by escalation, responsibility is reinterpreted as loyalty rather than accountability. Civic life transforms from cooperative construction into competitive survival.

Beyond reciprocal rhetorical escalation, polarization in post-communist societies increasingly assumes an epistemic dimension. Disagreement is no longer interpreted merely as divergence of opinion but as evidence of moral or intellectual deficiency. Cass Sunstein (2017) demonstrates that group polarization intensifies when individuals deliberate primarily within like-minded circles. Exposure to homogeneous perspectives does not moderate convictions; it amplifies them. In such environments, positions shift toward greater extremity, while alternative viewpoints are perceived as irrational or threatening.

In post-communist contexts, where trust in institutions and media remains fragile, this dynamic acquires particular force. Citizens who already harbor suspicion toward official narratives may retreat into alternative informational ecosystems. Digital platforms, structured by algorithmic personalization, reinforce confirmation rather than confrontation. What appears as freedom of information thus becomes selective exposure. The public sphere fragments into epistemic enclaves that rarely intersect.

This fragmentation reshapes moral perception. When opposing camps inhabit distinct informational worlds, shared factual reference points diminish. Ethical disagreement then loses its common ground. Instead of arguing about the interpretation of shared realities, groups contest the legitimacy of the realities themselves. The result is moral simplification: complex social issues are reduced to binary moral scripts, and compromise is interpreted as betrayal.

Such simplification is particularly destabilizing in societies undergoing continued institutional consolidation. Democratic norms require not only legal structures but habits of interpretative charity—the willingness to assume that opponents act from intelligible

motivations. When polarization erodes this assumption, public discourse shifts from deliberation to denunciation. The opponent is no longer mistaken but malicious.

This epistemic hardening reinforces schismogenesis. Each side's intensification becomes justification for the other's escalation. In post-communist societies, where historical experiences of ideological imposition remain vivid, this cycle can reactivate latent fears of domination. Defensive rhetoric is therefore amplified not only by contemporary disagreement but by unresolved historical memory.

Polarization, in this sense, is not simply excessive disagreement. It is the gradual erosion of shared interpretative frameworks. Without such frameworks, responsibility cannot function as accountability within a common world. It becomes instead loyalty within segmented moral communities.

The Individual in a Polarized Society: Moral Fatigue and Identity Fragility

The effects of polarization are not confined to institutions or public debate. They penetrate the moral experience of individuals. In environments characterized by constant antagonism, the capacity for sustained reflection weakens. Public discourse becomes emotionally saturated, and moral positioning demands immediacy.

Under such conditions, individuals often experience moral fatigue. The persistent requirement to declare allegiance, to defend identity, or to respond to perceived threats narrows the space for contemplative judgment. Instead of participating in shared deliberation, individuals are drawn into reactive alignment.

Polarized societies also destabilize identity. When shared narratives weaken and generational continuity fractures, individuals struggle to situate themselves within a coherent civic horizon. The absence of stable mediating structures—family traditions, civic associations, trusted institutions—reduces opportunities for gradual moral formation.

In this context, ideological belonging can provide temporary clarity. It offers structure in the midst of uncertainty and recognition in the midst of fragmentation. Yet such clarity often comes at the cost of complexity. The individual may gain certainty but lose openness; gain solidarity but lose dialogue.

Responsibility, in this environment, becomes selective. It is exercised toward those within one's perceived moral community and suspended toward those outside it. The willingness to remain in difficult conversation diminishes. Moral responsibility contracts from a civic orientation toward coexistence into a protective posture toward identity.

This contraction has existential implications. When individuals no longer experience themselves as co-creators of a shared world, their relationship to public life shifts from participation to reaction. Democratic citizenship becomes episodic rather than formative. Engagement is triggered by crisis rather than sustained by commitment.

Such developments do not necessarily produce apathy. On the contrary, they may generate intense activism. Yet intensity is not equivalent to responsibility. Without reflective distance and dialogical openness, activism risks reinforcing the very fragmentation it seeks to overcome.

Responsibility as a Civic Virtue

If polarization reflects a crisis of public responsibility, the response cannot be merely procedural or institutional. Responsibility must be reconsidered as a civic virtue—one that structures how individuals inhabit shared social space.

Responsibility, in this sense, is not reducible to compliance with law nor to private moral sentiment. It is the conscious recognition of interdependence within a common world. As Hannah Arendt (1958) argues, political life emerges in the "space of appearance" where individuals act and speak before one another. This shared space does not sustain itself automatically; it depends upon citizens who are willing to remain present within plurality rather than retreat into isolation or antagonism.

Public responsibility therefore entails more than holding opinions. It requires participation in the ongoing formation of social frameworks—what Charles Taylor (2004) describes as "social imaginaries," the shared understandings that make common practices possible. These imaginaries are not neutral; they are shaped through discourse, habit, and example. To withdraw from this formative process is not neutrality but abdication.

Democratic coexistence depends not only on the protection of rights but on voluntary self-limitation. This self-limitation is not a negation of freedom; it is its condition. Without some degree of restraint, freedom degenerates into competitive assertion. Alasdair MacIntyre (1981) observes that when moral language loses its grounding in shared virtues, it collapses into emotivism—claims of preference rather than reasoned judgment. In such contexts, responsibility ceases to be a cultivated disposition and becomes an episodic reaction.

The willingness to limit one's immediate preferences for the sake of coexistence reflects ethical maturity rather than weakness. It presupposes recognition that one's freedom unfolds within networks of mutual dependence. Hans Jonas (1984) extends this insight temporally: responsibility binds present action to future consequences. A society oriented exclusively toward short-term ideological victory undermines its own long-term stability.

Responsibility as a civic virtue includes several dimensions:

- acknowledgment of interdependence across ideological and generational lines;
- commitment to sustained dialogue even in conditions of disagreement;
- readiness to accept partial limitation of one's preferences for the sake of common life;
- long-term orientation toward collective consequences rather than immediate triumph.

Such responsibility cannot be imposed solely by institutions. It must be cultivated through education, example, and public discourse. Institutions may represent collective will, but they do not substitute for individual moral agency. Democratic fragility emerges precisely when responsibility is outsourced—when citizens expect institutions to preserve civic order while disengaging from its ethical maintenance.

In polarized post-communist societies, rebuilding responsibility as a public virtue does not require ideological uniformity. It requires the recovery of habits that sustain shared space: patience in dialogue, willingness to endure ambiguity, and readiness to recognize opponents as participants in the same civic world.

Without these habits, democratic systems may remain formally intact while ethically weakened. Responsibility, stripped of its civic dimension, becomes either privatized morality or ideological weapon. Neither sustains pluralistic coexistence.

Moral fatigue in polarized environments is not merely emotional exhaustion; it represents a deeper weakening of moral orientation. When individuals are continuously exposed to conflictual narratives, urgent moral claims, and escalating rhetoric, the capacity for sustained ethical reflection diminishes. Constant exposure to antagonism fosters reactivity rather than deliberation. Over time, this reactivity becomes habitual. Moral judgment shifts from careful evaluation to rapid categorization.

This process affects identity formation. Charles Taylor (2004) argues that identity is shaped within frameworks of significance that provide orientation and meaning. Where such frameworks are unstable or contested, individuals experience difficulty locating themselves within a coherent moral landscape. In post-communist societies, where inherited narratives were delegitimized and new narratives remain fluid, identity often becomes defensive rather than dialogical. It is constructed not primarily through shared projects but through contrast with perceived adversaries.

Selective responsibility emerges from this defensive posture. Individuals may feel intense moral obligation toward members of their own ideological community while suspending similar concern toward those outside it. This is not necessarily conscious hypocrisy; it is a structural consequence of fragmented moral horizons. Responsibility becomes bounded by identity rather than extended across difference. The ethical imagination narrows.

The long-term effect is a transformation of civic participation. Instead of perceiving themselves as contributors to a shared social world, individuals may begin to experience public life as an arena of symbolic struggle. Engagement becomes episodic and crisis-driven. Between moments of mobilization, withdrawal and cynicism grow. The oscillation between intensity and disengagement further destabilizes democratic continuity.

In post-communist contexts, this fragility is compounded by unresolved historical ambivalence toward authority and collective narratives. Where trust in institutions remains conditional and generational transmission incomplete, individuals often lack stable mediating structures that support gradual moral development. The result is heightened vulnerability to polarization: identity provides certainty, while shared responsibility appears abstract.

Rebuilding civic responsibility therefore requires addressing not only institutional reform but the moral experience of individuals. Without spaces that encourage reflective engagement across difference, moral fatigue hardens into indifference or hostility. Democratic resilience depends upon cultivating capacities for sustained attention, interpretative generosity, and dialogical patience—virtues that counteract the narrowing tendencies of polarized environments.

Freedom, Self-Limitation, and Democratic Responsibility

The crisis of responsibility in post-communist societies cannot be understood without addressing a deeper tension at the heart of democratic life: the relationship between freedom and self-limitation. The transition from authoritarian rule to democratic pluralism was widely interpreted as a liberation. Political freedom, freedom of speech, and economic autonomy were embraced as long-awaited correctives to imposed uniformity. Yet the ethical dimension of freedom—its internal discipline—was less systematically cultivated.

Under communist regimes, limitation was externally enforced. Normative boundaries were imposed by state ideology, often suppressing genuine moral agency. The

rejection of that system understandably generated suspicion toward any language of constraint. In the early years of transformation, the expansion of freedom appeared synonymous with the removal of limits. However, democratic freedom differs fundamentally from liberation from oppression. It presupposes not only rights but also the capacity for voluntary restraint.

In post-communist contexts, this distinction has often remained underdeveloped. The historical memory of coercion has shaped a cultural sensitivity to restriction, even when such restriction is self-imposed for the sake of coexistence. As a result, appeals to responsibility may be interpreted as disguised attempts at control. The language of duty risks being conflated with the language of domination. Yet without some form of internalized self-limitation, pluralistic societies struggle to sustain stability.

Hannah Arendt (1958) argues that political freedom exists only within a shared space where individuals appear before one another as equals. This space does not regulate itself automatically. It depends upon citizens who recognize that their freedom unfolds in relation to others who are equally entitled to act and speak. In post-communist societies, where public trust was historically distorted by surveillance and ideological conformity, rebuilding this shared space requires more than institutional reform. It requires the cultivation of habits that restrain the impulse to transform disagreement into exclusion.

Alasdair MacIntyre (1981) provides a further lens through which to interpret this fragility. When moral language becomes detached from shared practices, it degenerates into emotivism—expressions of preference rather than reasoned argument. In societies emerging from imposed orthodoxy, the temptation to redefine freedom as unbounded self-assertion is understandable. Yet unbounded assertion undermines the very practices that make communal reasoning possible. The absence of a shared ethical vocabulary intensifies polarization, as claims are interpreted as identity markers rather than invitations to dialogue.

The digital transformation of public discourse has amplified this dynamic. Cass Sunstein (2017) demonstrates how echo chambers and group polarization reinforce existing convictions while marginalizing dissenting perspectives. In post-communist societies already marked by fragile intergenerational trust, algorithmic segmentation deepens epistemic separation. Freedom of expression, while formally expanded, becomes structurally narrowed by informational self-selection. The result is not pluralism but parallel monologues.

The problem, therefore, is not freedom itself but its reduction to immediacy. Democratic responsibility demands a form of temporal awareness: the recognition that today's assertion shapes tomorrow's civic climate. Hans Jonas (1984) emphasizes that responsibility binds present agency to future consequences, particularly in technologically advanced societies. In post-communist contexts, where rapid modernization has occurred within a compressed historical timeframe, the long-term consequences of public rhetoric are often overshadowed by short-term political gain.

Voluntary self-limitation must therefore be reinterpreted not as surrender but as participation. To restrain one's own rhetoric, to resist escalation, or to remain in conversation with ideological opponents is not weakness; it is a contribution to the preservation of shared civic space. The refusal of self-limitation may appear courageous, yet it frequently accelerates fragmentation. Democratic maturity lies not in the intensity of conviction but in the capacity to inhabit disagreement without dissolving into hostility.

This reframing is particularly urgent in societies whose historical trajectory has produced deep ambivalence toward authority. Where past regimes abused the language of

collective good, contemporary citizens may hesitate to accept any appeal to common responsibility. Yet the alternative—an exclusively individualistic conception of freedom—risks reproducing instability in a different form. A society of individuals unwilling to limit themselves cannot sustain durable institutions, nor can it cultivate the trust necessary for bioethical deliberation.

Freedom and responsibility must therefore be understood as mutually conditioning rather than opposing principles. Freedom without responsibility fragments into competitive assertion; responsibility without freedom stagnates into conformity. Post-communist democracies confront the challenge of holding these principles in tension while reconstructing trust across generational and ideological divides. The ethical task is not to diminish freedom but to deepen it by embedding it within practices of self-limitation that protect the conditions of common life.

Bioethics as a Mirror of Civic Responsibility

Bioethics does not operate in a vacuum. Although it presents itself as a field of principled reasoning, its deliberative quality depends upon the broader moral climate in which it unfolds. The conditions of public discourse inevitably shape how ethical arguments are articulated, interpreted, and received.

In polarized societies, bioethical debates often become extensions of ideological struggle. Questions concerning autonomy, dignity, reproductive ethics, end-of-life decisions, or public health policy are framed less as shared moral inquiries and more as symbolic markers of political allegiance. The language of rights and the language of protection harden into opposing moral vocabularies.

This shift reflects what MacIntyre (1981) describes as the fragmentation of moral discourse: when shared frameworks dissolve, ethical argument is reduced to competing assertions of preference or authority. In such an environment, bioethics risks losing its deliberative depth. Principles are invoked strategically rather than reflectively.

The logic of schismogenesis (Bateson 1972) further intensifies this tendency. As opposing camps escalate their rhetoric, bioethical positions are interpreted not on the basis of internal coherence but through the lens of ideological affiliation. A proposal is evaluated not for its moral reasoning but for the side it appears to strengthen.

Responsibility, under these conditions, becomes distorted. Instead of functioning as accountability toward vulnerable persons and future consequences, it is redefined as loyalty toward one's ideological community. The ethical horizon narrows. Long-term considerations—so central to Jonas's (1984) understanding of responsibility—are often subordinated to immediate symbolic victory.

Bioethics thus becomes a sensitive indicator of civic health. Where public responsibility is cultivated, bioethical disagreement can remain robust yet dialogical. Where responsibility erodes, even principled debate becomes adversarial.

This does not imply that bioethics should aspire to neutrality devoid of conviction. Rather, it suggests that the capacity to hold conviction while sustaining dialogue depends upon civic virtues cultivated beyond the disciplinary boundaries of bioethics itself. When public responsibility weakens, bioethical reasoning reflects that weakness.

The erosion of civic responsibility therefore has consequences beyond political culture. It reshapes the interpretative environment in which ethical decisions concerning life, vulnerability, and justice are made. In this sense, the fragility of public responsibility becomes a bioethical concern.

A further consequence of polarization for bioethics lies in the transformation of normative reasoning itself. In stable deliberative environments, ethical principles function as orienting tools that facilitate careful balancing of competing values. Autonomy, beneficence, justice, and non-maleficence are interpreted within a shared expectation of good faith. In polarized contexts, however, these principles risk becoming symbolic resources deployed to reinforce prior ideological commitments.

This instrumentalization alters the structure of argumentation. Instead of asking how principles should be interpreted in light of complex human situations, participants may begin by identifying which principle aligns most closely with their pre-existing position. Ethical vocabulary then functions defensively rather than reflectively. The principle of autonomy may be invoked as absolute individual sovereignty, while appeals to justice may be framed as collective protection against perceived moral threat. The subtle balancing characteristic of bioethical reasoning gives way to categorical assertion.

Such distortion does not necessarily indicate bad faith. Rather, it reflects the broader civic climate in which ethical discourse unfolds. When public debate is shaped by suspicion and escalation, even well-intentioned professionals are influenced by the surrounding atmosphere. The capacity to acknowledge uncertainty or to revise one's position in light of new arguments may be perceived as weakness rather than intellectual integrity.

In post-communist societies, this vulnerability is intensified by the relatively recent institutionalization of bioethics as an academic and professional field. Where ethical committees, regulatory frameworks, and public deliberative traditions are still consolidating, polarization can exert disproportionate influence. Bioethical discourse may become entangled with broader cultural conflicts, reducing space for nuanced evaluation.

Reaffirming responsibility within bioethics therefore requires conscious resistance to this instrumentalization. It entails preserving the conditions under which principles can function as guides rather than as weapons. This involves maintaining openness to plural perspectives while refusing reduction of complex ethical dilemmas to ideological slogans. Bioethics, precisely because it addresses questions of life, vulnerability, and dignity, depends upon a civic environment capable of sustaining trust and interpretative charity.

Conclusion: Responsibility After Polarization

The analysis presented here has not sought to identify a political culprit nor to defend a particular ideological position. It has attempted to offer a reflective account of a condition observable in many post-communist societies: the erosion of responsibility as a public virtue.

Polarization, intensified by generational discontinuity and technological acceleration, has reshaped the moral atmosphere in which public life unfolds. When dialogue contracts and distrust expands, responsibility is easily reinterpreted as selective loyalty rather than shared accountability. The consequences extend beyond political culture; they permeate the ethical climate in which institutions, professions, and disciplines—including bioethics—operate.

Rebuilding responsibility does not require ideological uniformity. It requires the cultivation of habits that sustain plurality without collapsing into antagonism: the willingness to remain in conversation, the readiness to accept partial limitation of one's preferences, and the recognition of interdependence across generational and ideological divides.

Such habits cannot be legislated into existence. They must be practiced. Democratic structures may endure formally even in the absence of civic virtue, but their stability becomes increasingly fragile.

The question, therefore, is not whether polarization will disappear. The question is whether societies marked by historical rupture and accelerated change can recover responsibility as a shared orientation toward common life. Without such recovery, freedom risks becoming expressive rather than sustaining, and democratic coexistence increasingly reactive rather than formative.

References:

Arendt, H. (1958). *The Human Condition*. Chicago: University of Chicago Press.

Bateson, G. (1972). *Steps to an Ecology of Mind*. Chicago: University of Chicago Press.

Jonas, H. (1984). *The Imperative of Responsibility: In Search of an Ethics for the Technological Age*. Chicago: University of Chicago Press.

MacIntyre, A. (1981). *After Virtue: A Study in Moral Theory*. Notre Dame: University of Notre Dame Press.

Sunstein, C. R. (2017). *#Republic: Divided Democracy in the Age of Social Media*. Princeton: Princeton University Press.

Taylor, C. (2004). *Modern Social Imaginaries*. Durham: Duke University Press.

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ORIGINAL PAPER

Who Controls the Decision? Artificial Intelligence, Algorithmic Control, and Consumer Trust in Banking

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Abstract:
This article aims to provide a rigorous synthesis of market data and literature on algorithmic control, explainability/transparency, and consumer trust in the banking sector, with a particular focus on Central Europe and Romania. As an introductory article providing the latest market analysis, it will present measurement approaches, empirical findings, industry reports, and regulatory frameworks, identify methodological and substantive gaps specific to the CEE context, and propose a clear research agenda for structuring subsequent articles of the cumulative thesis.

Keywords: *Algorithmic control, Explainability (Explainable AI / XAI), Consumer confidence, Perceived risk, Banking sector, Algorithmic governance, Central and Eastern Europe (CEE).*

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1. Introduction

Digital transformation and the rapid integration of artificial intelligence (AI) in the banking sector have significantly changed institutional decision-making, customer relations, and risk management practices. Current research highlights that, although the use of AI increases operational efficiency, the degree of personalization, and predictive capabilities in areas such as credit assessment, fraud detection, and automated consultancy services, it also raises significant ethical and governance concerns (Černevičienė & Kabašinskas, 2024; McArthur & Mbohwa, 2025). At the forefront of these concerns are the lack of transparency in algorithmic decision-making, the complexity of interpreting sophisticated machine learning models, and the associated implications for accountability and consumer trust (Ashfin, 2023).

Explainable artificial intelligence (XAI) has emerged as an essential theoretical and methodological response, with the aim of making AI systems more transparent and easier to understand for stakeholders, thereby facilitating accountability and regulatory conformity (Ali et al., 2023/2024; Hossain Choudhury et al., 2025). However, despite increased attention to regulatory frameworks – as evidenced by ongoing developments such as the European Union's proposed AI regulations – researchers observe persistent gaps in standardized measurement approaches, empirical validation of trustworthiness outcomes, and context-specific evidence, with a particular focus on the banking context in Central and Eastern Europe (AI ethics review, 2025).

Consumer trust in algorithmic systems is driven by much more than the technical clarity of model interpretations. Research shows that individuals are evaluating AI systems through broader perceptions of fairness, accountability, data management, and institutional transparency. Glikson and Woolley (2020) argue that trust in AI stems from a combination of system-level attributes (such as explainability) and context-specific cues related to organizational integrity and governance practices. Ethical analyses further point out that trust in algorithms depends on how systems address concerns about bias, accountability, and personal data management (Mittelstadt et al., 2016). In parallel, work on fairness in machine learning asserts that user acceptance of algorithmic decisions is strongly influenced by their perception of the basic processes as being institutionally fair and transparent (Binns, 2018). Together, these studies indicate that trust in algorithmic banking systems cannot be reduced to technical transparency alone, but must be understood as a multidimensional construct incorporated into broader socio-institutional expectations.

Therefore, this article launches a comprehensive analysis of the current state of the industry, presenting both the current market context and the academic discourse on algorithmic control, explainability/transparency, and consumer trust in the banking sector. By synthesizing findings from scientific literature, industry reports, and recent regulatory frameworks, the analysis establishes a conceptual and empirical basis for understanding how these concepts are defined, measured, and debated, particularly in Central Europe and Romania. The objectives are to shed light on the basic concepts behind contemporary discussions on AI-based decision-making, to categorize the dominant measurement systems and methodological approaches used in previous studies, and to identify empirical and practical gaps that remain unresolved.

2. Review of the Literature

This section provides a summary of the academic literature and industry evidence that is relevant to the main themes of this paper: algorithmic control, explainability/transparency, and consumer trust in the banking sector. The objective is to

clarify basic terms, summarize empirical findings and measurement practices, and identify methodological and regional gaps – particularly for Romania and Central Europe.

Trust in algorithmic banking systems is a multiphased concept that goes beyond just how well they work and how clear the models are. The literature points out that users assess automated systems based on wider organisational criteria, including fair decision-making, organisational accountability, data governance and transparency of decision-making processes (Lee & See, 2004; Shin, 2021). These dimensions are especially relevant in financial services, where algorithmic decisions have direct and significant repercussions on consumers, such as access to credit, setting contractual terms, or fraud management. Recent research shows that explainability helps to build trust only when it is supported by accredited organizational practices, clear reporting procedures, and solid institutional governance frameworks, while perceptions of algorithmic bias and responsible data use strongly influence public acceptance of AI in the banking sector (Rai, 2020; Busuioc, 2021; Siau & Wang, 2018).

The technical literature on explainability draws a distinction between technical transparency at the modeling level and user-oriented explanations designed for the general public. Technical explainability – which relates to the internal mechanisms of the model and formal interpretation – is useful for developers and auditors, while user-oriented explanations are intended to provide practical and easily comprehensible reasoning that helps consumers understand and challenge decisions (Doshi-Velez & Kim, 2017; Ribeiro, Singh, & Guestrin, 2016). Industry reports and practitioner guidance consistently underscore that explanations to consumers about AI-based decisions should be concise, contextually relevant, and compliant with legal and regulatory mandates (Accenture, 2021; IBM, 2022; PwC, 2020). However, operational limitations, intellectual property concerns, and GDPR regulations significantly constrain the scope and level of detail of explanations that financial institutions can provide (European Banking Authority, 2021b; Information Commissioner's Office, 2020). In the banking sector, where regulatory control is particularly strict, the design of explanations must strike a careful balance between transparency, privacy protection, and operational feasibility (Basel Committee on Banking Supervision, 2020).

Perceived algorithmic control – the sense that users feel they can understand, influence, or challenge automated decisions – acts as a key factor between transparency and trust in AI systems. Research in human-computer interaction, consumer behavior, and banking services indicates that even highly transparent or explainable systems may fail to generate trust if users perceive a limited ability to intervene or ask for a remedy (Binns et al., 2018; Kizilcec, 2016). This perception includes both procedural elements, such as the availability of appeal or feedback mechanisms, and informational elements, including clarity about the data collected and how it is used. Perceived low control is associated with reaction, avoidance, and reduced engagement, regardless of the objective performance of the system (Kizilcec, 2016). At the same time, perceived risk remains a decisive factor in behavioral intentions toward AI-based services. Fundamental models of technology adoption highlight that privacy, security, and potential financial or reputational harm reduce the likelihood of adoption, while perceived usefulness and demonstrable performance benefits can mitigate these concerns (Pavlou, 2014; McKnight et al., 2011). In the banking sector, perceived risk is complex – encompassing financial loss, reputational damage, and misuse of personal data – and interacts dynamically with encouragement: greater encouragement reduces perceived risk and increases adoption intentions, while higher perceived risk undermines encouragement and diminishes

engagement with AI-based services (Cheng et al., 2021a; Gefen, Karahanna, & Straub, 2003; Kim, Ferrin, & Rao, 2008).

The institutional framework and regional distinctions are key factors, yet insufficiently analyzed, in consumer confidence in algorithmic banking systems. Evidence from comparative studies indicates that levels of institutional trust, regulatory maturity, and digital literacy influence perceptions of transparency, explainability, and control over automated decisions (European Commission, 2021; World Bank, 2021). In this regard, Central and Eastern European countries, including Romania, have distinct patterns compared to Western European economies, reflecting diverse historical and institutional trajectories (European Commission, 2022; European Banking Authority, 2021a). Consequently, empirical results derived mainly from Western European or Anglo-Saxon contexts may have limited applicability to CEE banking markets. However, the literature offers few comparative analyses that specifically investigate consumer confidence, perceived risk, and algorithmic decisions in the Romanian and regional banking sector, highlighting an empirical gap that this thesis aims to address.

3. Research Methodology

From a methodological stand point, the existing literature is characterised by a wide diversity in terms of the implementation and quantification of key concepts. Empirical studies typically rely on Likert scales to measure trust, perceived transparency, perceived algorithmic control, and perceived risk; however, there is considerable variation in item wording, scale length, and reporting of psychometric properties. While some contributions provide exhaustive evidence of construct validity and reliability through factor analyses and robustness checks, others report limited or no details on validation, thus limiting comparability across studies and hindering cumulative knowledge development and meta-analytic synthesis (Gefen et al., 2003; Kim et al., 2008; Hair et al., 2019).

Furthermore, much of the empirical research is based on evidence from a single country or institution, which casts doubt on its external validity and limits the generalizability of the results to different institutional contexts. In contrast, applied research in related fields, such as corporate governance, sustainability reporting, and financial statement disclosure, demonstrates the analytical value of large secondary datasets, standardized indicators, and rigorous psychometric validation procedures (Ciuciuc et al., 2024; Mititean & Cardoș, 2022). These methodological approaches offer feasible avenues that can be adapted to the study of algorithmic decision-making and consumer trust in banking systems in Central and Eastern Europe (CEE). This analysis identifies several significant gaps in the literature. First, there is still a clear lack of comparative studies that explicitly focus on CEE contexts and systematically consider institutional trust and digital literacy as determining variables. Second, disagreements in measurement practices across studies preclude meaningful comparison and theory building; in particular, validated and context-sensitive scales for perceived algorithmic control and user-oriented explainability remain underdeveloped. Third, existing research tends to privilege the technical dimensions of explainability, often neglecting institutional governance mechanisms, auditing, and consumer redress mechanisms – issues that are particularly important in highly regulated sectors such as banking (Dowie, De Bruijn, & De Mattos, 2021; Shirokova et al., 2021). Fourth, qualitative evidence from banking professionals remains limited, constraining our understanding of how organizations put governance frameworks, communication strategies, and dispute channels into practice. Finally, empirical research investigating how alternative explanation formats shape trust,

perceived risk, and behavioral intentions in the banking context is still in its infancy, highlighting the need for more systematic causal evidence.

Based on these findings, the article will address a series of interconnected questions and research hypotheses. Key research questions include: (1) How does perceived algorithmic control influence consumer trust in automated banking decisions? (2) Are there systematic differences between Romania and other Central European countries in terms of perceived trust and transparency? (3) What institutional mechanisms (e.g., auditing, challenge channels, communication practices) shape consumer trust in algorithmic banking systems? (4) How do technical versus user-oriented explanations affect trust and adoption intentions? and (5) To what extent do digital literacy and previous experiences with automated decisions moderate these relationships? These questions generate testable hypotheses – for example, that higher perceived algorithmic control is associated with greater trust in AI-based banking services and that perceived transparency mediates the effect of perceived performance on trust.

Consequently, the literature provides a solid conceptual foundation – based on trust in automation, explainable AI, and governance studies – but empirical evidence remains fragmented and unevenly distributed across regions. Therefore, this article will present a systematic analysis of the current state of technology and the market (mapping measurement tools, empirical findings, and regulatory guidelines) and aims to provide contextually and politically relevant insights into how banks can design algorithmic systems and governance practices that foster legitimate and sustainable consumer trust.

The empirical analysis is conducted using existing databases and institutional indicators, following a four-step structured approach to ensure rigor and clarity of interpretation. The first stage involves a descriptive assessment of variables extracted from secondary sources, including institutional and market-level indicators, as well as the constructs of trust, control, explainability, risk, and digital literacy. Reliability and basic correlations between constructs are examined to provide an initial overview of the data. Country-level summaries from institutional datasets contextualize regulatory maturity, basic institutional trust, and digital adoption patterns.

In the second stage, the measurement characteristics of the constructs are evaluated through exploratory and confirmatory factor analyses, adapted to the structure of the existing data. Reliability is assessed using Cronbach's α and composite reliability, and convergent validity is verified using average variance extracted (AVE), ensuring that the constructs can be meaningfully interpreted for cross-national analysis.

The third stage centers on testing hypothetical relationships using regression models applied to secondary data. Ordinary least squares (OLS) regression is used for continuous outcomes, with logistic regression applied if the dependent variables are binary. According to the reference model, adapted from the standard specifications of fixed-effects OLS linear regression (Wooldridge, 2010) for trust, the following is specified:

$$Trust_i = \beta_0 + \beta_1 \times Control_i + \beta_2 \times Explainability_i + \beta_3 \times X_i + \gamma c + \varepsilon_i$$

where X_i represents the control variables available in the data sets, γc indicates the fixed effects of the country, and ε_i is the error term. Similar model specifications are applied when trust is replaced by intention or risk as the dependent variable.

Finally, mediation and moderation effects are examined using structural equation modeling (SEM) on secondary data. Indirect effects are estimated with bootstrap confidence intervals to test potential mediation paths, such as Explainability → Control → Trust. Moderation analyses explore whether digital literacy or previous negative

experiences influence the strength of these relationships, with interaction terms centered on the mean to reduce multicollinearity. All models report robust country-level pooled standard errors, and statistical significance is assessed at conventional levels ($p < 0.05$), with standardized effect sizes provided to facilitate substantive interpretation.

This subtopic defines the basic concepts, their operational proxies, measurement elements (examples), coding rules, and procedures for handling missing data and indicators in the literature. The objective is to produce a replicable codifier that can be used to harmonize multiple secondary data sets and to consistently code documents from banks/regulatory authorities.

Dependent variables

Variable	Abbreviation	Operational Definition	Example Reference / Quotation	Measurement Proxy and Coding	Main Reference
Trust in algorithmic banking services	**TRUST**	Consumers' trust that banks' automated decisions are accurate, reliable, and legitimate	*"I trust that my bank makes correct decisions when using automated systems."*	Questionnaire items 1–7: Likert scale; average of items; higher values indicate higher trust	(Glikson & Woolley, 2020); (Pavlou, 2003); (Venkatesh et al., 2003)
Behavioral intention or adoption	**INTENT**	Intention to use or observed adoption of AI-based banking services	*"I intend to use artificial intelligence–based banking services within the next 12 months."*	Self-reported intention on a 1–7 Likert scale or observed adoption rate (% of users); higher values indicate higher intention/adoption	(Doshi-Velez & Kim, 2017)

Independent variables

Variable	Abbreviation	Operational Definition	Example Reference / Quotation	Measurement Proxy and Coding	Main Reference
Perceived explainability / transparency	**EXPLAIN**	The perceived clarity, relevance, and usefulness of explanations provided for algorithmic decisions	*"The reasons provided by my bank for automated decisions are clear and easy to understand."*	Survey items on a 1–7 Likert scale or document-based indicators (0 = none; 1 = partial; 2 = full); rescaled to 1–7 or standardized	(Ribeiro, Singh, & Guestrin, 2016)

Perceived algorithmic control	**CONTROL**	The perceived ability to understand, influence, contest, or opt out of automated decisions; includes the presence of recourse mechanisms	*"I can contest automated decisions that affect me."*	Survey items on a 1–7 Likert scale or document-based coding of recourse mechanisms (0 = none; 1 = limited; 2 = formal)	(Doshi-Velez & Kim, 2017)
Perceived risk	**RISK**	Perceptions of privacy, security, and financial risk associated with automated banking services	*"Using automated banking services exposes me to privacy or financial risks."*	Multi-item index on a 1–7 Likert scale; combined as an average; higher values indicate higher perceived risk	(Lankton, McKnight, & Tripp, 2015)

Control variables

Variable	**Abbreviation**	**Operational Definition**	**Example Reference / Quotation**	**Measurement Proxy and Coding**	**Main Reference**
Digital literacy	**DL**	Individual digital skills and the ability to understand and use digital banking tools and artificial intelligence features	*"I am confident in using online banking features without assistance," plus short objective tasks*	Index combining self-assessed skills (1–7 Likert scale) and objective task scores; standardized (z-score)	(van Deursen & van Dijk, 2014)
Prior negative experience	**NEG_EXP**	Whether the respondent has previously experienced a negative outcome resulting	*"Have you ever been affected by an automated decision made by a bank that*	Binary variable: 1 = yes; 0 = no	(European Commission, 2021)

		from an automated decision	*you considered unfair?" (Yes/No)*		
Institutional trust	**INST_TRUST**	Aggregate trust in national institutions and banks at the country level	*Country-level average of the survey question "How much do you trust banks in your country?"*	National-level index from Eurobarometer or national surveys; continuous	(World Bank, 2024)
AI governance maturity	**AI_MATURITY**	The degree of preparedness of national regulatory and supervisory authorities for AI in financial services	*Index coded from market scanning: 0 = low; 1 = medium; 2 = high*	Ordinal index; used as a country-level control or moderator	(European Banking Authority, 2021b)
GDP per capita	**GDP_PC**	Control variable capturing economic development	*World Bank GDP per capita (constant USD)*	Continuous; log-transformed for regression analysis	(World Bank, 2024); (Eurostat, 2024)
Internet penetration	**INT_PEN**	Percentage of the population with access to the internet	*National statistics / Eurostat indicator*	Continuous (%); used as a control for digital access	(OECD, 2024)
Demographic controls	**AGE, GENDER, EDU, INC**	Standard socio-demographic covariates	*Age in years; gender; highest level of education; household income category*	Standard coding; included as covariates in regression models	(National Institute of Statistics, 2024)

The tables summarize the variables used in the empirical analysis, grouped into dependent, independent, and control variables, defined in accordance with the literature

on trust in artificial intelligence and the adoption of digital financial services. The dependent variables capture consumer trust in algorithmic banking decisions and the intensity of AI-based service use. The independent variables implement the central mechanisms of the designed model, namely perceived explainability, perceived algorithmic control, and perceived risk. The set of control variables includes relevant individual, institutional, and macroeconomic factors, such as digital skills, previous negative experiences, institutional trust, AI governance maturity, and standard indicators of economic development and digital infrastructure. This structure allows for testing the relationships between transparency, control, risk, and trust in the banking context, using comparable secondary data at the national and transnational levels.

4. Research Results

The unit of analysis is set up on two related levels. At the individual level, consumer perceptions of trust in algorithmic banking decisions, perceived risk, and digital skills are collected using standardized survey indicators and then aggregated at the national level to make sure they're comparable across Central European countries.

The data is drawn from several authoritative sources. Measures of consumer confidence, perceived risk, and trust in institutions are obtained from special Eurobarometer surveys. The digital skills and internet penetration are implemented using the Digital Economy and Society Index (DESI). Macroeconomic and infrastructure indicators, including GDP per capita, are taken from World Bank and Eurostat databases. The maturity of AI governance in the financial sector is measured by coded indicators from reports published by the European Banking Authority (EBA).

The conceptual sample includes Romania, Germany, Poland, and the Czech Republic, selected to reflect both Romanian banking systems and a Central European benchmark characterized by more diverse institutional trust and regulatory capacity.

The descriptive statistics indicate significant variations between countries in terms of consumer confidence in algorithmic banking decisions. Romania has the lowest average trust and the highest perceived risk, consistent with lower levels of digital skills and institutional trust. Germany serves as a benchmark for high trust, characterized by strong digital skills and mature institutional environments. Poland and the Czech Republic occupy middle positions, reflecting the heterogeneous dynamics of transition in Central and Eastern Europe.

Table 1. Descriptive statistics at country level (aggregated individual perceptions) (European Commission, 2023; Obelovska et al., 2025)

Country	TRUST (mean)	RISK (mean)	Digital Skills (DESI)	Institutional Trust	Internet Penetration (%)
Romania	3.6	4.9	36.2	3.8	85
Germany	5.4	3.2	62.8	6.1	93
Poland	4.3	4.1	44.7	4.7	90
Czech Republic	4.8	3.7	54.1	5.2	92

Romania shows a low level of trust in algorithmic decisions, correlated with a high perceived risk and low digital skills, which shows that access to technology without institutional and cognitive capital is not enough. Germany offers a clear contrast, with a high level of trust, low risk, and a mature digital system. Poland and the Czech Republic fall between these extremes, reflecting processes of digital and institutional consolidation, where moderate trust coexists with uncertainties about transparency and data use.

For the Digital Competence Indicators (DESI), established institutional and academic sources have been used. According to the European Commission, DESI provides comparable indicators on digital performance across EU Member States (European Commission, 2024), and a recent analysis highlights that DESI 2024 data provides a solid basis for assessing digital skills and infrastructure in EU countries (Obelovska et al., 2024). For the level of trust in institutions, benchmark sources from the literature were used, in particular the Eurobarometer and the TRUEDEM database. The Eurobarometer provides longitudinal indicators of citizens' trust in national and European institutions (GESIS, 2024), while TRUEDEM is defined as a unified database of political trust measures in Europe (European Observatory on Political Trust, 2024). Data on internet penetration were based on statistics from the International Telecommunication Union (ITU), which records indicators of ICT access and use at global and national levels (ITU, 2025).

Table 2. Correlations reported in the literature between explainability, algorithmic control, perceived risk, and trust in algorithmic systems. Performed in SPSS

Study	Empirical Context	Level of Analysis	Explainability–Trust (r)	Control–Trust (r)	Risk–Trust (r)	Key Observations
Glikson & Woolley (2020)	Organizational AI (empirical meta-review)	Individual	0.34***	0.41***	−0.29***	Control mediates the effect of explainability
Shin (2021)	Explainable decision-making algorithms	Individual	0.38***	0.46***	−0.33***	Causability > explainability
Cheng et al. (2021a)	Digital financial services	Individual	0.31**	0.39***	−0.42***	Risk is dominant in financial contexts
Lankton et al. (2015)	Automated systems	Individual	0.27**	0.35***	−0.48***	Risk strongly associated with avoidance
Siau & Wang (2018)	Explainable AI & ML	Individual	0.44***	0.40***	−0.26**	

Note. Values represent Pearson coefficients reported in the original studies. ***p < 0.001, **p < 0.01. Level of analysis = primary unit of measurement (individual respondent). Performed in SPSS.

Table 3. Reported results of linear regression on the determinants of trust in algorithmic systems. Performed in SPSS

Study	Context	Explainability (β)	Control (β)	Risk (β)	Control Variables	R^2
Pavlou (2003)	E-commerce	0.21**	—	−0.34***	TAM, online experience	0.29
Gefen et al. (2003)	E-commerce	—	0.28***	−0.31***	Usefulness, ease of use	0.33
Shin (2021)	Explainable AI systems	0.19**	0.32***	−0.27***	Digital literacy	0.41
Cheng et al. (2021b)	AI-based financial services	0.17*	0.35***	−0.39***	Age, education, experience	0.46
Kim et al. (2008)	Consumer decision-making	—	0.30***	−0.41***	Security perception	0.38

Note. Standardized coefficients (β) reported in the original studies. Models include demographic and technological controls. *p < 0.05, **p < 0.01, ***p < 0.001.

Table 2 and Table 3 show that the literature indicates the consistency and strength of relationships between perceived explainability, perceived algorithmic control, and trust in automated systems, regardless of the technological context analyzed. Methodologically, algorithmic control can be considered a stronger and more stable indicator of trust than explainability, suggesting that users evaluate not only the clarity of explanations, but also the actual ability to influence or challenge automated decisions. At the same time, perceived risk has a substantial negative effect, which is more pronounced in financial contexts, where the consequences of algorithmic decisions are direct and significant. These results indicate that technical transparency is necessary but insufficient in the absence of institutional mechanisms for control, recourse, and governance, a conclusion that is particularly relevant for the heavily regulated banking sector.

In terms of H1, as shown in Table 1, the reported correlations between explainability and trust are positive and statistically significant in all studies analyzed, with Pearson coefficient values ranging from r = 0.27 to r = 0.44. The regression results summarized in Table 2 also show positive standardized coefficients for explainability (β between 0.17 and 0.21), implying a direct but moderate effect on trust. However, the literature indicates that this effect is influenced by context. Studies in non-financial or low-risk areas (e.g., Siau & Wang, 2018) report higher coefficients for explainability, while in financial contexts explainability seems to play a more complementary role. This is particularly relevant for Romania and Central and Eastern Europe, where lower levels

of digital literacy may limit consumers' ability to convert technical explanations into effective trust.

Taking H2 into account, the combined results clearly support this hypothesis. In all the studies analyzed, the correlation and regression coefficients for algorithmic control are higher than those for explainability, with β coefficient values ranging from 0.28 to 0.35 (Table 2). This model indicates that trust is built not only through understanding algorithmic decisions, but also through the existence of intervention, challenge, and appeal mechanisms. For the banking markets in Romania and CEE, where institutional trust is structurally lower, these results indicate that the design of control mechanisms (e.g., the possibility of human review, clear complaint channels) could have had a greater impact on trust than simply providing technical explanations.

In H3, both the correlations and regression coefficients reported in the literature show a strong negative effect of perceived risk on trust, with Pearson coefficients ranging from −0.26 to −0.48 and β coefficients ranging from −0.27 to −0.41. The effect of risk is most pronounced in studies in the field of financial services (Cheng et al., 2021a; Kim et al., 2008), where the consequences of algorithmic decisions are perceived as direct and potentially costly. This result is particularly relevant for Romania, where institutional data indicate a higher level of concern about data security and its use by financial institutions. The literature thus indicates that reducing perceived risk may be a necessary requirement for building trust, even in the presence of algorithmic explainability and control.

Within H4, although most of the studies reviewed do not explicitly test mediation or moderation models, the reported patterns suggest that explainability and control act as indirect mechanisms for reducing perceived risk. Studies that consider these variables simultaneously (e.g., Shin, 2021; Cheng et al., 2021b) report higher R^2 values (up to 0.46), indicating superior explanatory power of the models. In the context of ECE, this finding suggests that algorithmic governance strategies that combine procedural transparency with clear control mechanisms can reduce consumer uncertainty and fears, indirectly contributing to increased trust.

Although the studies analyzed in section H5 were mainly conducted in Western Europe or North America, the synthesis of the results indicates that the extent of the relationships varies systematically depending on the institutional context. This difference justifies the hypothesis that, in Romania and other Central and Eastern European countries, algorithmic control and perceived risk reduction may have a greater influence on trust than technical explainability itself.

Overall, the summary of the results from the literature supports the hypotheses formulated and indicates that trust in algorithmic banking systems is a multidimensional concept, shaped by the interaction between explainability, control, and perceived risk. The relatively greater significance of algorithmic control and risk reduction suggests that they may play a more decisive role in governance than the technical performance of AI systems.

5. Conclusion

This article aims to systematically review the academic literature, empirical evidence, and market context regarding algorithmic control, explainability, and consumer trust in the banking sector, with an explicit focus on Romania and Central and Eastern Europe. By integrating cross-sector research findings, institutional reports, and country-level comparative data, the analysis provides a coherent picture of how trust in algorithmic banking systems is addressed, measured, and explained in contemporary academic literature.

A first key finding of the study is that consumer trust in algorithmic decisions cannot be reduced to the technical performance of systems or the mere transparency of models. The evidence collected consistently indicates that perceived explainability, perceived algorithmic control, and perceived risk constitute an interdependent set of determinants of trust, with stable and statistically significant effects across diverse technological and institutional contexts. In particular, algorithmic control – understood as the perceived possibility to challenge, influence, or request a review of automated decisions – appears to be a more robust and consistent predictor of trust than technical explainability itself.

A second important conclusion is that perceived risk has a significant and persistent negative effect on trust, an effect that is amplified in the banking sector, where the consequences of algorithmic decisions are direct and can be costly for consumers. The literature shows that, in the absence of credible control and governance mechanisms, even explainable systems may be unable to generate legitimate trust. Thus, technical transparency, while necessary, is insufficient if not supported by clear institutional frameworks for accountability, audit, and challenge.

The comparative analysis at country level clearly reveals the decisive role of the institutional context and digital capital. Romania stands out with a lower level of trust in algorithmic banking decisions, a higher perceived risk, and lower digital skills compared to countries such as Germany. These differences indicate that mechanisms for increasing trust work differently depending on institutional maturity, historical experiences, and levels of digital literacy. Accordingly, results obtained in the Western European or Anglo-Saxon context cannot be automatically transferred to Central and Eastern European markets without conceptual and methodological adaptations.

A significant contribution of this article is the identification of structural gaps in the current literature. Despite numerous studies on explainability and trust in AI, research remains methodologically fragmented, with considerable differences in the implementation of constructs and a clear underestimation of the contexts in Central and Eastern Europe. Furthermore, the dominant focus on the technical dimensions of explainability has led to a relative neglect of institutional governance mechanisms, algorithmic auditing, and complaint channels, which are essential in highly regulated sectors such as banking.

In this context, the article fulfills its role as an introductory article within the cumulative thesis, providing a solid conceptual, empirical, and methodological basis for further research. By systematically mapping measurement tools, empirical findings, and regulatory frameworks, the article lays the groundwork for a clear research agenda focused on large-scale empirical validation, cross-country comparisons, qualitative investigations with banking experts, and experimental evaluations of algorithmic explanation formats.

To be more specific, the results suggest that effective AI governance strategies in the banking sector need to go beyond the technical transparency paradigm and include solid institutional mechanisms for control, accountability, and consumer protection. For Romania and other countries in Central and Eastern Europe, building trust in algorithmic banking systems depends less on technological sophistication and more on the ability of institutions to demonstrate control, fairness, and accountability in the use of AI.

In conclusion, this article contributes to the literature by providing a comprehensive perspective on the relationship between explainability, algorithmic control, and consumer trust, focusing on the importance of institutional and regional

context. Through this approach, the article not only explains the current situation in the sector, but also presents the directions needed to develop politically and managerially relevant empirical research aimed at supporting the design of algorithmic banking systems that inspire legitimate, sustainable, and socially justified trust.

Authors' Contributions:

The authors contributed equally to this work.

References:

Accenture. (2021). *Responsible AI: From principles to practice*. https://www.accenture.com/content/dam/accenture/final/a-com-migration/pdf/pdf-149/accenture-responsible-ai-final.pdf

Ali, S., Abuhmed, T., El-Sappagh, S., Muhammad, K., Alonso-Moral, J. M., Confalonieri, R., ... Herrera, F. (2023/2024). Explainable artificial intelligence (XAI): What we know and what is left to attain trustworthy artificial intelligence. *Information Fusion, 99*, 101805. https://doi.org/10.1016/j.inffus.2023.101805

Ashfin, U. (2023). Achieving transparency and trust with explainable AI (XAI) in financial services. *Frontiers in Computer Science and Artificial Intelligence.*

Basel Committee on Banking Supervision. (2020). *Sound practices: Implications of fintech developments for banks and bank supervisors*. Bank for International Settlements. https://www.bis.org/bcbs/publ/d431.htm

Binns, R., Veale, M., Van Kleek, M., & Shadbolt, N. (2018). 'It's reducing a human being to a percentage': Perceptions of justice in algorithmic decisions. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems* (pp. 1–14). ACM. https://doi.org/10.1145/3173574.3173951

Busuioc, M. (2021). Accountable artificial intelligence: Holding algorithms to account. *Public Administration Review, 81*(5), 825–836. https://doi.org/10.1111/puar.13293

Černevičienė, J., & Kabašinskas, A. (2024). Explainable artificial intelligence (XAI) in finance: A systematic literature review. *Artificial Intelligence Review*.

Cheng, J., Wang, Y., & Jiang, H. (2021a). User trust, perceived risk, and adoption of AI-driven financial services. *Electronic Commerce Research and Applications, 50*, 101080. https://doi.org/10.1016/j.elerap.2021.101080

Cheng, X., Wang, L., & Jiang, Z. (2021b). Trust and adoption of AI-based financial services. *Electronic Commerce Research and Applications, 47*, 101036.

Ciuciuc, A., Neamţu, D. M., & Popescu, C. R. G. (2024). Sustainability reporting quality and corporate governance mechanisms: Evidence from emerging European markets. *Journal of Cleaner Production, 434*, 140243. https://doi.org/10.1016/j.jclepro.2023.140243

Comisia Europeană. (2021). *Fostering a European approach to artificial intelligence* (COM(2021) 205 final). Publications Office of the European Union. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021DC0205

Comisia Europeană. (2022). *Digital Economy and Society Index (DESI) 2022: Thematic chapters*. Publications Office of the European Union. https://digital-strategy.ec.europa.eu/en/library/digital-economy-and-society-index-desi-2022

Doshi-Velez, F., & Kim, B. (2017). Towards a rigorous science of interpretable machine learning. *arXiv*. https://arxiv.org/abs/1702.08608

Dowie, C., De Bruijn, O., & De Mattos, C. (2021). A coding scheme for studying group interactions in international negotiations. *British Journal of Management, 32*(2), 501–520. https://doi.org/10.1111/1467-8551.12453

European Banking Authority. (2021a). *EBA 2021 annual report*. https://www.eba.europa.eu/

European Banking Authority. (2021b). *EBA analysis of RegTech in the EU financial sector* (EBA/REP/2021/17). https://www.eba.europa.eu/

European Commission. (2021). *Special Eurobarometer: Public attitudes toward the digital transformation of the EU*. https://ec.europa.eu/commission/presscorner/api/files/document/print/en/ip_21_6462/IP_21_6462_EN.pdf

European Commission. (2023). *România în Indicele Economiei și Societăţii Digitale*. Shaping Europe's Digital Future. https://digital-strategy.ec.europa.eu/ro/policies/desi-romania

European Commission. (2024). *DESI dashboard for the Digital Decade*. https://digital-decade-desi.digital-strategy.ec.europa.eu/datasets/desi/charts

Eurostat. (2024). *Digital economy and society statistics – households and individuals*. European Commission. https://ec.europa.eu/eurostat/web/digital-economy-and-society/data/database

Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping. *MIS Quarterly, 27*(1), 51–90. https://doi.org/10.2307/30036519

Glikson, E., & Woolley, A. W. (2020). Human trust in artificial intelligence. *Academy of Management Annals, 14*(2), 627–660. https://doi.org/10.5465/annals.2018.0057

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning.

IBM. (2022). *Everyday ethics for artificial intelligence*. https://www.ibm.com/impact/ai-ethics

Information Commissioner's Office. (2020). *Explaining decisions made with AI*. https://ico.org.uk/for-organisations/guide-to-data-protection/key-dp-themes/explaining-decisions-made-with-ai/

Institutul Naţional de Statistică. (2024). *Date statistice naţionale*. https://insse.ro/

International Telecommunication Union. (2025). *Global and regional ICT data sets*. https://www.itu.int/en/ITU-D/Statistics/pages/stat/default.aspx

Kim, D. J., Ferrin, D. L., & Rao, H. R. (2008). A trust-based consumer decision-making model. *Decision Support Systems, 44*(2), 544–564. https://doi.org/10.1016/j.dss.2007.07.001

Kizilcec, R. F. (2016). How much information? In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems* (pp. 2390–2395). ACM. https://doi.org/10.1145/2858036.2858529

Lankton, N. K., McKnight, D. H., & Tripp, J. (2015). Technology, humanness, and trust. *Journal of the Association for Information Systems, 16*(10), 880–918. https://doi.org/10.17705/1jais.00411

Lee, J. D., & See, K. A. (2004). Trust in automation. *Human Factors, 46*(1), 50–80.

McArthur, F., & Mbohwa, C. (2025). AI ethics in banking services. *Discover Artificial Intelligence, 5*, Article 319. https://doi.org/10.1007/s44163-025-00432-4

McKnight, D. H., Carter, M., Thatcher, J. B., & Clay, P. F. (2011). Trust in a specific technology. *ACM Transactions on Management Information Systems, 2*(2), 1–25. https://doi.org/10.1145/1985347.1985353

Mititean, P., & Cardoș, I. R. (2022). Corporate governance, transparency, and financial performance. *Economic Research–Ekonomska Istraživanja, 35*(1), 113–134.

Obelovska, K., Abziatov, A., Doroshenko, A., Dronyuk, I., Liskevych, O., & Liskevych, R. (2025). Analysis of digital skills and infrastructure in EU countries based on DESI 2024 data. *Future Internet, 17*(6), 228. https://doi.org/10.3390/fi17060228

OECD. (2024). *Education and demographic indicators*. https://stats.oecd.org/

Pavlou, P. A. (2003). Consumer acceptance of electronic commerce. *International Journal of Electronic Commerce, 7*(3), 101–134. https://doi.org/10.1080/10864415.2003.11044275

PwC. (2020). *Explainable AI: A guide for transparency and trust*. https://www.pwc.com/m1/en/services/assurance/risk-assurance/documents/explainable-ai.pdf

Rai, A. (2020). Explainable AI. *Journal of the Academy of Marketing Science, 48*, 137–141. https://doi.org/10.1007/s11747-019-00710-5

Ribeiro, M. T., Singh, S., & Guestrin, C. (2016). "Why should I trust you?". In *Proceedings of the 22nd ACM SIGKDD Conference* (pp. 1135–1144). ACM. https://doi.org/10.1145/2939672.2939778

Shin, D. (2021). The effects of explainability and causability. *International Journal of Human–Computer Studies, 146*, 102551. https://doi.org/10.1016/j.ijhcs.2020.102551

Shirokova, G., Morris, M. H., Laskovaia, A., & Micelotta, E. (2021). Effectuation and causation. *Journal of Business Research, 129*, 169–182.

Siau, K., & Wang, W. (2018). Building trust in AI, ML, and robotics. *Cutter Business Technology Journal, 31*(2), 47–53.

van Deursen, A. J. A. M., & van Dijk, J. A. G. M. (2014). The digital divide shifts to differences in usage. *New Media & Society, 16*(3), 507–526.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology. *MIS Quarterly, 27*(3), 425–478.

World Bank. (2021). *Europe and Central Asia economic update*. https://openknowledge.worldbank.org/entities/publication/71eb3521-4c98-55b6-bf4c-6a49c9d36acb

World Bank. (2024). *World Development Indicators*. https://databank.worldbank.org/source/world-development-indicators

World Population Review. (2026). *Internet penetration by country*. https://worldpopulationreview.com/country-rankings/internet-penetration-by-country

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ORIGINAL PAPER

Symbols of National Identity

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Abstract:
This article explores national identity as a symbolic construct shaped by myths, collective representations, and the social imaginary. Rather than reducing the nation to political, territorial, or linguistic criteria, the study approaches it as a symbolic community sustained through shared meanings and cultural narratives. National identity is thus understood as the product of a complex network of symbols that generate cohesion, belonging, and differentiation.
The analysis focuses on four key national symbols: the flag, the anthem, the national day, and the currency. The flag and anthem are examined as highly visible and emotionally charged symbols, capable of mobilizing collective attachment and reinforcing unity, while also containing the potential for exclusion and conflict. The national day is analyzed as a temporal and commemorative symbol that activates historical memory and reinforces collective identity, despite its relative instability and dependence on political and historical contexts. In contrast, the national currency operates as a more subtle and everyday form of symbolism, contributing to identity formation through routine use and what can be described as "banal nationalism."
I will argue that the strength of national symbols lies not only in their institutional recognition, but in their capacity to engage deeper layers of the collective imaginary and to reactivate underlying mythological structures. At the same time, these symbols reveal an inherent ambivalence: they foster solidarity and continuity, yet also generate alterity and tension. Ultimately, national identity emerges as a dynamic and ongoing process, in which symbolic forms play a central role in shaping both internal cohesion and external differentiation.

Keywords: *Symbol, National Identity, Flag, Anthem, National day, Currency*

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Introduction

The study of national identity has aroused constant interest in the social sciences and humanities, being approached from various perspectives that highlight both its political and institutional dimensions, as well as its cultural and symbolic ones. Beyond defining the nation through criteria such as territory, language, or state organization, an important direction of analysis emphasizes the role of the collective imaginary, myths, and symbols in the constitution and consolidation of national communities. Starting from these theoretical premises, I will analyze the role of essential symbols of national identity – the flag, the anthem, the national day and the currency – highlighting both their explicit functions and their profound dimensions, linked to the collective imaginary and the mythological background. The analysis follows how these symbols, although partly conventional and institutionalized, acquire strength and legitimacy through their ability to activate archetypal representations, generate affective attachments, and mediate the relationship between the individual and the national community. At the same time, the tensions and ambivalences inherent in these symbols are explored, which can function both as factors of cohesion and as sources of conflict and identity delimitation.

The nation as a symbolic community

Usually when we discuss the nation we refer to it as a political and cultural entity defined by a state, population and territory delimited by borders (Tartler, 2006, p.67) but also as a culture, with common symbols and values, which are cultivated and consolidated by the nation-state without which it would not exist (Guibernau, 1996).

In his attempts to define the nation, Anthony D. Smith identifies, in addition to territory, language and culture, essential dimensions related to myths and symbols (Smith, 1992: 60; Smith, 2001). National symbols include, among others, the flag, the anthem, the currency, and the various ceremonies (Smith, 1991: 77).

Benedict Anderson uses the concept of imagined community to refer to the nation, since its members do not know each other directly, building a common image of belonging (Anderson, 2000: 11-12). In this sense, national identity is constituted on the basis of these representations. It can be argued that myths, symbols and ceremonies, and the way in which the past is known and imagined, play a role in concretizing and consolidating this image. The nation is thus constituted at the level of the collective imaginary (Boia, 2005, Ghenea, 2015b).

These symbols and ceremonies create unity, identity, but also allow for relating to other nations in terms of otherness. We can thus define the nation as a symbolic, imaginary construction, without ignoring the other aspects that define it. The statement that nations are imaginary constructs does not imply their fictional character, but, on the contrary, emphasizes the fact that their reality is supported by mythical roots. This perspective explains the strong attachments they generate, as well as their resistance to change. The explanation is to be found in their connection with the mythological background; it is the myth of unity that gives strength to nations. Otherwise, nations could not have been built, only through the efforts of elites. The myth acted both on the masses who rallied to the national ideal, but also underpinned the decisions and actions of the cultural and political elites who laid the foundations of the nation. The imaginary gives strength to the nation, and creates identity. National identity is, among other things, the product of a complex network of myths and symbols. These are both original and reinterpreted or later constructed to give legitimacy to the nation. Political symbols, officially recognized and promoted by the state, although constructed or specifically

chosen to strengthen national identity, are not necessarily arbitrary, as they contain archetypal images and symbols that are not reducible to their political significance and utility. In this sense, the nation can be understood as a symbolic construction, in which common representations and ritual practices contribute to the formation of a sense of belonging and solidarity (Ghenea, 2014a; Ghenea, 2014b). I will further analyse the meaning of several national symbols (the flag, the anthem, the national day and the currency).

National flag

The national flag represents one of the most visible symbols of national identity and a central element in its construction (Turner, 1967; Ortner, 1973; Eriksen & Jenkins, 2007; Ghenea, 2015).

At the beginning of his controversial book on the "clash of civilizations", Samuel Huntington offers a series of illustrative examples of the use of national flags. A relevant example is that of an academic meeting held in Moscow in 1992, where the national flag was flown upside down, interpreted as a symbol of an identity in transition. (Huntington, 1996). Huntington interprets this gesture as signifying a transitional stage, as an expression of the need for Russians, who not many years ago had been Soviets, to reinvent themselves. At the same time, he notes that more and more flags were raised, suggesting a return of ethnic nationalism in Eastern Europe after the fall of communism (Huntington, 1996; Kolstø, 2006). The importance of flags as national symbols is also suggested by Huntington in other situations, such as the one in which the inhabitants of Sarajevo, in 1994 when the city was under siege, waved the flags of Saudi Arabia and Turkey instead of the Western European ones, thus identifying themselves with their Muslim brothers (Huntington, 1996: 19). Alternatively, this gesture can be interpreted as an expression of dissatisfaction with the West, rather than a cultural identification. The argument would be that most of the inhabitants, who were forced by the war to leave the city, emigrated to Western European countries, not Muslim ones (Eriksen & Jenkins, 2007: 1).

Th. Eriksen and R. Jenkins appreciate that, although Huntington's theory of an imminent clash of civilizations is considered superficial, it has the merit of highlighting the importance of community symbols and the continuity of national or regional attachments of an ethnic, cultural and religious nature. It is also suggestive that he begins his work with a reflection on the role of the flag (Eriksen & Jenkins, R., 2007: 1).

In the opinion of some anthropologists and philosophers of the imaginary (Durand, 1999), the flag would represent a sign, having an arbitrary character, it would be a simple emblem. Although it is chosen conventionally, like the others (the anthem, the national day, the currency), it contains in its composition or refers to universal symbols. The flag itself is, according to Jean Chevalier and Alain Gheerbrant, a symbol of protection granted or implored. There is a certain symbolic connection between the bearer of the flag and certain cosmic realities, it represents the unity between heaven and earth, referring to representations of ascension (Chevalier & Gheerbrant, 1994: 264).

These examples suggest that the flag functions not only as a sign of recognition, but also as a symbol loaded with multiple meanings. From a symbolic perspective, the flag is not just a conventional sign, but integrates universal symbols. From this perspective, it acquires a profound symbolic dimension, associated with ideas of protection and unity (Chevalier & Gheerbrant, 1994: 264). The banner is seen as a sign of war, a sign of command, of rallying. It is the emblem of the warrior commander who gathers his men under his sign for battle. It is at the same time a sign of victory (Chevalier

& Gheerbrant, 1994: 266). This meaning is also used in national symbolism, in armed conflicts, in military parades, on the occasion of commemorative moments, honoring the heroes of the homeland, etc. The national flag has taken from all these meanings and adapted them to the national message and feelings. It should also be emphasized its capacity to generate belonging and collective identification.

Lucien Sfez highlights the passionate dimension of attachment to the flag, which can degenerate into irrational behaviors (Sfez, 2000: 75). Sfez reminds us that not so long ago, attempting to destroy the national flag would have sent you to prison. In their function as emblems, as "means for reunification", flags are instruments of violence (Sfez, 2000: 75). Attachments to the flag can lead to forms of fetishization and even symbolic or physical violence. These dimensions highlight the ambivalence of the symbol, capable of both cohesion and conflict. Like any symbol, the flag is characterized by ambivalence (pure-impure, evil-beneficial, sacred-profane); it is a creative factor of identity, but it can contribute to the exacerbation of otherness.

Th. Eriksen and R. Jenkins note that in Medieval Europe, flags had an instrumental role, making it possible to distinguish between friends and enemies on the battlefield, and were also associated with common origin, place of birth, membership in a particular clan, etc. Aristocratic families carried heraldic flags to show their noble lineage. In the era of nation-states, flags fulfil a role (at a more abstract and comprehensive level) similar to that of the totems of primitive communities (Eriksen & Jenkins, 2007: 3). However, now it is about belonging to the nation and not to other groups. We do not discuss this aspect, but we note the double meaning of the flag, both instrumental and symbolic.

National anthem

The purpose of the anthem is that of a ceremonial composition intended for collective performance. Therefore, it is designed to be easy to remember and perform, favoring collective identification. This is why anthems are usually made to determine emotional reactions, collective identity through voice and sound (Fornäs, 2012: 150). However, the question arises whether anthems can generate collective identity to the same extent as visual symbols. We have seen that the flag has an extraordinary unifying force (especially due to the visual symbols it contains), but the anthem does not benefit from these. Even if the predominance of the visual is asserted, Derrida emphasizes the original character of the voice (Derrida, 1976). In this perspective, Fornäs argues that musical sound is not semantically inferior to images. In turn, visual symbols are integrated into different contexts, both solemn and ordinary. Flags and logos can be displayed all the time, on different supports, but anthems are only listened to on special, festive occasions. They are less banal than other symbols, and this special character gives them a greater capacity to attract attention, also fulfilling a community-building function (Fornäs, 2012: 152).

Peter J. Martin appreciates the increased demand for folk songs today in light of their capacity to form communities. They offer individuals the opportunity to identify themselves with "certain symbolic entities." While folk songs contribute to a broader identification, a hymn has a more official and formal character, being supported by certain institutions or organizations, nations or states (Martin, 1995: 275). Malcolm Boyd, after analyzing a large number of hymns from around the world, identified five categories, of which the first two are the most common: 1) solemn hymns (such as the British and European ones); 2) marches ("La Marseillaise"); 3) opera tunes (specific to Latin

American countries); 4 popular melodies (usually used in Asia) and fanfares without lyrics (specific to Middle Eastern countries) (Fornäs, 2012: 153).

This analysis highlights the connection between the simplicity of the hymns and their symbolic efficiency. Political symbolism, although under the sign of the arbitrary and conventional, nevertheless refers to the archetypal background, conveying myths and symbols still active in the collective imagination.

National Day

The national day represents a significant element in the consolidation of collective identity. Similar to the anthem, it involves commemorative rituals and practices. The national day is linked to a certain rhythm of social life, but also determines this rhythm in a way, being a part of the life of the community. Through their gestures, the participants in the manifestations on the occasion of the national day activate representations of the national past, they are carriers of meanings that refer to the future of national unity. At the same time, they communicate these values and meanings to the whole world. Not only is national consciousness involved, but also the way the nation is perceived externally. These representations serve to remind us of the importance of a particular nation, of the role it has played and continues to play in history. We can also see these symbolic days as a way of communication between nations, through which they make their national identity known. Some national days are celebrated in countries other than their original ones, sometimes reaching a global scale. Probably the best-known national day is that of the United States of America, which is celebrated on July 4, the date on which the Declaration of Independence was signed.

The main argument of the volume edited by David McCrone and Gayle McPherson (2009) is that "national days are commemorative devices in time and place for reinforcing national identity" (McCrone & McPherson, 2009: 2). Do national days really matter? Michael E. Geisler notes that Anthony D. Smith's (1991) "generous and comprehensive" study of national identity completely omits the national day (Geisler, 2009: 10). Which would mean that national days are less relevant than those related to architecture, folklore, the legal system, etc. Is this an omission on Smith's part, or are national days redundant with regard to national identity? McCrone and McPherson consider that, although Smith's omission could be explained (by the fact that he is English, and England's national day, April 23, St. George's Day, being honored rather than respected), national days are not redundant: "The very fact that there are plural national days, that there are competitors for the status, or perhaps that they mark different events, experiences, people, is what makes them interesting" (McCrone & McPherson, 2009: 2).

Using the examples of Russia, Australia, Germany and Japan, Geisler argues that national days are often "relatively weak and extremely unstable signifiers of national identity" (Geisler, 2009:14). This becomes evident if we compare them with other national symbols. As an argument, the case of Germany is brought up, which despite its problematic history has managed to fix its national symbols. The flag, the capital, the anthem, although they have been controversial, moved or readjust many times, have finally imposed themselves. In comparison with these, the national day (in general, not only in the case of Germany) has a greater instability (Geisler, 2009:15).

Geisler argues that national symbols function by overdetermination, in the sense that they work together to establish a network of meanings. Unlike the flag, anthem, and currency, the national day is not omnipresent, as it occurs only once a year. However, it cannot go unnoticed: you can only escape it by leaving the country or locking yourself in

your house. Furthermore, the national day is less susceptible to secularization, being much more closely tied to its religious roots.

Geisler makes three arguments in favor of the thesis that national days do not function in the same way as other national symbols:

"1. National days are not ubiquitous: we encounter them but once on a calendar year; therefore, 'over-determination' does not work for national days.

2. They do not go unnoticed.

3. In the national day, the historical 'overwriting' of religious traditions with the secular ideology of nationalism shows the latter to be a historically incomplete project and forces national day to compete for meaning with the religious segmentation of the calendar year." (Geisler, 2009:15).

Geisler's arguments can be nuanced. Even if we accept the overdetermination theory, which is also open to criticism, the fact that national days only occur once a year does not remove them from the network of national symbols and does not diminish their significance. On the one hand, the reduced frequency does not diminish the symbolic significance. The instability of some national days, chosen as examples by the cited author, is due to socio-political and historical contexts, which have replaced national days depending on the ideology promoted. If the event to which the national day refers is related to independence (the myth of the savior, the myth of unity), the imaginary gives strength and stability to the commemorated event. Then the richer the symbolism of the day and refers to values of a universal nature, the more durable its maintenance will be. On the other hand, rarity can intensify symbolic impact. Religious holidays are perennial and rich in meaning, although they are once in a while. Moreover, competition with religious symbolism does not indicate a deficit, but a symbolic continuity, highlighting the religious filiation of national symbols. They are secularized symbols, they originate in religious symbolism and appear in its continuation.

However, there are many differences in the way national days are perceived and experienced. Each country has its own national specifics, but also a certain history of choosing a national day. Some states do not have a national day, others celebrate it little or not at all. In others there are days competing to become national, they commemorate political or cultural events, which have a problematic character (McCrone and McPherson, 2009: 1). Sometimes they are associated with past political regimes, towards which there is some resentment. Not infrequently, with the change of political regime the national day was also changed. In this respect, the case of Romania is exemplary. During the period 1866-1947 the national day of Romania was May 10, the day on which Prince Carol of Hohenzollern-Sigmaringen took the oath before the representative Assembly of the United Romanian Principalities. The significance of the day was strengthened by the proclamation of Romania's state independence in 1877. Later, in 1881, after the parliament voted to transform the country into a kingdom, to mark the event, the national day was celebrated with great pomp on May 10. Most likely, the day was not chosen at random, but on the principle that two different but significant events can increase the symbolic and commemorative charge of the day. This created a mythological connection between the monarch, as savior, and the independence of the Romanian state from Ottoman rule, which had lasted for so many centuries. Between 1948 and 1989, during the communist regime, the national day was established on August 23, marking the turning of arms against Nazi Germany and the beginning of the popular revolution in Romania. We could say that the change of day also marks a turning point from monarchy to an authoritarian communist regime. On this date, Romania not only turned against Nazi Germany, but also turned

towards communist Russia. Another turn, this time against communism, resulted in another change in the date for the national day. Although the option of December 22 as the national day, a significant day for the liberation from the communist regime, was also proposed, it was ultimately not accepted. I am not discussing the political reasons here, but I cannot ignore the fact that the imaginary also played a role. The day that decisively marked the fate of the 1989 revolution was too bloody, recent and uncertain, but at the same time it did not access a sufficiently strong mythological/archetypal background. A return to May 10 was also proposed, which would have meant a re-actualization of the monarchical past. In the end, it was agreed upon to celebrate December 1, 1918, the day of the Great Union. It was also a return to the monarchical past, but it did not commemorate the monarchy, nor state independence, now an event far too distant and with a consolidated significance, but national unity. We can see how the myth of unity operates here. The most significant day for the nation is the day of its unification, after in the past it was the day of its liberation from foreign domination. Both the commemorated events and their meanings play an important role in the imaginary: independence paved the way for unity, the myth of the savior and that of unity are intertwined. The myth of unity worked so powerfully and decisively that it ignored the fact that December 1, 1918, also marked a political loss for Hungary, and could be interpreted as an affront to the Hungarian community in Transylvania. Once again, the imaginary ignores differences and reinforces otherness. Another aspect is related to the representativeness of the national day. It may be representative of the dominant majority or the conquering nation, but for other parts of the population it may mark an event with a contrary significance, such as the loss of sovereignty. In Australia, the national day, celebrated on 26 January, commemorates the landing of the first British fleet at Botany Bay in 1788 to establish the first penal colony. The strongest opposition has come from Aboriginal people, who see the day as a celebration of one of the harshest British colonization, and refer to it as "Invasion Day" or "Survival Day," rather than a national day (Geisler, 2009: 11). In some cases, national days have been banned and vilified, commemorated in secret, with participants risking imprisonment or worse (McCrone and McPherson, 2009: 1).

In some cases national days had to be "detoxified" because they were associated with past political regimes or events, now seen in a negative light, others were reinvested with new meanings, to fit current representations. We can deduct from this that the imaginary, can be shaped and re-signified, but it will always resist, and when its force is greater than that of change, the original meanings remain active.

National currency

According to Matthias Kaelberer (2004), the relationship between currency and identity is not predominantly affective, but based on institutional trust. With modernity, the relationship of trust has become rather abstract and institutionalized. Consequently, to support trust, identity does not have to be based on a sense of belonging. A diffuse identity, based on factors of a utilitarian or contractual nature, is sufficient, which is part of hybrid identities (Kaelberer, 2004).

Although it functions primarily as an economic instrument, currency also contributes to the consolidation of identity. The strength of currency can have effects on national pride, because the way a country is perceived externally, through it, contributes to increasing its status and, implicitly, that of its citizens. Currency therefore also plays the role of a nation's calling card. In fact, the relationship between currency and national identity is reciprocal: the former contributes to the consolidation of the latter, but is also an effect of it. As a rule, currency is chosen to represent the nation. Moreover, it is a

support for representations of national identity, such as cultural figures, founding heroes, spiritual patrons or key historical figures, who had an important role to play in gaining independence, in achieving unity or who expanded and increased the power of the state that the currency represents. However, like any national symbol, the currency is a conventional symbol, it is the result of the choice of decision-makers or political and cultural elites. It thus plays the role of a political instrument in the construction of identity. Under these conditions, does the currency still have a symbolic function? Of course it does, but the way it works differs from that of other national symbols.

To summarize, we could say that (among others), the national currency fulfills the following functions:

1) Economic – means of payment and exchange, standard of value, etc.

2) Political – represents the image of the state in the world (economic strength usually translates into political strength); contributes to the construction of national identity;

3) Social – establishes social ties, status relationships, etc.

4) Cultural – makes known and promotes historical figures and cultural elites, fixing them in the public consciousness;

5) Symbolic – regulates certain representations at the level of the imaginary, constitutes a factor in consolidating identity.

Even though it performs symbolic functions, the currency differs from other national symbols. First of all, the flag, the anthem and the national day, as we have seen, have an affective charge, they appeal to feelings, they are based on the awakening of strong emotions and attachments. The currency does not have an emotional charge or at least does not lead to such strong feelings as the flag and the anthem. Second, the behaviors associated with the first category of symbols are directly related to the strong feelings they arouse: a soldier can give his life to protect the flag on the battlefield or to conquer that of the enemy, the national anthem can cheer spirits or antagonize crowds against each other, the national day involves a series of commemorative gestures. None of this happens with currency. Individuals are unlikely to exhibit extreme behaviors in relation to currency, unlike other symbols. Third, while the first symbols are directly and explicitly associated with the nation, currency has only a secondary function, the consolidation of identity. In collective representations, while the first symbols represent the nation, currency is only a medium of exchange, with symbolic connotations, but remains a medium of exchange. Fourth, currency operates in the register of a “banal nationalism” (Billing, 1995: 42), characterized by everyday presence and diffuse impact. We are often unaware of which personality is represented on a particular banknote or we simply do not care. This does not mean that the banknote does not fulfill a symbolic function, but this is achieved at a more subtle level, without involving the solemnity of other national symbols. Although the term "banal nationalism" is used by Billing to distinguish between virulent nationalism in some states and the subtle display of national symbols in states with a stabilized national identity, we can also use the term to distinguish between different national symbols: some are still charged with affectivity, solemnity or are ritualized, such as the flag, the anthem and the national day, while others are trivialized, brought into everyday life, such as currency. We could say that currency has been from the beginning, through its dual commercial and identity function, a symbol arising from banality, from everyday life.

Conclusions

The analysis of the symbols of national identity highlights the fact that they cannot be reduced to simple institutional conventions, but must be understood as constitutive elements of a complex network of meanings, anchored in the collective imaginary. The flag, the anthem, the national day and the currency, although different in form, frequency of use and affective impact, participate together in the construction and consolidation of national identity, functioning through a process of symbolic "over-determination".

Among these, the flag and the anthem stand out for their capacity to generate intense emotional reactions and mobilize collectivities, while the national day structures collective memory and provides a ritual framework for reaffirming belonging. The currency, although apparently less emotionally charged, acts on an everyday and diffuse level, contributing to the consolidation of identity through familiarity and constant circulation. Together, these symbols articulate both the visible and latent dimensions of the nation.

At the same time, the study reveals the ambivalence of these symbols: they can create solidarity and cohesion, but also differentiation, opposition and even conflict. Their strength derives precisely from the connection with the founding myths and archetypal structures of the imaginary, which gives them a remarkable resistance to change, but also a capacity for re-signification depending on historical and political contexts. Therefore, national identity appears as a dynamic process, in which symbols not only reflect social reality, but also actively contribute to shaping it.

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References:

Anderson, B., (2016). *Imagined Communities. Reflections on the Origin and Spread of Nationalism*, London, New York: Verso.

Billig, M. (1996). *Banal nationalism,* London: Sage.

Boia, L., (2005). *Două secole de mitologie națională,* Bucharest: Humanitas.

Chevalier, J., Gheerbrant, A. (eds.), (1994). *Dicționar de simboluri*, 3rd vol., Bucharest: Artemis Publishing.

Derrida, J., (1976). *Of Grammatology,* Baltimore/London: Johns Hopkins University Press.

Durand, G. (1999). *Aventurile imaginii. Imaginația simbolică. Imaginarul*, Bucharest: Nemira Publishing.

Eriksen, Th. H. and Jenkins, R., (2007). *Flag, Nation and Symbolism in Europe and America*, London and New York: Routledge.

Fornäs, J., (2012). *Signifying Europe*, Bristol: Intellect.

Geisler, Michael E., (2009). The Calendar Conundrum: National Days as Unstable Signifiers. In McCrone, D and McPherson, G., (editors), *National Days. Constructing and Mobilising National Identity*, Basingstoke and New York: Palgrave Macmillan, pp.10-25.

Ghenea, Ș.V. (2014a). Richard Rorty on Solidarity and Cultural Difference and the Cultural Policies Concerning the Ethnic Minorities. In Boldea, I. (ed.), *Globalization and Intercultural Dialogue: Multidisciplinariy Perspectives*, Târgu Mureș: Arhipelag XXI, pp. 211-218.

Ghenea, Ș.V. (2014b). Richard Rorty: Pragmatism and Ethnocentrism. *The Scientific Journal of Humanistic Studies*, (11), 8-12.

Ghenea, Ș.V, (2015a). National Identity and European Unity: a Symbolic Approach. *Revista de Științe Politice,* (47), 11-21.

Ghenea, Ș.V, (2015b). Nation and National Unity". In Iulian Boldea (editor), *Globalization and National Identity. Studies on the Strategies of Intercultural Dialogue*, Târgu Mureș: Arhipelag XXI, 297-310.

Guibernau, M., (1996). *Nationalism: the nation-state and nationalism in the twentieth century*, Cambridge: Polity Press.

Huntington, S., (1996). *The Clash of Civilizations and the Remaking of World Order,* New York: Simon and Schuster.

Kaelberer M. (2004). The euro and European identity: symbols, power and the politics of European monetary union. *Review of International* Studies, (30), 161-178.

Kolstø, P. (2006). National symbols as signs of unity and division. *Ethnic and Racial Studies*. (29), 676–701.

Martin, P.J. (1995). *Sounds and Society: Themes in the Sociology of Music*, Manchester/New York: Manchester University Press.

McCrone, D and McPherson, G., (2009). *National Days. Constructing and Mobilising National Identity*, Basingstoke and New York: Palgrave Macmillan.

Ortner, S. (1973). On Key Symbols, *American Anthropologist*, (75), 1338–46.

Sfez, L., (2000). *Simbolistica politică,* Iași: Institutul European.

Smith, A.D., (1991). *National Identity*, Hammondsworth: Penguin.

Smith, A.D., (1992). National Identity and the Idea of European Unity. *International Affairs*. (98), 55-76.

Smith, A.D., (2001). *Nationalism. Theory, Ideology, History,* Cambridge: Polity Press.

Tartler, G., (2006). *Identitate europeană*, Bucharest: Cartea Românească.

Turner, V. (1967). *The Forest of Symbols*, Ithaca, New York: Cornell University Press.

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ORIGINAL PAPER

Algorithmic Hiring and Bias: Evaluating the Accuracy, Fairness, and Ethical Implications of AI-Driven Recruitment Systems

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Abstract:
Artificial Intelligence (AI) is increasingly integrated into recruitment as organizations position their hiring practices as a part of their employer branding and talent marketing strategy. Algorithmic hiring systems not only influence candidate selection but also shape perceptions of fairness, inclusivity, and organizational reputation in the talent marketplace. This study explores the marketing implications of AI-driven recruitment systems, analyzing how accuracy and bias in algorithmic decision-making affect employer

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branding, candidate experience, and stakeholder trust. Drawing from recruitment marketing frameworks and consumer behavior theory, the research adopts a mixed-method approach—surveying job seekers, analyzing recruitment campaign data, and conducting sentiment analysis of employer reviews. Findings indicate that while AI enhances efficiency and can improve brand positioning through faster, personalized hiring processes, perceived bias or ethical lapses significantly damage organizational image and candidate loyalty. The study provides actionable insights for integrating responsible AI in recruitment marketing, highlighting the need for transparency, fairness, and ethical communication to strengthen long-term brand equity in competitive labor markets.

Keywords: *Recruitment Marketing, Employer Branding, AI in Recruitment, Algorithmic Hiring Bias, Candidate Experience*

Introduction

Artificial Intelligence (AI) has revolutionized recruitment by streamlining candidate sourcing, screening, and selection. In today's digital-first labor market, recruitment is not merely a human resource activity but a marketing function that builds employer brand equity and influences organizational reputation. Organizations increasingly deploy AI-driven recruitment systems as part of their talent marketing strategies to attract top candidates, project fairness, and differentiate themselves in competitive job markets. However, while algorithmic hiring enhances efficiency, issues of bias, fairness, and ethical accountability persist. These challenges have direct implications for candidate experience, organizational trust, and employer branding — central concerns in marketing-driven talent acquisition.

Statement of the Problem

Despite the growing use of AI in recruitment, there is limited empirical evidence on how algorithmic accuracy and perceived bias affect marketing outcomes such as employer branding, candidate loyalty, and organizational reputation. Most studies focus on the technical aspects of AI but neglect the marketing perspective, where candidate perceptions act as a form of consumer behavior influencing the "market image" of the employer. Thus, a gap exists in evaluating the dual role of AI recruitment systems: a tool for efficiency and a marketing instrument shaping organizational identity.

Objectives

1. To evaluate the impact of AI-driven recruitment systems on candidate perceptions of fairness and trust from a marketing perspective.
2. To analyze the relationship between algorithmic bias in hiring and its influence on employer branding and organizational reputation.

Methodology

Research Design: Descriptive and analytical study.

Data Collection

Primary data: Online surveys of job seekers and employees who experienced AI-driven recruitment.

Secondary data: Analysis of employer review platforms and recruitment campaign data.

Sampling: Purposive sampling of 200 respondents across IT, finance, and service sectors.

Data Analysis: Quantitative analysis using statistical tools; qualitative insights from open-ended responses. Chi-square analysis used to compare perceptions of AI hiring across demographic groups.

Review of Literature

Bogen and Rieke (2018) critically examine the risks associated with algorithmic hiring, particularly focusing on how biased datasets can reproduce or even amplify workplace discrimination. The study highlights that training data often reflects historical inequalities, leading to unfair outcomes in candidate screening and selection. They emphasize that algorithmic decisions lack transparency, making it difficult for applicants to challenge unfair results. From a regulatory perspective, the authors stress the importance of ethical oversight and auditing mechanisms to ensure equitable hiring practices. Their findings establish the urgent need for fairness, accountability, and transparency in AI recruitment systems, linking directly to both ethical and marketing implications.

Sivathanu and Pillai (2019) provide a conceptual framework exploring the adoption of AI in HR practices, emphasizing its strategic role in shaping employer branding. The study notes that AI improves efficiency in recruitment by enabling faster candidate matching, predictive analytics, and personalized hiring experiences. However, the authors also caution that employee perceptions of AI systems directly affect candidate trust and long-term employer reputation. Their work highlights how AI adoption is not merely a technological upgrade but also a **marketing tool** that influences how organizations are perceived in competitive talent markets. This framework bridges HR technology with marketing outcomes, underscoring the importance of ethical, transparent AI use to enhance candidate experience and organizational image.

AI in Recruitment

Artificial Intelligence (AI) has transformed recruitment from a purely administrative function into a strategic tool for employer branding and talent marketing. Companies increasingly rely on algorithmic hiring systems to automate candidate screening, shortlisting, and decision-making. These systems promise efficiency, reduced costs, and data-driven objectivity, enabling recruiters to process large applicant pools quickly. However, beyond the technical advantages, AI-driven hiring also has strong marketing implications, as recruitment practices directly influence employer reputation, candidate experience, and brand equity in the labour market.

From a marketing perspective, recruitment is not just about filling positions; it is a form of communication that conveys the values and culture of the organization to potential employees. Candidates today act like informed consumers who evaluate employers based on their hiring processes, fairness, and inclusivity. Algorithmic hiring, therefore, plays a dual role: while it helps companies position themselves as innovative and technology-driven, it also risks undermining brand image if bias, discrimination, or lack of transparency are perceived in the process.

One of the central concerns with algorithmic hiring is bias. Algorithms learn from historical data, and if this data reflects existing inequalities (e.g., gender, race, or

educational background), the AI system may inadvertently reproduce or even amplify these biases. This creates a contradiction between the company's employer branding efforts—which often promote diversity and inclusion—and the candidate's real experience of bias in AI-driven hiring. Studies such as Bogen and Rieke (2018) emphasize that hiring algorithms, unless carefully monitored, can reinforce systemic discrimination. From a marketing standpoint, such bias not only affects the rejected candidates but can also spread negative perceptions through social media and employer review platforms like Glassdoor or LinkedIn, ultimately damaging the employer's brand image.

On the other hand, AI also offers opportunities to strengthen employer branding if implemented responsibly. AI-based recruitment systems can provide personalized communication, faster feedback, and data-driven fairness, all of which enhance the candidate experience. Research by Sivathanu and Pillai (2019) highlights that adoption of AI in HR has the potential to improve employer branding when candidates perceive the system as transparent and trustworthy. For instance, companies that communicate how their AI tools are designed to minimize bias can build trust and signal a strong commitment to ethical practices, which in turn enhances their attractiveness in the job market.

From an analytical standpoint, evaluating AI-driven recruitment requires integrating both HR metrics and marketing analytics. Descriptive statistics and sentiment analysis of online reviews help measure candidate satisfaction and perceptions of fairness. Regression models can be used to study the relationship between perceived fairness of AI hiring and employer branding outcomes, such as willingness to recommend the company. Qualitative thematic analysis of candidate feedback further provides insights into trust, transparency, and inclusivity. These methods highlight how recruitment decisions extend beyond operational efficiency into the realm of organizational reputation management.

In conclusion, algorithmic hiring is more than a technological advancement—it is a strategic marketing tool that shapes how organizations are viewed in the competitive talent marketplace. If designed and communicated ethically, AI recruitment systems can enhance fairness, build trust, and strengthen employer branding. However, without proper monitoring, transparency, and ethical safeguards, they risk damaging organizational reputation and eroding candidate loyalty. Therefore, AI in recruitment must be approached not only as a human resource innovation but also as a marketing responsibility, requiring close collaboration between HR, data scientists, and marketing professionals.

Analysis and Interpretation

Chi Square Analysis

Fairness vs. Candidate Trust

- H_0 (Null Hypothesis): There is no association between perceived fairness of AI recruitment systems and candidate trust.
- H_1 (Alternate Hypothesis): There is a significant association between perceived fairness of AI recruitment systems and candidate trust.

Fairness Perception	High Trust	Low Trust	Total
Fair (120)	100	20	120
Unfair (80)	25	55	80
Total	125	75	200

Chi-Square Value: 64.8, $p < 0.001$.

Interpretation: Since the p-value is less than 0.05, H_0 is rejected. This means fairness in AI hiring strongly influences candidate trust, proving that when candidates perceive hiring as fair, they are more likely to trust the company.

Fairness vs. Employer Branding

- H_0: There is no association between perceived fairness of AI recruitment systems and employer branding perception.
- H_1: There is a significant association between perceived fairness of AI recruitment systems and employer branding perception.

Fairness Perception	Positive Branding	Negative Branding	Total
Fair (120)	95	25	120
Unfair (80)	30	50	80
Total	125	75	200

Chi-Square Value: 48.6, $p < 0.001$

Interpretation: H_0 is rejected. The results confirm that fairness in AI recruitment positively impacts employer branding. Candidates who perceive fairness tend to associate the company with a stronger, positive brand image.

Perceptions of AI Hiring Across Demographics

H_0 (Null Hypothesis): There is no significant association between demographic characteristics and perceptions of AI hiring.

H_1 (Alternate Hypothesis): There is a significant association between demographic characteristics and perceptions of AI hiring.

Demographic Variable	Perception Factor	χ^2 Value	p-value	Result
Gender	Fairness	0.23	0.63	Not Significant (H_0 accepted)
Age Group	Trust	12.6	0.031	Significant (H_0 rejected)
Education Level	Employer Branding	15.4	0.017	Significant (H_0 rejected)

Interpretation

- **Gender vs. Fairness:** No significant difference was found ($p = 0.63$), indicating that both male and female candidates share similar concerns about fairness in AI hiring.
- **Age vs. Trust:** A significant association was found ($p = 0.031$), suggesting younger candidates show higher trust in AI hiring systems compared to older groups.
- **Education vs. Employer Branding:** A significant association ($p = 0.017$) indicates that more educated respondents perceive AI-driven hiring as positively influencing employer branding.

Findings

1. **Fairness influences candidate trust:** Candidates who perceived the AI recruitment system as fair showed significantly higher trust ($\chi^2 = 64.8$, $p < 0.001$). Fairness perception is a critical determinant of trust in AI hiring.
2. **Fairness impacts employer branding:** A strong positive association was found between fairness and employer branding ($\chi^2 = 48.6$, $p < 0.001$). Fair hiring practices enhance how candidates perceive the company's brand.
3. **Gender differences are insignificant:** No significant association was found between gender and fairness perception ($\chi^2 = 0.23$, $p = 0.63$). Both male and female respondents share similar concerns about fairness in AI hiring.
4. **Age influences trust in AI hiring:** A significant difference was observed across age groups ($\chi^2 = 12.6$, $p = 0.031$). Younger candidates tend to trust AI systems more, while older groups are more skeptical.
5. **Education shapes branding perception:** Candidates with higher education levels were more likely to view AI hiring as enhancing employer branding ($\chi^2 = 15.4$, $p = 0.017$). Educated respondents may better understand the efficiency and modernity associated with AI.

Suggestions

1. **Promote transparency in AI hiring:** Employers should clearly communicate how AI systems evaluate candidates to increase trust, especially among older applicants.
2. **Use fairness as a branding strategy:** Companies can strengthen employer branding by showcasing AI-based recruitment as objective, bias-free, and efficient.
3. **Build awareness programs:** Since skepticism is higher among older candidates, targeted campaigns and training sessions should address fears about bias and explain the role of AI in decision-making.
4. **Conduct regular algorithm audits:** Independent fairness and bias audits should be carried out to ensure AI recruitment tools are equitable and to enhance credibility in the job market.
5. **Adopt a hybrid recruitment model:** Combining AI efficiency with human oversight ensures balance—AI handles large-scale data while human recruiters ensure empathy and contextual judgment.

Conclusion

The study reveals that perceptions of fairness in AI-driven recruitment play a decisive role in shaping candidate trust and employer branding. Candidates who view the system as fair are significantly more inclined to trust the hiring process and associate the company with a positive brand image. Interestingly, demographic insights highlight that while gender does not influence fairness perceptions, age and education do matter: younger candidates tend to place greater trust in AI recruitment, while highly educated respondents are more likely to see AI as a factor that strengthens employer branding. These results emphasize that fairness, transparency, and communication are essential pillars for ensuring candidate acceptance of AI-based hiring.

From a marketing perspective, AI recruitment is not just a hiring tool but also a branding instrument that shapes organizational reputation in the talent market. Companies can leverage AI systems to project an image of innovation, objectivity, and inclusiveness, provided they address fairness concerns and maintain transparency. By adopting hybrid models, conducting regular algorithm audits, and tailoring communication to different demographic groups, organizations can enhance trust while simultaneously positioning themselves as forward-thinking employers. Thus, AI in hiring, if managed ethically and strategically, offers both operational efficiency and long-term branding advantages in an increasingly competitive employment landscape.

Authors' Contributions:

The authors contributed equally to this work.

References:

Bogen, M., & Rieke, A. (2018). Help wanted: An examination of hiring algorithms, equity, and bias. Upturn (Report), 1–35.

Sivathanu, B., & Pillai, R. (2019). Adoption of artificial intelligence in human resource management: A conceptual framework. Benchmarking: An International Journal, 26(6), 1748–1762.

Tambe, P., Cappelli, P., & Yakubovich, V. (2019). Artificial intelligence in human resources management: Challenges and a path forward. California Management Review, 61(4), 15–42.

Raghavan, M., Barocas, S., Kleinberg, J., & Levy, K. (2020). Mitigating bias in algorithmic hiring: Evaluating claims and practices. Proceedings of the 2020 Conference on Fairness, Accountability, and Transparency (FAT '20), 469–481.

Upadhyay, A. K., & Khandelwal, K. (2019). Applying artificial intelligence: Implications for recruitment. Strategic HR Review, 17(5), 255–258.

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ORIGINAL PAPER

Public opinion on Russia in Ukraine and Georgia. Comparative Analysis

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Abstract:
The aim of this paper is to analyze the public opinion of citizens in Georgia and Ukraine towards the Russian Federation, on the grounds that the two states have in common several elements. Among them, we mention the fact that both are states aggressed by Russia, both have a past in the sphere of the Soviet Union and therefore in both Russia has never ceased to exert its influence.
In our opinion, from the perspective of a psychosocial dimension of the conflict, the repercussions are felt at the level of identity, of collective traumas (social memory theory), victimization, opinions about the enemy ("demonization"), stereotypes, existential fears. Conflict trauma can be passed on from generation to generation (social memory theory), forming a new collective identity, one marked by existential fear.
Thus, after the institutionalisation of conflict (creating, in practice, a culture of conflict), violence becomes a way of relating to the other identity. Living in a culture of conflict, of violence, international mediation almost becomes an utopian idea. Therefore, despite multiple attempts of mediation by international institutions, the conflicts in the breakaway regions of South Ossetia and Abkhazia and Ukraine persist, albeit not in the form of open conflict, but in the form of frozen conflict, as the case may be.
In our opinion, it is important to note what was the opinion of Ukrainians on the development of their country in relation to Russia both before 2022 (the year of invasion) and after, in order to compare these results with the opinion of Georgians in the same time units on similar issues.

Keywords: *conflict, cooperation, warfare, psychosocial dimension, public opinion, social trauma.*

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Polls prior to February 2022

In a poll the results of which were published on August 12, 2009, entitled ”*Georgians' Attitudes Toward Russia Less Friendly Since War”,* by the news editors Neli Esipova and Julie Ray, at Washington, D.C., the 2008 war between Russia and Georgia prompted that, in May 2009, 47 percent of respondents to a questionnaire on the relations their country should have with the Russian Federation were of the opinion that those ties should be positive (Esipova *et al,* 2009). By comparison, when asked the same question in June 2008 (just before the start of the war), the percentage who thought that good relations with Russia should be maintained was around 64 percent (Esipova *et al,* 2009). As a result, the war has led to a 17 percent drop in respondents favouring rapprochement with Russia over an 11-month period.

The above-mentioned study took place in Tbilisi in 3 stages: in May 2007, in June 2008 and in May 2009, on a sample of 1,000 persons aged 15 years and over, with a maximum margin of sampling error is ±3.5 percentage points (Esipova *et al,* 2009).

In comparison with the above mentioned results, according to a 14 nations survey conducted from August 27 to September 24, 2009 by the Pew Research Center's Global Attitudes Project among 14.760 adults (margin of sampling error was not specified), at that time, regardless that a country situated not far away of Ukraine had been the victim of a war started by Russia, 46% of the Ukrainean respondents stated that Russia had a good influence on Ukraine overall, while only 25% answered that the specified influence was a negative one over their country, 20% answered ”neither bad, nor good” and 9% refused to answer (Pew Research Center, 2009). As we will see below, this public perception of Ukrainians over Russia will change within time, mostly due to the aggresion that has started in 2014 against Donbass region and especially after the 2022 invasion of the entire country.

Furthermore, we will analyze the results of a public opinion survey of reidents of Ukraine held on behalf of the Center for Insights and Survey Research (CISR) of the International Republican Institute, between March 13 and March 2021 throughout the entire Ukraine, except for Crimea, Donetsk and Luhansk occupied territories (Center for Insights in Survey Research, March 2021).

The survey consisted of face-to-face discussions with 2400 respondents aged 18 and over, with a response rate of 54% and a margin of error of 2% (Center for Insights in Survey Research, March 2021). Thus, to the question "If Ukraine was able to enter only one international economic union, which one of the following should it be?", 54% of the respondents indicated "European Union" as an answer, 20% "Customs Union with Russia, Belarus and Kazakhstan", 13% answered "something else" and 14% refused to answer (Center for Insights in Survey Research, March 2021).

To the above-mentioned question, grouped by age category, 63% of respondents aged 18-35 answered "European Union", 16% "Customs Union with Russia, Belarus and Kazakhstan", 11% "something else" and 10% refused to answer (Center for Insights in Survey Research, March 2021). On the same question, respondents aged 36-50 answered as follows: 48% indicated "European Union", 20% indicated "Customs Union with Russia, Belarus and Kazakhstan", 15% answered "other" and 17% refused to answer (Center for Insights in Survey Research, March 2021). And respondents aged 51 and over answered: 50% European Union, 22% "Customs Union with Russia, Belarus and Kazakhstan", 12% "something else" and the remaining 15% gave no answer (Center for Insights in Survey Research, March 2021).

As a comparison with the situation in Ukraine, the above data from this country will be compared with the results of a study carried out on a similar economic issue in approximately the same period - February 2, 2021 - February 26, 2021, in Georgia, by CISR, under the aegis of the United States Agency for International Development (USAID) (Center for Insights in Survey Research, February 2021). The sample on which this survey was conducted consisted of 1500 persons, aged 18 years and over, residing in Georgia, excluding Abkhazia and South Ossetia, with a margin of error not exceeding 2.5% and a response rate of 75%, the sample being representative in terms of age, gender and region (Center for Insights in Survey Research, February 2021). Noteworthy, however, is the fact that respondents were allowed to provide multiple answers, which makes it difficult for us to clearly interpret the study.

Thus, to the question "Which of these countries do you consider to be the most important economic partners for Georgia?", the answers were "USA", "European Union", "Turkey", "Ukraine", "Azerbaijan", "Russia", "China", "Armenia", "Iran", "None" and "No answer" (Center for Insights in Survey Research, February 2021).

Therefore, 55% of respondents answered "USA", "European Union" - 39%, "Turkey" - 29%, "Ukraine" - 21%, tied with "Azerbaijan" - 21%, "Russia" was tied with "China" - both options were chosen by 11% of respondents, "Iran" - 5%, "None" - 1% and "No answer" - 3% (Center for Insights in Survey Research, February 2021).

If we were to categorize the answer "European Union" as the Western direction in the Ukrainian survey, we note that only 54% of Ukrainians preferred the "Western way" at the time of 2021, and the 13 percent who answered "other" or the 14 percent who refused to answer cannot be included in any category, thus confusing us with a deficit in the survey, because some of these 27 percent may opt for both the "Western way" and economic alliances with the East (Center for Insights in Survey Research, March 2021). However, in the absence of concrete data on the clear choice of these respondents who totaled 27%, we will choose not to consider the 27 percent as belonging to either the pro-West or the pro-East category and will limit our interpretation of the results to the 54 percent pro-EU.

In the case of the survey in Georgia, we will interpret the answers "USA" and "European Union" together as the "Western way" and the rest of the answers as the "Eastern way". Therefore, we observe that the "Western way" accounts for 55% ("USA") + 39% ("European Union"), while the "Eastern way" options account for 29% ("Turkey") + 21% ("Azerbaijan") + 11% ("Russia") + 11% ("China") + 9% "(Armenia") + 5% ("Iran") (Center for Insights in Survey Research, February 2021). It is not possible to calculate a percentage total in favor of one direction or the other, as the same respondent had the possibility to give multiple answers, thus tipping the balance both one way or the other, but at a first glance, we can see that there was a parity of the options "the Western way" vs. "the Eastern way", with the respondents' preferences being roughly the same in both countries.

In terms of strategic decision making, the two aforementioned CISR surveys, both in Ukraine and in Georgia, also asked respondents a similar question: "If a referendum was held today on Ukraine joining NATO, how would you vote?" in Ukraine and "Do you support or oppose Georgia joining NATO?". (Center for Insights in Survey Research, February and March 2021).

Thus, in the case of Ukraine, 48% of respondents said they "would vote for Ukraine to join NATO", 28% "would vote against Ukraine joining NATO", 11% "would not vote" and 13% gave no answer. (Center for Insights in Survey Research, March 2021).

While in Georgia, 59% of respondents "fully support Georgia joining NATO", 19% "somewhat support", 6% "somewhat oppose", 8% "strongly oppose" and 8% did not answer. (Center for Insights in Survey Research, February 2021). We can interpret these results, if we look strictly at the two surveys, given that they were conducted over roughly the same period of time and by the same public opinion polling institute, as meaning that in Ukraine only 28% of respondents would have opted for an alliance with NATO, while in Georgia, 59% of respondents were in favor of such an alliance, if we only count the very decided ones.

In the followings, however, we will note that especially in the case of Ukraine, unlike Georgians, the former's negative view of Russia has sharpened considerably in the wake of the February 2022 invasion, while Georgians' negative public perception of Russia has increased at a lower pace, as the 2022 war did not directly target them. However, the past social traumas caused by the 2008 war with Russia have triggered existential fears in Georgians' collective memory once they realized that another country was facing not only similar problems to theirs, but even more serious ones, namely a large-scale invasion in the case of Ukraine.

Beyond the aforementioned aspects, there have also been studies regarding the Georgian population's opinion of Russia, according to which it was a more positive one prior to 2022, before the time of the invasion of Ukraine. According to a study conducted by the Georgian Foundation for Strategic and International Studies 2021, published by the Friedrich Ebert Stiftung, in February 2021, about 52% of the population had a positive attitude towards Russia, while 39% had a neutral attitude and only 7% a negative perception (Georgian Foundation for Strategic and International Studies, 2021). The study was a mixed method one, including a quantitative survey using computer assisted telephone interviewing (CATI) as well as qualitative online focus group discussions, on a sample of 1851 telephone interviews with adults, with the exception of the occupied territories of South Ossetia and Abkhazia (Georgian Foundation for Strategic and International Studies, 2021). Moreover, the study also included 24 focus groups held in 12 locations (Georgian Foundation for Strategic and International Studies, 2021). According to the survey, positive attitudes towards Russians at that time were based on old professional ties in the past, neutral attitudes were based on respondents' acceptance that people simply differ from region to region, while the negative attitudes were based on the association between the decisions of the political leadership and the actual citizens of Russia (Georgian Foundation for Strategic and International Studies, 2021, Center for Insights in Survey Research, February 2021).

Polls after February 2022

In May 2022, after multiple international events have taken place, in which the Russian Federation has been the protagonist of international aggression in the Black Sea region, according to a survey conducted by the Institute of Polling and Marketing of the U.S. NGO International Republic Institute – Center for Insights in Survey Research, on a sample of 1486 respondents in Georgia, over 18 years of age, with a margin of error of approximately 2.5 percent, 54% of respondents indicated that the European Union represents the most important political partner for Georgia, followed by the United States of America with 53% (Institute of Polling and Marketing, International Republic Institute – Center for Insights in Survey Research, 2022). At the other end of the scale, only 4% of respondents said that the Russian Federation is the most important political partner for Georgia, with only Iran ranking lower in this respect with 1% (Institute of Polling and

Marketing, International Republic Institute – Center for Insights in Survey Research, 2022). Moreover, according to the same survey, 90 percent of the respondents believed that the Russian Federation is the biggest political threat to Georgia (Institute of Polling and Marketing, International Republic Institute – Center for Insights in Survey Research, 2022).

Regarding the Russian invasion of Ukraine in 2022, this event has increased Georgians' concerns about the image of Moscow as an aggressor, according to a two-stage survey conducted in Tbilisi, Batumi, Telavi, Zugdidi, Akhalkalaki, and Marneuli in February and March 2022, by Caucasus Research Resource Centers Georgia for NDI (Caucasus Research Resource Centers Georgia for NDI, 2022). The sample used was of 2036 respondents in February, with an average margin of error of 1.8%, and of 2024 in March, with an average margin of error of 1.6% (Caucasus Research Resource Centers Georgia for NDI, 2022). Specifically, the two stages of the survey were conducted at two key moments: just before Russia's invasion of the entire Ukraine and right after it began (Caucasus Research Resource Centers Georgia for NDI, 2022).

According to the results obtained, to the question "Which countries and unions should Georgia have the closest political/economic cooperation with?", in February 2022, 29% of respondents answered "with the European Union", and in March 2022, this percentage increased to 42%; on the other hand, regarding the percentage of respondents who answered "Russia" to the above question, in February 2022, their percentage was 24%, and in March 2022, the percentage decreased to 13% (Caucasus Research Resource Centers Georgia for NDI, 2022). All these changes in the Georgian population's opinion about Russia as the aggressor – in less than a month's time – show that past traumas from the 2008 war have been exacerbated and "revived" with the invasion of Ukraine in February 2022, as fear of the Russian Federation as a threat to its neighbours persists in Georgians' *social memory*.

As for surveys of the Ukrainian population on their attitude towards Russia, according to Eurobarometer results of June 15, 2023 (these surveys were conducted between April 28 and May 3, 2023), 34.6% of Ukrainians believe that the Russian population is responsible for the war actions of the political class in Moscow by collectively supporting the decisions of the Russian leadership (Eurobarometer, 2023). Therefore, 84% of Ukrainians hold a negative attitude toward Russian citizens, according to the aforementioned study (Eurobarometer, 2023).

As for the public perception of the Georgian population regarding the onngoing war between Russia and Ukraine, according to a Caucasus Barometer 2024 Georgia survey conducted by the Caucasus Research Resource Centers, a research institute financed by the Carnegie Corporation of New York, from April 16, 2024 to May 13, 2024 on a sample of 1509 respondents, adults only (over 18 years old) in Georgia, excluding populations living in South Ossetia and Abkhazia, (survey mode: Computer-assisted personal interview – CAPI), the repondents mainly indicated that the Russian Federation is the most responsible entity on the current war in Ukraine – 35% of them (The Caucasus Research Resource Centers, 2024). Moreover, 25% of the respondents indicated Vladimir Putin personally as the main responsible of the war, 1% indicated the Russian people, while on the other hand, 8% indicated Volodimyr Zelenskiy personally, other 7% indicated the United States of America, 5% considered the Government of Republic of Ukraine, 1% blamed the Ukrainian people, 1% indicated the EU, another 1% indicated NATO (The Caucasus Research Resource Centers, 2024). The rest of the 2% of the

respondents to this question indicated other entities, while 17% did not know and 1% refused to answer (The Caucasus Research Resource Centers, 2024).

According to the aforementioned study, at the question ”Which country is the main enemy of Georgia?”, 69% of the respondents answered „Russia”, while only 4% answered „USA”, 2% answered „Turkey”, 1% „Armenia”, 3% said „Other”, 16% did not know and 2% refused to answer (The Caucasus Research Resource Centers, 2024).

To compare the results of the aforementioned question with the the ones obtained in a barometer (survey mode: Computer-assisted personal interview) conducted by the same institute from October 9, 2019 to November 4, 2019 (prior to the 2022 invasion of Ukraine), on a sample of 2317 respondents, adults only (over 18 years old) in Georgia, excluding populations living in South Ossetia and Abkhazia (The Caucasus Research Resource Centers, 2024), at that time only 49% of the respondesnts indicated „Russia” as the main enemy of the country (The Caucasus Research Resource Centers, 2019). 4% of the respondents of the aforementioned study indicated „Turkey”, 2% indicated USA, 2% answered „Armenia”, 1% answered „Everybody”, 2% said „Other”, 8% answered „No one”, 26% did not know and 5% refused to answer (The Caucasus Research Resource Centers, 2019).

The difference from the 2019 result to the one obtained in 2024 at the same question – from 49% to 69% represents an indicator of the fact that the social perception of the Georgian population towards Russia was negatively influenced by its actions in this period of time. Most probably, these actions are a result of the 2022 invasion of Ukraine, this producing the fear that such scenario could apply to any other country located within Moscow’s sphere of geographical and geopolitical interest. Besides this, among Georgian people, there is also the collective social trauma from the 2008 war, added on the fear based on the fact that Russia is still capable, in 2024, of invading its neighbors using most of its armed forces.

Conclusions

As intended, the present report brought together results of public opinion polls conducted in Georgia, Ukraine, and also internationally, for the purpose of outlining the way attitudes towards Russia have changed over the years, in relation to the conflicts that emerged in 2008, 2014 and 2022. The reason of this choice consisted on the fact that Both Georgia and Ukraine are two vulnerable states that have suffered attacks from a common aggressor, namely the Russian Federation (Puddington, 2017).

Moreover, one of them falls into the pattern of "frozen" conflicts (Georgia), with the possibility that the second one could turn that way after ceasing fire (one indicator in this sense is the current status of the Crimean peninsula, which is quite uncertain) (Grant, 2017, p. 390). Additionally, in both cases there has been involvement of Western institutions, which advocate for peace, that (in our opinion) leads to an appetite of the population of the aggressed states for increased cooperation with the West. Therefore, both conflicts contain psychosocial relations, such as negative representations of the enemy, living in a violent social context, marked by hostile and traumatising attitudes, leading to a high degree of victimisation, collective emotions and stereotypes rooted in the social memory.

In our point of view, it is important to note what was the opinion of Ukrainians on the development of their country in relation to Russia both before 2022 (the year of invasion) and after, in order to compare these results with the opinion of Georgians in the same time units on similar issues.

According to the results of this research paper, the former's negative view of Russia has sharpened considerably in the wake of the February 2022 invasion, while Georgians' negative public perception of Russia has increased at a lower pace, as the 2022 war did not directly target them. However, the analysed studies have shown that the social perception of the Georgian population towards Russia was, in some measure, negatively influenced by Moscow's actions in this period of time. Most probably, these actions are a result of the 2022 invasion of Ukraine, this producing the fear that such scenario could apply to any other country located within Moscow's sphere of geographical and geopolitical interest. Besides this, among Georgian people, there is also the collective social trauma from the 2008 war, added on the fear based on the fact that Russia is still capable, in 2024, of invading its neighbours using most of its armed forces.

All these changes in the Georgian population's opinion about Russia as the aggressor – in less than a month's time – show that past traumas from the 2008 war have been exacerbated and "revived" with the invasion of Ukraine in February 2022, as fear of the Russian Federation as a threat to its neighbours persists in Georgians' *social memory*.

Additionally, in terms of Ukrainians' perception of the evolution of the war with Russia, the data reveal that in the spring of 2024, Ukrainians' outlook on the evolution of this military conflict remained optimistic

Moreover, Russia's leadership, led by President Vladimir Putin, suffers from an increasingly negative social perception at international level, being in contrast to the perception of the Ukrainian President Volodymyr Zelenskyy, who benefits of a much more favourable one. However, an important matter is how the global security paradigm will change following the election of Donald Trump as President of the United States. Such aspect remains to be seen in the near future.

References:

Caucasus Barometer 2019 Georgia, published by The Caucasus Research Resource Centers, link: https://caucasusbarometer.org/en/cb2019ge/factsheet/

Caucasus Barometer 2024 Georgia published by The Caucasus Research Resource Centers, link: https://caucasusbarometer.org/en/cb2024ge/RESFRWAR_1/

Caucasus Research Resource Centers Georgia for NDI, "*New Poll Shows Key Public Attitude Shifts Amid Ukraine War*", 21.04.2022, link: https://civil.ge/archives/487013

Center for Insights in Survey Research, "*Public Opinion Survey of Residents of Ukraine*", 2021, link: https://www.iri.org/wp-content/uploads/2021/05/public_-_03.2021_national_eng-_public.pdf

Center for Insights in Survey Research, "*Public Opinion Survey: Residents of Georgia,*" 2021, link: https://www.iri.org/wp-content/uploads/2021/04/iri_poll_presentation-georgia_february_2021_1.pdf

Esipova, N., Ray J., "*Georgians' Attitudes Toward Russia Less Friendly Since War. More Georgians favor close relations with United States, European Union",* 2009, published at GALLUP, link: https://news.gallup.com/poll/122258/georgians-attitudes-toward-russia-less-friendly-war.aspx

Eurobarometer, "*Public Opinion on Russia's War Against Ukraine*," 15.06.2023, link: https://www.europarl.europa.eu/at-your-service/files/be-heard/eurobarometer/2022/public-opinion-on-the-war-in-ukraine/en-public-opinion-on-the-war-against-Ukraine-20230615.pdf

Georgian Foundation for Strategic and International Studies, "*Attitudes and perceptions towards Russia in Georgia*," 2021, link: https://library.fes.de/pdf-files/bueros/georgien/18663.pdf

Grant, Thomas D., *"Frozen Conflicts and International Law"*, Cornell International Law Journal Vol. 50, 2017, link: https://www.lawschool.cornell.edu/research/ILJ/upload/Grant-final.pdf

Institute of Polling and Marketing, International Republic Institute – Center for Insights in Survey Research, "*Public Opinion Survey Residents of Georgia",* March 2022, link: https://www.iri.org/wp-content/uploads/2022/04/IRI-Poll-Presentation-Georgia-March2022_Final.pdf

Pew Research Center, "*End of Communism Cheered but Now with More Reservations,*" 02.11.2009, link: https://www.pewresearch.org/global/2009/11/02/end-of-communism-cheered-but-now-with-more-reservations/

Puddington, A., report entitled *"Breaking Down Democracy: Goals, Strategies, and Methods of Modern Authoritarians"*, published in Freedom House, 2017, link: https://freedomhouse.org/report/special-reports/breaking-down-democracy-goals-strategies-and-methods-modern-authoritarians

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ORIGINAL PAPER

Natural Language Processing as an Integrated Model of AI-Mediated Pedagogy

Adrian-Florin Bușu[1)]

Abstract:
The rapid advancement of Artificial Intelligence has intensified interest in the pedagogical applications of Natural Language Processing (NLP) for English Language Teaching (ELT). While NLP-based systems have demonstrated effectiveness in areas such as automated feedback, adaptive tutoring and conversational practice, their integration into educational contexts remains constrained by limitations in emotional intelligence, pragmatic competence and multimodal communication. This article examines how NLP can be productively integrated into AI-driven ELT systems by situating technological developments within a broader theoretical and pedagogical framework. By integrating research from NLP, computer-assisted language learning, affective computing and second language acquisition, the article proposes a framework in which NLP operates as a linguistically precise yet affectively delimited support structure for communicative development. Rather than pursuing full emotional simulation, the article argues for a principled integration of linguistic analysis, discourse modeling and limited affective responsiveness, positioning AI as a complementary agent within human-centered language education.

Keywords: *pragmatic competence, automated analysis, communicative realism.*

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Introduction

In the domain of language learning, the incorporation of Artificial Intelligence into educational practice, at least in ELT contexts, has shifted from experimental novelty to structural presence. Language education has proven especially receptive to AI-mediated innovation due to its reliance on symbolic systems and patterned input. Among the enabling technologies behind this shift, Natural Language Processing (NLP) occupies a central position, as it provides machines with the capacity to analyze, generate and respond to human language in increasingly sophisticated ways. In English Language Teaching (ELT), NLP-driven systems are now widely used in grammar correction, automated writing evaluation, dialogue-based practice, pronunciation feedback and personalized learning pathways. These systems promise consistency and individualized attention, which are qualities that are difficult to achieve in traditional classroom settings alone. At the same time, however, language learning is not reducible to formal linguistic competence. Communication involves pragmatic sensitivity, emotional adjustment, sociocultural norms and interpretive judgment, all of which exceed the current capabilities of NLP systems.

Emotional Intelligence, defined as the ability to recognize, interpret and respond appropriately to affective states, plays a crucial role in communication and language acquisition. Learners' motivation and willingness to communicate are deeply shaped by emotional experience. This raises a central question for AI-mediated pedagogy: how can NLP, a technology optimized for linguistic pattern recognition, meaningfully support emotionally and socially situated language learning without overstating its interpretive capacities? This article tackles this question by critically examining research on NLP in language education and proposing an integrative framework that aligns computational affordances with pedagogical principles. We consider it would be useful, not only in Romanian ELT classes, but in general, as it would trigger efficiency and communicative authenticity among students. Rather than treating Emotional Intelligence as a feature to be fully replicated by AI, the article argues for a constrained and pedagogically grounded use of affective modeling embedded within robust linguistic and discourse-level processing.

NLP and Linguistic Competence in English Language Teaching

NLP provides the computational foundation for AI-mediated ELT by enabling automated analysis of learner language across multiple levels of structure, including morphology, syntax, lexis, cohesion and discourse organization. Early applications of NLP in language learning relied heavily on rule-based grammars and predefined error categories. While such systems were effective for controlled exercises, they were limited in their ability to handle learner variability, non-standard input and communicative intent. The transition towards machine learning and neural language models has significantly expanded NLP's pedagogical potential. Transformer-based architectures can now model contextual dependencies, idiomatic usage and stylistic variation with increasing reliability. In ELT contexts, these advances allow AI systems to provide feedback that goes beyond error detection to include explanations of usage, register appropriateness and alternative formulations.

Empirical studies indicate that NLP-driven feedback can improve grammatical accuracy, lexical diversity and writing fluency, particularly when feedback is immediate, specific and tailored to learner proficiency (Heift & Schulze, 2015; Li, 2021). From a

second language acquisition perspective, we interpret such feedback as a support for the process of *noticing*, enabling learners to attend to form–meaning relationships without interrupting communicative engagement. In this respect, NLP contributes directly to linguistic competence while preserving learner autonomy and supporting self-regulated learning.

Discourse, Interaction and Communicative Competence

Communicative competence in a second language extends beyond grammatical accuracy to include the ability to participate meaningfully in discourse and social interaction. Following Hymes' foundational distinction between linguistic competence and communicative competence, successful language use requires sensitivity to context, interlocutor roles, discourse conventions and pragmatic intent (Hymes, 1992). From this perspective, the pedagogical value of NLP in English Language Teaching depends not only on sentence-level processing, but also on its capacity to model discourse-level phenomena.

Recent developments in NLP have enabled AI systems to process extended stretches of text and dialogue by maintaining contextual representations across multiple turns. Dialogue systems equipped with discourse tracking mechanisms can recognize topic continuity, reference resolution, adjacency pairs and conversational sequencing. In ELT settings, this allows AI tutors to simulate structured interactions such as interviews or academic discussions, offering learners opportunities to rehearse communicative routines that are otherwise difficult to practice individually.

Research on conversational intelligent tutoring systems suggests that such interactional structures support the systematization of language knowledge. Learners interacting with AI systems tend to produce longer utterances, engage in negotiation of meaning and demonstrate increased fluency over time (Graesser et al., 2014: 612). Importantly, these gains are linked not to the illusion of human-like interaction, but to the predictability and pedagogical focus of AI-mediated dialogue, which reduces cognitive load and performance anxiety. Nevertheless, the discourse competence supported by NLP remains fundamentally constrained. AI systems generate responses based on statistical regularities rather than interpretive understanding, which limits their ability to manage indirect speech acts. As a result, NLP-driven interaction should be conceptualized as *guided communicative rehearsal* rather than authentic social engagement. When integrated transparently into ELT curricula, such rehearsal can play a crucial role in preparing learners for real-world interaction without misrepresenting the nature of AI.

Emotional Intelligence and Constrained Affective Responsiveness

Emotional Intelligence is recognized as a key factor in successful language learning. It influences motivation and willingness to communicate. Language classrooms are affectively charged environments in which anxiety and confidence shape learners' behavior as much as cognitive aptitude. The integration of NLP into AI-mediated ELT therefore raises important questions about the role of emotion in human–machine interaction. Current NLP systems are limited in their ability to interpret emotional meaning beyond surface-level textual indicators. Sentiment analysis and emotion classification models typically rely on lexical cues and syntactic patterns, enabling them to detect broad affective categories such as positivity, negativity or basic emotions. While these tools have achieved impressive accuracy in constrained domains, they struggle with

ambiguity, irony or culturally specific emotional expression, all of which are features that are common in authentic language use.

In educational contexts, specifically in the domain of ELT, this limitation has led researchers to advocate for a model of *constrained affective responsiveness* rather than full Emotional Intelligence. Under this model, AI systems do not attempt to simulate empathy or emotional understanding in a human sense. Instead, they monitor affective signals that are directly relevant to learning processes, such as expressions of confusion, frustration or disengagement. These signals may be inferred from linguistic behaviors including repeated errors, hesitation markers, negative self-assessment or abrupt task abandonment. Empirical research in Affective Computing indicates that instructional interventions triggered by such signals, for instance offering hints, slowing task progression or providing neutral encouragement, can improve learning outcomes without requiring deep emotional interpretation (D'Mello & Graesser, 2012: 145). Importantly, these responses are framed as pedagogical strategies rather than emotional dialogue, preserving transparency and avoiding anthropomorphic misrepresentation. This constrained approach aligns with ethical considerations in AI design, minimizing the risk of emotional manipulation while still acknowledging the affective dimensions of learning. In ELT, however, it allows NLP systems to support learner engagement and persistence without overstepping their interpretive capabilities.

Multimodal Integration and Communicative Realism

Language use is inherently multimodal, especially in spoken interaction, where meaning is distributed across verbal and nonverbal channels. Pronunciation, intonation, rhythm, gesture and facial expression are components of communication that contribute to communicative effectiveness and pragmatic appropriateness. Consequently, NLP-based systems achieve greater pedagogical relevance when integrated with complementary modalities such as speech processing and prosodic analysis. Automatic speech recognition (ASR) technologies, when combined with NLP, enable AI systems to provide feedback on spoken production, including segmental accuracy, stress placement and intonation patterns. Research in pronunciation pedagogy demonstrates that such feedback can significantly improve intelligibility, particularly when learners receive visual or auditory representations of prosodic features (Derwing & Munro, 2015). Moreover, discourse-level prosody, such as turn-taking cues and emphasis, can be modeled to support conversational competence. Multimodal integration also enhances communicative realism by approximating the temporal and interactive dynamics of real-world communication. Dialogue systems that incorporate timing, hesitation and overlap simulate conversational rhythm more effectively than text-only interfaces. However, the inclusion of visual modalities such as facial recognition introduces ethical challenges related to privacy and consent. As a result, many educational AI systems prioritize speech-based multimodality, which offers pedagogical benefits with fewer ethical risks.

From a pedagogical standpoint, we consider that multimodal NLP systems should be designed to foreground intelligibility and communicative effectiveness rather than native-like performance. This orientation aligns with contemporary ELT goals, emphasizing successful communication over prescriptive norms and allowing AI to function as a supportive training environment rather than an evaluative authority.

Methodology

In this article we are employing a qualitative integrative methodology designed to synthesize insights from multiple research traditions relevant to AI-mediated English Language Teaching. Rather than presenting new experimental data, the article adopts a conceptual-analytical approach grounded in Applied Linguistics, Educational Technology, Natural Language Processing and Affective Computing. The literature which we have reviewed for this article was selected based on three criteria: relevance to NLP-based language instruction, empirical or theoretical contribution to understanding learning outcomes and applicability to communicative competence or affective dimensions of learning. Sources include peer-reviewed journal articles, foundational monographs and widely cited conference proceedings. Emphasis was placed on studies that examine learner interaction with AI systems rather than purely technical performance metrics.

The methodological stance reflects the interdisciplinary nature of the research problem. Language learning is simultaneously a cognitive, social and emotional process. However, no single methodological framework is sufficient to capture its complexity. Thus, by integrating findings across disciplines, the article constructs a theoretically coherent model of NLP integration that remains pedagogically grounded. This approach allows for critical evaluation of technological claims, distinguishing between demonstrable instructional benefits and speculative aspirations. Methodologically, the article positions itself between empirical synthesis and theoretical modeling, aiming to inform both future research design and practical implementation in ELT contexts.

Future Research Directions

Recent research increasingly emphasizes the need for longitudinal and ecologically valid studies of AI-mediated language learning. While short-term experimental designs dominate the literature, researchers such as Burstein et al. (2014) and Li (2022) argue that sustained exposure is necessary to assess whether AI-supported interaction leads to durable gains in communicative competence and pragmatic transfer. Longitudinal classroom-based studies would allow researchers to trace how learners' discourse strategies evolve over time and how AI-mediated practice interacts with teacher-led instruction.

Pragmatic competence remains a particularly underexplored domain. Studies by Taguchi (2015) and Kasper and Rose (2002) demonstrate that pragmatic development is highly sensitive to instructional design and contextualized input. Integrating these insights with NLP research suggests the need for hybrid instructional architectures that combine data-driven language models with explicit pragmatic frameworks. Preliminary work by Cohen and Ishihara (2013) on technology-enhanced pragmatics instruction offers a foundation for exploring how AI systems might support speech acts, politeness strategies and sociocultural norms more effectively. Affective dimensions of AI-mediated learning also warrant deeper investigation. D'Mello and Graesser (2012) and Calvo and D'Mello (2010) have shown that affect-aware systems can support engagement, but they caution against overinterpreting emotional signals. Recent ethical analyses (Zawacki-Richter et al., 2019; Holmes et al., 2022) underscore the importance of transparency and learner agency when deploying affect-sensitive technologies in educational settings. Qualitative studies examining learner perceptions of emotional responsiveness in AI tutors would therefore be a valuable complement to performance-based metrics.

Finally, concerns about linguistic bias and representational inequity are increasingly prominent in both NLP and applied linguistics. Research by Blodgett et al.

(2020) and Baker-Bell (2020) highlights how language technologies may inadvertently privilege standard or dominant varieties of English. Future research should examine whether AI-mediated ELT environments reinforce or challenge such hierarchies, particularly in multilingual classrooms. Incorporating English as a Lingua Franca perspective (Jenkins, 2015: 49) into NLP system design represents a critical frontier for both research and practice.

Final Considerations

Based on the research reviewed here, it is our opinion that the pedagogical implications of NLP integration must be evaluated within established theories of language learning and instruction. Communicative Language Teaching and task-based frameworks emphasize meaningful interaction, learner autonomy and contextualized use of language (Ellis, 2003; Long, 2015). NLP-based systems align with these principles insofar as they provide structured opportunities for interaction and feedback, but their effectiveness depends on thoughtful curricular integration rather than technological sophistication alone.

Concerns about anthropomorphism and over-attribution of intelligence to AI systems have been widely discussed in the literature on human–computer interaction. Nass and Moon (2000: 81-103) demonstrate that users tend to apply social expectations to interactive technologies, a tendency that becomes increasingly important in educational contexts. Framing AI output as pedagogical material rather than conversational agency is therefore essential to maintaining epistemic clarity and avoiding misleading representations of machine understanding. The central role of the teacher in AI-enhanced classrooms is strongly supported by research on blended and technology-mediated learning. Studies by Bax (2011: 12) and Kessler (2018: 205) emphasize that technological tools are most effective when teachers actively mediate their use, contextualize feedback and align digital interaction with learning objectives. In this sense, NLP systems function as amplifiers of pedagogical intention rather than autonomous instructors.

From a broader educational perspective, the integration of NLP into ELT reflects a shift toward what Selwyn (2019) describes as *critical digital pedagogy*, in which technological innovation is evaluated in terms of its social, ethical and educational consequences. By situating NLP within this critical framework, teachers and researchers can resist deterministic narratives and focus instead on how AI can support reflective, inclusive and human-centered language education.

All things considered…

Natural Language Processing offers powerful tools for enhancing English Language Teaching, but its educational value depends on principled integration rather than technological ambition. NLP excels at linguistic analysis, adaptive feedback and dialogic simulation, producing demonstrable learning benefits. Its limitations in emotional and pragmatic understanding are real but manageable through constrained affective modeling and multimodal support. By positioning NLP as a supportive structure for communicative development rather than a surrogate for human intelligence, AI-mediated ELT systems can complement human teaching while respecting the complexity of language as both a cognitive and emotional practice.

References:

Baker-Bell, A. (2020). *Linguistic justice: Black language, literacy, identity, and pedagogy*. Routledge.

Bax, S. (2011). *Normalisation revisited: The effective use of technology in language education*. *International Journal of Computer-Assisted Language Learning and Teaching, 1*(2).

Blodgett, S. L., Barocas, S., Daumé III, H., & Wallach, H. (2020). *Language (technology) is power: A critical survey of "bias" in NLP*. *Proceedings of ACL*, 5454–5476.

Burstein, J., Chodorow, M., & Leacock, C. (2014). *Automated essay evaluation: The Criterion online writing service*. *AI Magazine, 25*(3).

Calvo, R. A., & D'Mello, S. (2010). *Affect detection: An interdisciplinary review of models, methods, and their applications*. *IEEE Transactions on Affective Computing, 1*(1).

Cohen, A. D., & Ishihara, N. (2013). *Teaching and learning pragmatics: Where language and culture meet*. Pearson.

Derwing, T. M., & Munro, M. J. (2015). *Pronunciation fundamentals*. John Benjamins.

D'Mello, S., & Graesser, A. (2012). *Dynamics of affective states during complex learning*. *Learning and Instruction, Volume 22, Issue 2, Memphis.*

Ellis, R. (2003). *Task-based language learning and teaching*. Oxford University Press.

Graesser, A. C., et al. (2014). *AutoTutor: An intelligent tutoring system*. *IEEE Transactions on Education, 48*(4).

Heift, T., & Schulze, M. (2015). *Errors and intelligence in computer-assisted language learning*. Routledge.

Holmes, W., Bialik, M., & Fadel, C. (2022). *Artificial intelligence in education: Promise and implications for teaching and learning*. Center for Curriculum Redesign.

Hymes, D. H. (1992). *The concept of communicative competence revisited.* Benjamins.

Jenkins, J. (2015). *Repositioning English and multilingualism in English as a Lingua Franca*. *Englishes in Practice, 2*(3).

Kasper, G., & Rose, K. R. (2002). *Pragmatic development in a second language*. Blackwell.

Kessler, G. (2018). *Technology and the future of language teaching*. *Foreign Language Annals, 51*(1).

Li, J. (2021). *The effectiveness of automated written corrective feedback*. *Computer Assisted Language Learning*.

Li, J. (2022). *Artificial intelligence in second language learning: A systematic review*. *Computer Assisted Language Learning*, Advance online publication.

Long, M. H. (2015). *Second language acquisition and task-based language teaching*. Wiley-Blackwell.

Nass, C., & Moon, Y. (2000). *Machines and mindlessness: Social responses to computers*. *Journal of Social Issues, 56*(1).

Selwyn, N. (2019). *Should robots replace teachers? AI and the future of education*. Polity Press.

Taguchi, N. (2015). *Instructed pragmatics*. Cambridge University Press.

Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). *Systematic review of research on artificial intelligence applications in higher education*. *International Journal of Educational Technology in Higher Education, 16*(39).

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ORIGINAL PAPER

Clarity, Coherence and Communication: The Case for Standardized Administrative Language

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Abstract:
Communication in public administration requires the use of specific and precise vocabulary, employing standardized terminology that helps avoid misinterpretations or ambiguities and ensures coherence in the transmission of information. Precise and concise terminology is essential for describing complex concepts and theories in an accessible and easily understandable manner.
The language of public administration is characterized by specific, technical, and often formal terminology. However, the terms used do not always have a single, stable meaning; they can exhibit semantic variations depending on the administrative, legal, or institutional context. Such variations may lead to confusion and interpretive difficulties, particularly in communication with citizens or between institutions operating in different fields.
Semantic variations refer to the differences in meaning that a word or specialized term may carry across different contexts.
The development of communication channels both among employees and between employees and the outside world is crucial. Through communication, public administration also receives from external sources the information it needs in order to achieve its objectives.
Within any administrative structure, communication is important as it ensures the quality of existing relationships. Public communication, as the term itself suggests, operates in the public sphere, under the influence of administrative relations between the public sector employee and the citizen. Public communication involves sharing information of collective interest, as well as maintaining social relations for which public institutions are responsible.
Keywords: *semantic variations, communication, terminology, information.*

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Introduction

Polysemic variation constitutes an inherent feature of specialized terminology, much as it does in general language. It frequently manifests through terminological metaphors, semantic transfer, and processes of semantic shift, and may, in certain instances, originate in semantic neology. Within this framework, a clear correlation can be established between conceptual variation and denominative variation. Moreover, the proliferation of denominative variants may be indicative of conceptual indeterminacy, which, in turn, can generate or reinforce conceptual variation.

The more recent or conceptually vague a notion is, the greater the number of denominative variants it tends to generate. These variants reflect the multiple nuances of the concept, shaped by different communicative contexts, authors, specialists, and schools of thought. Consequently, it is essential to examine these phenomena - denominative, conceptual, and polysemic variation - in an integrated manner. Such an approach allows for the analysis of the term and the concept as two facets of the same entity, which ultimately accounts for the considerable evocative power of terminology.

Terminology cannot be reduced to a specific vocabulary, nor can it be regarded merely as a subdiscipline of another field. Terms and concepts, as the fundamental objects of study in terminology, cannot be examined in isolation; rather, they must be analyzed in an integrated manner. Consequently, most terminological research involves a combined application of onomasiological and semasiological approaches.

In all contexts, terminology - whether addressing a specific practical need or underpinning thematic or systematic research - cannot be dissociated from the theoretical reflections and practical applications that inform it.

Moreover, the methodologies employed, which are defined in accordance with the particular requirements of each study, are grounded in pre-existing epistemological frameworks and remain intrinsically linked to specific schools of thought or theoretical orientations (whether normative or descriptive), depending on the objectives pursued.

Characteristics of administrative language

The language employed by public authorities in official documents constitutes a distinct register, carefully structured to ensure precision, legality, and the institutional character of administrative communication. It should not be regarded merely as a collection of technical terms; rather, this terminology reflects a broader culture of state functioning, encompassing the relationship between institutions and citizens, as well as the processes through which decisions are formulated, communicated, and implemented.

When terminological research is conducted in a coherent and methodologically rigorous manner, the results obtained are likely to differ substantially in both scope and significance. Empirical evidence from practice substantiates this perspective, with illustrative examples to be discussed in subsequent chapters. Furthermore, it is important to emphasize that terminology encompasses all specialized domains of human knowledge, which are inherently interconnected. The close and enduring relationship between terminology and linguistics represents a significant advantage that, in our view, should not be overlooked, as it remains essential to the advancement of terminological inquiry.

The placement of terminological variation within a dual perspective - linguistic and extralinguistic - proves to be particularly relevant, as the absence of such an approach would limit the proper identification of certain phenomena. Conceptual and semantic variants can be identified only through a meticulous analysis of the textual corpus, within which the circulating information undergoes a process of decoding. For an accurate

interpretation of this information, it is necessary to adopt an extended contextual perspective that goes beyond the strictly co-textual level. In this regard, extralinguistic factors provide a pertinent analytical framework for the examination of such variations.

The phenomenon of terminological variation is no longer perceived as a source of ambiguity, but rather as an opportunity for lexical enrichment. Terms do not function merely as labels; instead, they acquire variable meanings depending on the context and communicative situation. They are characterized by a high conceptual potential, which distinguishes them from figures of speech specific to classical rhetoric, granting them the ability to convey subtle semantic nuances. Terms and concepts, regarded as an inseparable unit, exhibit flexibility and an interdisciplinary nature, adapting to the requirements of various specialized fields.

"If, in polysemy, the semantic core remains invariant and is manifested through the various uses of the polysemous lexeme, in the case of metaphor, any feature of the metaphorical lexeme, whether essential or secondary, can be transferred, as long as it facilitates the analogy for which it is used." (Assal, 1995:23)

Terminological metaphorization begins with the transfer of both essential and secondary features; however, this process directly leads to polysemy. For this reason, we do not agree with the distinction proposed by Assal. Metaphor plays an essential role in naming and conceptualizing new realities. It operates wherever analogy can trigger any form of change, thereby enabling the use of the internal resources of language to create new terms and concepts, both in general language and in specialized discourse. On the other hand, polysemy does not represent a process, but rather a result, a linguistic reality. It is the direct outcome of metaphorization. Among the manifestations of polysemy are new meanings, semantic transfers, semantic shifts, and metaphors. The new concepts introduced through metaphor are linked to the previous meanings of the term.

It should be noted that, although it may seem unusual to discuss the metaphorical meanings of words in the language of public administration, we are all aware that language is not static; it is continuously enriched with new words that acquire new and new meanings. Administrative language is intended for human communication; therefore, it also undergoes such changes depending on the new meanings that participants attribute to terms.

Metaphorization is a frequent and valuable process in terminology, playing a role in creating new denominations that fill conceptual gaps and generate new concepts. Within the cognitive universe, words and meanings are not constrained by fixed boundaries; they circulate freely wherever imagination can evoke, signify, and conceptualize realities.

Thus, the naming of a term becomes the materialization of this mental process within metaphorization and represents a label (the signified) that leads to polysemy. This manifests in language through multiple meanings associated with the same signifier and through different references. In discourse, context and co-text help clarify the term and prevent ambiguity. However, in everyday language, it is necessary to explain and understand this process of metaphorization in order to avoid confusion and ambiguity.

In order to properly understand this phenomenon, it is essential to examine the diachronic evolution of a term's meanings, as well as to observe the ways in which its usage becomes stabilized and regulated within linguistic practice. The validation of a new sense is contingent upon subsequent developments; nevertheless, due to the efficiency of terminological metaphorization, it is highly probable that the term will preserve its relevance within its linguistic history, irrespective of its frequency of use. This period of

adaptation varies in accordance with conceptual dynamics and the emergence of new scientific and technological realities.

Language continuously adapts to semantic change, thereby reflecting cultural and technological transformations, which confers upon terminological metaphorization a profoundly dynamic and productive character. In this respect, terminological metaphor should be understood as a complex cognitive process through which new concepts are generated, its outcome being the emergence of polysemy. In contrast to rhetorical metaphor, terminological metaphor possesses the capacity to produce conceptualizations grounded in globally accumulated knowledge.

"Thus, lexical variation and inconsistency are often related to the context in which language is used, the level of register employed, and the specific domain of the speakers. It is also observed that shifts in meaning and variation occur even in scholarly discourse, where researchers may use the same words with different meanings. Furthermore, it happens that the same speakers use multiple terms to refer to the same object or concept, even in the case of specialized technical terminology." (Candel, 1993: 291)

In the context of international exchanges and the diversification of specialized languages, establishing clear and consistent classifications of terms within well-defined domains may become challenging. In this regard, it may be useful to reconsider these principles in order to enable a more accurate description of terminological usage and polysemous phenomena.

Such an approach would contribute to a better overall understanding of a specialized field and would highlight its interconnections with other areas of knowledge, both from a synchronic and diachronic perspective. Moreover, it would be beneficial to intensify international cooperation in order to achieve a certain degree of harmonization, within the limits of linguistic possibilities, of the terminology used in specialized languages.

The creation of new terms is directly responsible for the emergence of terminological variation, and in this respect, it is important to understand how these phenomena are interconnected, including neologism formation, metaphorization, and terminological variation. In a previous chapter, we discussed the process of terminological metaphorization and emphasized that it leads to the polysemous variation of terms.

The emergence of automatic translation systems and artificial intelligence has provided significant support, but also a trap into which uninformed individuals can easily fall. If one is not knowledgeable in a given field, one cannot simply take as valid any information that is readily provided.

According Bărbuceanu C.D., "AI platforms actually understand on how each person learns best, they tweak how they present information, switch up the difficulty, and even adjust the speed."(Bărbuceanu, C. D., 2025:194)

Contemporary terminology is situated at the intersection of tradition and innovation. Its inherent challenges - such as ambiguity, external influences, and the accelerated pace of change - may be addressed through critical reflection and coordinated efforts aimed at standardization. At the same time, its developmental prospects are manifold, including increased openness to interdisciplinarity, adaptation to emerging technologies, and a stronger orientation toward competence-based education. In this sense, terminology should not be understood merely as a code employed by specialists, but rather as a barometer of the profound transformations currently shaping education in the contemporary world.

According Bărbuceanu C. D., "the concept of digital literacy in the scenery of the digital age education is the ability and dexterity citizens possess in how and what language to use when suitable; it is also the facility in the digital language of technology and the capacity to critically inspect various kinds of language and texts". (Bărbuceanu, C. D., 2020:141)

Terminology reflects not only the theoretical and institutional developments of education, but also the cultural dimension of society. It is shaped by values, traditions, mentalities, and processes of intercultural interaction, which influence the way educational concepts are formulated, used, and transformed. The cultural dimension of terminological change highlights the fact that language is a social and cultural construct in a constant state of transformation. Culture shapes vocabulary, and terminology, in turn, influences educational practices and mentalities.

According Burtea-Cioroianu C.-E., "these competences represent an integrated set of essential skills in the educational and professional context, encompassing effective communication, the ability to interact (interpersonal, intercultural), civic understanding and participation, as well as a dual dimension of culture: on the one hand, an awareness and understanding of cultural values, and on the other hand, an artistic expression and knowledge of the cultural diversity of the country where you are studying." (Burtea-Cioroianu, 2025:173)

The modernization of terminology represents an inevitable and necessary process in the context of the social, cultural, and technological transformations of the contemporary world. Language cannot remain static, as communication itself is a living phenomenon in a continuous state of adaptation. The modernization of terminology does not consist merely in replacing old words with new ones; rather, it involves conceptual reconstruction, the refinement of meanings, and the integration of terms that more accurately reflect the reality of current communication. An important aspect of terminology modernization is the internationalization of discourse.

At the same time, the modernization of terminology is influenced by the emergence of digital technologies and their impact on individuals. This process is not without difficulties. At times, the proliferation of new terms may generate confusion, while the overlap between traditional and modern terminology creates ambiguities. Moreover, there is a risk that terms borrowed from other languages are used superficially, without a deep understanding of the concepts they represent. For this reason, the modernization of administrative terminology must be accompanied by systematic efforts of clarification, standardization, and cultural adaptation.

The modernization of administrative terminology is a continuous process that reflects the dynamic relationship between language and society. It expresses the need to describe contemporary realities, to integrate innovations, and to provide a common language for specialists in the field. Through this process, administrative terminology asserts its relevance and its capacity to respond to present-day challenges, while at the same time preparing the ground for future transformations.

According Stoian, A., "although it may be true that for English learners, this language, as any other foreign language, can have a lot of pitfalls, learning the appropriate connecters can help them achieve a satisfying level of English". (Stoian, A., 2024:211)

The field of virtual learning has imposed, over the past two decades, a true revolution in terminology. The emergence of digital environments, the development of the internet, and the widespread use of online resources have introduced into administrative language a series of new terms, often borrowed from English and adapted

to the specific features of Romanian educational discourse. These terms are not just simple linguistic labels, but reflect substantial transformations in the way communication in the administrative field is conceived, organized, and carried out.

"The notion of discourse immediately faces two difficulties. The first is the relationship between monologue and dialogue. The second is that of the co-presence of two terms, discourse and text". (Chirițescu, Păunescu, 2025:98)

Administrative language, like any specialized register, has always sought a clear, rigorous form adapted to the demands of education. The definition of administrative language has thus started from the need to construct a conceptual framework in which specialized notions acquire an unambiguous meaning, avoiding the confusions inherent in everyday language.

However, this definition has never been definitive. Administrative language is, by its very nature, living and dynamic, reflecting societal transformations, shifts in paradigms, and the concrete needs of a constantly changing society. In the modern period, its redefinition has become an essential condition for the progress of the science of specialized language.

The process of redefinition is never linear. Tensions constantly arise between tradition and innovation, between already established concepts and the need to adapt to contemporary realities. Some terms remain in administrative language as stable reference points, while others evolve or disappear. This ongoing movement reflects not only developments in public administration, but also the dynamics of the broader world in which specialized communication takes place.

Thus, language in the field of public administration can be seen as an open construction, engaged in a continuous process of definition and redefinition. It is shaped by academic research, educational policies, new technologies, and practical experience gained in the field through communication between public administration employees and citizens at service counters. Its definition is necessary for coherence and scientific communication; its redefinition is inevitable in order to maintain relevance and up-to-dateness in relation to societal change.

Ultimately, administrative language is not merely a technical tool, but also a mirror of how humanity understands the importance of education, and of how it projects its future through the training of new generations of specialists.

Placing terminological variation within both a linguistic and an extralinguistic perspective is highly beneficial, as without such an approach certain phenomena could not be adequately observed. Conceptual and semantic variants can only be identified through a careful analysis of texts, in which circulating information is decoded. In order to correctly understand this information, it is necessary to adopt a contextual perspective that goes beyond the mere analysis of co-text. These extralinguistic causes provide a useful framework for analyzing such variants.

"Translation is an exercise in interpreting ideas, which requires a lot of mental agility and writing skill. Also, knowledge of the two languages, the one from which one is translating and the one into which one is translating, are essential things." (Chirițescu, Păunescu, 2025:33)

Communication in the field of public administration represents the process through which state institutions transmit information, decisions, and services to citizens and receive feedback from them. It is characterized by clarity, rigor, and formality, having the role of ensuring transparency, efficiency, and the proper functioning of the relationship between authorities and the public.

According Scorțan D., "the psycho-affective dimension in building a team is not negligible. Of course, it is easier to work with people „that we like", but the question that arises is rather to know how to work together while going beyond emotional divisions. It is important to design the work in team as a skill to be acquired and not as an eventuality subject to affinities." (Scorțan, D., 2024:145)

Communication in public administration also plays a crucial role in ensuring democratic governance and institutional accountability. Through effective communication strategies, public institutions are able to increase accessibility, reduce informational asymmetries, and strengthen public trust. In the context of digital transformation, administrative communication has become increasingly complex, integrating both traditional channels and digital platforms. This evolution requires not only linguistic precision, but also adaptability to diverse audiences and communication contexts, in order to maintain efficiency and coherence in public service delivery.

To fully understand what administrative and political discourse analysis is, it is necessary to determine what can be identified as discourse of this type. The easiest way to identify political discourse is through its authors or actors; that is, an administrative discourse can be recognized as such as a consequence of the person who delivered it, namely the directly involved individual. In this sense, "the main actors in public administration are the group of individuals, elected or appointed as central actors within it, who are paid for their activities in the service of the community." (Van Dijk, 1997: 13)

The vocabulary used in public administration is characterized by a high degree of formality, precision, and clarity, being adapted to the needs of official communication between institutions and citizens. It includes specialized terminology, standardized expressions, and fixed formulations designed to ensure coherence and uniformity in administrative documents.

An important feature of this vocabulary is the frequent use of legal-administrative terms such as "decision," "regulation," "competence," "procedure," or "authority," which reflect the normative nature of the field. Moreover, there is a noticeable trend toward internationalization and modernization, through the adoption of English loanwords, particularly in the context of administrative digitalization.

In addition, administrative language avoids ambiguity and subjective expressions, favoring impersonal formulations and rigorous syntactic structures. Thus, the vocabulary of public administration contributes to ensuring transparency, efficiency, and accuracy in institutional communication.

Terminological variations within the terminology of public administration highlight the complexity and dynamism of a field situated at the intersection of specialized language, legal normativity, and the need for comprehensibility in the relationship with citizens. Public administration, as a living system in continuous transformation, directly reflects the social, political, legislative, and technological changes of a society. In this context, the terminology specific to this field is far from being static or uniform, undergoing significant lexical, semantic, pragmatic, and even stylistic variations.

The identified terminological variations can be viewed from several perspectives: those resulting from institutional reforms, the evolution of the legislative framework, or the alignment with European Union standards and practices; those generated by external linguistic influences, especially from English, as a consequence of globalization and the internationalization of administrative discourse; as well as those arising from actual everyday usage, where regional, contextual, or institutional differences lead to the use of equivalent terms or even to ambiguities.

Another important aspect highlighted is the delicate relationship between terminological precision - essential for the clarity of norms and administrative acts - and linguistic accessibility, necessary for effective communication with the general public. This tension requires a balance between the technical rigor of specialized language and the democratic imperatives of transparency and inclusion. Moreover, the role of administrative language in building trust between citizens and institutions cannot be underestimated: a clear, coherent, and unified language contributes to strengthening a climate of trust and mutual respect.

Conclusions

Communication, situated at the core of human activity, constitutes a fundamental factor in structuring and carrying out interactions between individuals and the organizations to which they belong. In the context of sustainable development, this dimension acquires increased relevance, reflecting the complexity of contemporary social and institutional relationships. Within communicative exchange processes, the full dynamics of linguistic activity associated with the discourse of sustainable development can thus be observed. However, prior to analyzing linguistic determinants, it is necessary to emphasize the essential role of the human being, as an agent of communication, in generating this activity. Consequently, communicational causes emerge as central elements of the analytical approach.

The language used in the field of public administration is a specialized one, with technical terminology; however, in the end, communication takes place between two or more participants, most often one of them being an informed actor (the public administration employee), while the other or others are non-specialized actors (the citizen or citizens). Communication must be understood by both parties. Therefore, it is essential that the language used be the same and that the participants show mutual understanding toward one another.

Authors' Contributions

The authors contributed equally to this work.

References:

Assal, A., (1995). La métaphorisation terminologique, *L'Actualité terminologique*, 28 :2, Ottawa: Bureau de la traduction du gouvernement du Canada.

Bărbuceanu, C. D., (2020). Teaching the Digital Natives. *Revista de Ştiinţe Politice. Revue des Sciences Politiques*, Craiova: Universitaria Publishing House, no. 65, pp. 136-145, chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://cis01.central.ucv.ro/revistadestiintepolitice/files/numarul65_2020/13.pdf.

Bărbuceanu, C. D. (2025). Teaching the Digital Natives - Incorporating AI in Classrooms. *Revista de Ştiinţe Politice. Revue des Sciences Politiques*, no. 88, chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://cis01.central.ucv.ro/revistadestiintepolitice/files/numarul88_2025/15.pdf.

Burtea-Cioroianu, C.-E. (2025). Integrated Approach to Teaching and Learning Romanian as a Foreign Language. *Revista de Ştiinţe Politice. Revue des Sciences Politiques*,

no. 88, chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://cis01.central.ucv.ro/revistadestiintepolitice/files/numarul88_2025/13.pdf.

Candel, D. (1993). Français oral de spécialité et terminologie, *Le Langage et L'Homme*, Socioterminologie, 28 :4, Bruxelles: De Boeck Université.

Chirițescu, I. M., Păunescu, F. A. (2025). Metaphor in didactic discourse. *Revista de Științe Politice. Revue des Sciences Politiques*, no. 86, chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://cis01.central.ucv.ro/revistadestiintepolitice/files/numarul86_2025/8.pdf.

Chirițescu, I.M., Păunescu, F. A. (2025). Translating Texts with Sports Terminology versus Literary Translation – Similarities and Differences. *Revista de Științe Politice. Revue des Sciences Politiques*, no. 85, chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://cis01.central.ucv.ro/revistadestiintepolitice/files/numarul85_2025/3.pdf.

Scorțan, D. (2024). Teaching practices with an interdisciplinary approach. *Revista de Științe Politice. Revue des Sciences Politiques*, no. 84, chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://cis01.central.ucv.ro/revistadestiintepolitice/files/numarul84_2024/11.pdf.

Stoian, A.M. (2024). The role and purpose of English prepositions. Revista de Științe Politice. Revue des Sciences Politiques, no. 84, chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://cis01.central.ucv.ro/revistadestiintepolitice/files/numarul84_2024/17.pdf.

Van Dijk, T. A. (1997). *What is Political Discourse Analysis?*, published in J. Blommaert & C. Bulcaen (Eds.), *Political Linguistics*, Amsterdam: John Benjamins Publishing Company.

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Simulation and resistance in the democratization of Romania: Public policy instruments between the normative control of the West and the survival of local elites

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Abstract:
The present paper aims to analyze the process of decommunization and democratization of Romania, emphasizing both the normative control exercised by Euro-Atlantic institutions and the power-preservation strategies used by post-communist elites.
The transition to a democratic state was not achieved, as expected, through immediate and transparent reform policies. These were marked, on the one hand, by the formal adoption of Western institutions and procedures (to satisfy the accession criteria) and, on the other hand, by an informal resistance aimed at neutralizing their impact on the inherited power structures.
Methodologically, the study relies on public policy analysis and the path dependency model to identify the mechanisms through which local elites slowed down lustration legislation and "captured" independent institutions through political appointments. The paper demonstrates that, although the West imposed democratic control instruments (such as the MCV or transparency laws), their success was partly due to the Romanian political system's ability to mimic compliance without giving up discretionary control over state resources. The conclusions emphasize that in the process of Romania's democratization, important democratic forms were often emptied of content by various techniques of institutional resistance, which made it a hybrid one. The establishment of the rule of law with all its specific principles and values is possible by gradually removing the mechanisms inherited from communism and by creating a culture of citizen empowerment to fight against authoritarian tendencies that might emerge.

Keywords: *decommunization, path dependency, public policies, political resistance, institutional capture, normative control.*

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With the fall of the communist regime, public policies of decommunization were marked, on the one hand, by the resistance of local elites to retain their power and, on the other hand, by the normative control of Euro-Atlantic structures. These clashed, more or less, depending on the interests of each party. Under these conditions, Romania "borrowed" Western instruments to satisfy external requirements, while preserving internal control mechanisms. In the following, I will analyze the paradox of assisted democratization, the "facade" instruments used by the state, the mechanisms of resistance to external control, the conflict of control with an emphasis on the MCV case and on justice, and in conclusion I will make some references regarding external control and the hybrid regime that emerged following the processes of decommunization and democratization.

In this sense, I consider Nicolae Iorga's quote important: "Let it be a lesson for all the reformers of today and tomorrow... for all those who come to power with their pockets full of laws that pass but are never applied, because the poor nation lives much better respecting its traditions than all the laws; in this way, a good law turns into a tradition, leaving aside bad laws." (Iorga, 1927/1993, p. 93). In our situation, external control could lead to the creation of legislative frameworks that would help establish a functional and prosperous democratic state in a shorter time. However, the control of the elites and the emptying of the substance of the laws issued only with the aim of showing Western states that we are consistent and that we support the democratization process, led to the preservation of certain habits specific to the old communist regime, referring here in particular to corruption and the network of clientelism that had formed throughout the communist period.

The research questions that guided the analysis were the following: 1 To what extent were the instruments of public democratization policies adopted as a result of an internal democratic conviction or as a survival strategy in the face of external pressures? 2. What were the main techniques for "neutralizing" decommunization policies used by the Romanian political elites to maintain control over state resources? 3. How did the balance of power between the EU's normative control (through the CVM) and the resilience of the Romanian political system evolve in the post-accession period? 4. Can "institutional capture" be considered a form of continuity of control methods specific to the old regime under a new democratic form?

1. Introduction: The Paradox of Assisted Democratization

The end of communist regimes for some of the Central and Eastern European states led to the engagement of the West as the architect of the immediate reforms that were absolutely necessary for the installation of new democracies in states with totalitarian pasts. In the following, I will define the concept of "normative control" in order to understand what this assisted democratization meant and how the control mechanisms from the West worked, and also how it was possible for Romanian society to find options through which to maintain its levers of power.

Normative control is the process by which the compliance of rules, decisions or legal acts with higher-ranking norms (the Constitution, organic laws) or compliance with pre-established quality standards is verified. In this sense, the European Union has a normative control committee, an independent body within the European Commission with the role of advising the College of Commissioners in order to provide a central quality

control. It also provides support to the legislative process, especially in the early stages of impact assessments and Commission evaluations.

Although control suggests that it is an instrument of pressure and tension because it could identify problems/irregularities/violations of norms to be remedied, it should be seen as a "barometer that indicates how the person called upon to apply the decision acts, as well as the degree to which the decision corresponds to the purpose for which it was issued" (Tofan, 2009, p. 293).

A simple search in an explanatory dictionary reveals that the notion of control refers to the action of verifying a situation or activity in order to observe its evolution and improve it, directing it when necessary (Romanian Academy, 2012, p. 231). For administrative law activities, the activity of public administration is considered, with certain values, usually those enshrined in legal norms.

Also, the Romanian elites were in a position where they needed external legitimacy, but were put in a dilemma, risking losing power through real decommunization. They aimed to "maintain their privileges and squeeze as much of the state's wealth as possible" (Boia, 2013, p. 117) through various methods of corruption, which after 1989 can be considered "an effective technique in the mechanism of redistribution of national wealth, the structure of institutions and their functioning" (Opriș, 2016, p. 138).

2. "Facade" Instruments (Mimeticism)

In political science, the choice of public policy instruments is never neutral; it reflects the distribution of power and the objectives of political actors. In the context of the adoption of transparency and anti-corruption laws in response to EU conditionality, institutions were created that respected European patterns (for example, ANI, CNSAS), but whose functioning is conditioned by political resources and appointments.

In the case of Romania, we can talk about a mix between indigenous instruments (often used to simulate reform or maintain control) and imported/imposed instruments (as part of democratic conditionality). These instruments can be classified according to their usefulness in different processes. Thus, we distinguish between decommunization instruments, democratization instruments and those of transparency and civil control.

2.1. Decommunization Instruments (Focus on Justice and Memory)

These were most strongly negotiated between post-communist elites and civil society supported by Western partners. The first important instruments that should be mentioned here are the lustration instruments that were dissolved, postponed and ultimately did not diminish their purpose, considering them to be even failed. Romania chose an extremely weak lustration model compared to the Czech Republic or East Germany. The Lustration Law was successively blocked at the Constitutional Court, a legal instrument used here as a political barrier.

Also, "Ghetto-Archive" type institutions were created, such as the CNSAS - National Council for the Study of the Archives of the Securitate - a public policy instrument based on the German model (Gauck Institute), but adapted locally. Romania chose a "controlled access" model, where political control over the CNSAS council was an instrument to limit the effects of decommunization. The Institute for the Investigation of the Crimes of Communism and the Memory of the Romanian Exile was also established. Through the C.N.S.A.S., citizens had access to their files drawn up by the former political police (Securitate), and through the IICMER, attempts were made to identify those guilty of crimes and abuses committed during the communist period. By

law no. 187 of 07.12.1999 regarding access to one's own file and the exposure of the Securitate as political police published in the Official Gazette no. 603 of 09.12.1999, citizens had the chance for the first time to have access to their own file. From this moment, small steps followed the creation of a legislative framework through which citizens could find out information, to the extent that these files were declassified and left to the public.

To all this is added the symbolic condemnation of the old political regime through the Tismăneanu Commission. This was an instrument of memory politics (politics of memory). It was an internal election of the presidency (2006) to obtain legitimacy before the West, even before joining the European Union. This was completed with the publication of the Final Report condemning the old regime, considering it to be "illegitimate and criminal" (Presidential Commission for the Analysis of the Communist Dictatorship in Romania, 2006, p. 636).

Thus, transitional justice measures were limited only to the removal of old communist symbols, without criminal prosecution for crimes committed during the communist regime. Although lustration laws were adopted several times, they were declared unconstitutional. In practice, lustration laws were not implemented (Dujisin, 2021, p. 80). This is how the concept of "unfinished revolution" appears, which conveys the idea that there is still a negative influence on society from the old communist regime (Dujisin, 2021, p. 67). Other authors use the phrase stolen revolution (Mazilu, 1991) or that it opened new horizons for the "Great Post-Communist Robbery" (Copilaș, 2017) which generated rapid enrichment for opportunists who knew how to profit in a negative way from the transition to a market economy.

2.2. Democratization Tools (Focus on Institutional Reform)

These instruments are based on a massive influence of Western "normative control". The conditionality imposed by the EU was achieved through the Cooperation and Verification Mechanism – CVM. This was the clearest instrument imposed by the West. It is not just a monitoring procedure, but a policy steering instrument through which the EU controlled Romania's legislative agenda in the field of justice and anti-corruption for over 15 years. This was particularly necessary given that the transition to a state of law was considered to also include a transition of justice, which at that time had some problems. Corruption had also affected this part, which was particularly important for the proper functioning of a state of law. Thus, corruption methods, such as bribery, had also affected some magistrates, who were part of this process and who reduced sentences or affected sentences by invoking lack of evidence, while they themselves were concealing some corpus delicti and incriminating evidence (Morar, 2022, pp. 374-376). "The purpose of the bribe was, most often, to speed up the procedures and allocate files to certain magistrates. Most of those who were aware of corruption acts by individuals in the legal system did not report them, due to the too complicated process or because they were convinced that nothing would happen, the lack of trust in the criminal prosecution bodies being evident." (Danilet, 2009, p. 16) In this case, we observe how citizens' trust in justice decreases, how the fairness of justice affects trust in state institutions with a defense role. Therefore, institutional reform and implicitly justice reform was particularly important and even a condition for accession to the EU. Corruption affects the quality of democracy. A highly corrupt state can very easily slide towards authoritarian forms of leadership.

An instrument of external legal control transposed internally was the imposition of a governmental agent for the ECHR as the official representative of the Romanian state, who will function as a specialized structure within the Ministry of Foreign Affairs (MAE).

Romania was forced to create public policy mechanisms to respond to the avalanche of lawsuits related to confiscated properties. The state has been confronted with these especially since the publication of Law no. 10 of 2001 on the legal regime of certain immovables taken over abusively between 06.03.1945 and 22.12.1989.

To all this are added the Independent Agencies (Regulatory Agencies). The West imposed the creation of "islands of efficiency" such as the Competition Council, the National Authority for Administration and Regulation in Communications (ANCOM - institution that regulates the electronic communications, postal services and information technology market in Romania) and the National Integrity Agency (ANI - institution responsible for verifying the assets, conflicts of interest and incompatibilities of persons holding public offices) in order to remove the control of resources from the direct influence of political parties. This economic democratization measure provided for the transition to a market economy and the creation of solid foundations that would bring prosperity to the state and wanted a reduction in the involvement of politics in the aforementioned process.

2.3. Transparency and Civil Control Instruments

From the point of view of transparency and civil control, access to information of public interest was an important fact with Law no. 544 of 2001. Although adopted by a left-wing government (PSD), it was an instrument imported under pressure from civil society funded by Western foundations, the most important being Open Society. It is considered one of the most democratic laws in Romania, reducing the discretionary control of the bureaucracy. The transparency of the decision-making process took place through Law no. 52 of 2003) being considered an instrument of "participatory democracy" imposed as a standard of good governance by the OECD and the EU.

Regarding the origin of the instruments, the table below also presents the type of instruments and the political objectives that stood behind them.

Table 1: Origin of the instruments

Type of Instrument	Origin/Source	Policy Objective
Limited lustration	Internal (Post-communist elites)	Preserving the status quo and controlling the past.
Access points to archives	Mixed (Civil society + Western models)	Transfer of control of information to the citizen.
Independence of Justice (DNA/ANI)	External (Imposed by EU/USA)	Breaking political control over state resources.
Digitalization and E-Government	External (EU Standards)	Reducing corruption by eliminating human/bureaucratic control.

Romania practiced “institutional mimicry”, adopted the instruments imposed by the West (as a form), but tried to control their functioning through political appointments or underfunding (as a substance). This is the essence of “democratization under control” in the Romanian case.

3. Mechanisms of resistance to external control: Elite survival techniques

In the post-communist period, the Romanian political elites (coming from the second echelon of the PCR or from the new post-1989 business structures) did not oppose democratization head-on, but adopted a strategy of “resistance through adaptation”. There

are four important mechanisms through which they tried to maintain their power within the state. First, they used the strategy of legislative dilution and amended draft laws in Parliament, emptying them of content, eliminating sanctions and making them practically unenforceable. Then, they controlled the institutions, "captured" them, using the political space to run agencies that should have been independent. And finally they used the Constitutional Court and turned it into an arbiter to block decommunization policies (e.g. the Lustration Law), thus they always had the constitutional challenge at their disposal. Added to all this is the excessive bureaucracy that further hindered the democratization process.

3.1. The "Legislative Watering Down" Technique

The mechanism of operation of this technique was quite simple: The de jure acceptance of a law demanded by the West (e.g. the Lustration Law or justice reforms), but the introduction of amendments in parliamentary committees that made the respective law unenforceable. A conclusive example is represented by the systematic postponement of the Lustration Law until the targeted figures retired or left public life, transforming the law into a post-factum instrument, with no real impact on the control of power. This political concept is called Salami tactics which led to the slicing of the reform until nothing substantial remained of it.

If we were to analyze the lustration law, it had a course marked by postponements, repeated invalidations at the Constitutional Court and parliamentary amendments that neutralized its practical impact. Decision no. 820 of 7 June 2010 ruled against the first form of the Lustration Law adopted by Parliament in May 2010), the CCR declaring the law unconstitutional in its entirety, invoking the fact that we cannot rely on collective guilt, but individual guilt, and holding a certain position should only be condemned when the involvement of individual guilt within the regime could be demonstrated. After the first invalidation, Parliament amended the law and adopted it again in February 2012. The CCR intervened again, declaring the most important articles (Art. 1 letters c, d, e and Art. 8) unconstitutional by Decision no. 308 of March 28, 2012. In the end, the law was symbolically adopted approximately 22 years after the fall of the regime, and its emptying of content meant that no high-ranking person was effectively removed from office based on this law, because the moral and legal statute of limitations had already passed (5 years, as amended in Parliament).

Lavinia Stan will demonstrate that transitional justice in Romania failed due to the postponement of the lustration process. Compared to other states, such as the Czech Republic or Poland, which were much tougher and faster in terms of the lustration law process, Romania allowed the old elite to consolidate its power by converting political influence into economic capital. She believes that the measures were limited to symbolic justice, transforming the process into an instrument of political struggle between post-communist factions, rather than a moral cleansing of the state (Stan, 2013).

3.2. "Institutional Capture" through Political Algorithm

This could have happened through the mechanism of establishing independent agencies required by the EU to ensure the required "checks and balances", but the appointment of political loyalists to the boards of directors made way for dignitaries who manipulated decisions and actions. Thus, the institution reports the success of the reforms to Brussels (checking the criteria), but in reality it protects the group interests of local elites. For example, we can bring to attention the way of appointing members to the National Audiovisual Council (CNA) or to the boards of directors of state-owned companies.

In order to understand why the institutions were resistant to change, why they were very difficult to reconfigure, why they manifested their rigidity and fixity in the face of change, we must consider the term path dependence that made them have all these characteristics. (Palier, 2009, pp. 193-194) Moreover, the creation of alternative institutions would generate high investment costs, therefore it was preferable for the state to adapt the existing ones, rather than to replace them, emphasizing the process of institutional development (Palier, 2009, p. 194). The same thing happened in Romania. With those few exceptions when those institutions necessary to control and diminish corruption and to condemn the old regime were created from scratch, many institutions were reorganized under the new democratic leadership. That is why Opriș is very right in his statement that during the period of "trials and errors" that the state went through in its democratic journey, "the conversion of the old democracy (....) took place, baptizing it democratic, liberal and pro-Western" (Opriș, 2016, p. 115).

During the communist period, the legitimacy and credibility of the communist leadership was also given by various personalities who accepted collaboration with the leadership. Thus, those who were terrorized by the security forces and who were later offered cooperation offers, by accepting them, ended up obtaining the party's recognition and in turn formed other generations of young people, thus giving legitimacy to the leadership. We can bring to attention the case of Noica who was converted to Marxism-Leninism in prison (Mungiu Pipide, 2002, p. 264). This example illustrates the fact that the coercive persuasion exercised by the communist regime led to the instrumentalization of prestigious intellectual figures who were made to choose between terror and privileges. In our transitional context, elites were noted who wanted the privileges they could have obtained by holding political or administrative positions, thus, it was quite easy to adapt to the new requirements. It was nothing new. The mechanism remained the same, it was only necessary to adapt to the new requirements of the political leadership, which no longer used terror this time, but perhaps blackmail, especially in the case of easily corruptible people who had a past that also involved violating norms that could have been easily brought to the surface.

In this context, we think of the political elite after 1989. It was this elite that tried to preserve its power. Just as many influential people of the time tried to submit to the new leadership, to agree with the ideas and ideology behind it, so after 1989, many of them just tried to take over from the ideas of the West and show their support in order to receive legitimacy and acceptance from it and the electorate. That is why we can say, like Opriș, that we witnessed the reconversion of the old elite, in many cases changing only its name to "democratic and liberal" (Opriș, 2016, p. 115). The mechanism by which all state institutions were directly controlled by the center (as in the communist period) was also preserved in Romania after 1989, through the appointments to key positions of officials who respected the political directives of those who held state power.

3.3. Using the Constitutional Court as a "Safety Valve"

When external pressure (EU/NATO) forces the adoption of a radical decommunization law, the elites use their control over the referrals to the CCR to declare the law unconstitutional. This mechanism represented a "safety exit" in situations where the effect of a regulation could no longer be postponed or diminished, being, in fact, a form of "legalistic" resistance. Politicians can tell the West: "We wanted to reform, but the judges won't let us", thus maintaining democratic appearances while blocking substantive change. This was abused throughout the transition period. Even today, the Constitutional Court plays a very important role in the governance of the state. In this

context, we mention only two judgments: Constitutional Court Decision no. 32 of December 6, 2024, which annulled the first round of the presidential elections of November 24, 2024, and the Constitutional Court Decision no. 153 of February 18, 2026 on the reform of the service pensions of magistrates, which later became Law no. 24/2026. If the first decision aroused the indignation of a good part of the citizens, many of whom lost their trust in this institution, the second decision, which was long awaited, being postponed countless times, was received with great positivism from the citizens

3.4. "Bureaucratic Overload"

The mechanism of this excessive bureaucratization provided for the creation of a labyrinth of overlapping procedures and institutions, so that the responsibility for the failure of a democratization policy could not be attributed to anyone. Under these conditions, control becomes diffuse and difficult to monitor by European experts, allowing the maintenance of informal networks of power under the cover of a complex bureaucracy.

It is necessary to specify that the resistance of the elites did not represent a rejection of democracy, but rather an attempt to control the democratization process. The result was a diminution of the change, and in this case it was no longer possible to speak of a real paradigm shift in power. The result is what some researchers call a "Facade Democracy" or a "Hybrid Regime".

4. The Conflict of Control: The MCV Case and Justice

The analysis of the period of "democratic backsliding" represented the moment when local elites tried to regain control over the judicial system, defying the recommendations from Brussels. In this sense, a "non-engagement of politics in justice" was desired (Morar, 2022, p. 209). This would have shortened the transition period, would have helped create institutions that would resist any forms of corruption. Due to the fact that the old structures were not removed in time, they also affected the judicial system. Thus, the conflict of control in the MCV case was not a legal one, but one of power. The resilience of internal structures transformed justice into a space in which European norms were formally adopted, but emptied of content through interpretations of the CCR or through the inaction of local control institutions. The Romanian political and judicial elites did not accept external control (MCV) that would diminish their privileges. The idea of "delusions of grandeur" of the elites that stood behind these actions (Mungiu-Pippidi, 2002, p. 239) manifested itself by transforming control institutions into instruments of group protection. Instead of being a "barometer" of integrity (as Apostol Tofan said), internal control was used to "discipline" reformist magistrates.

This led to the establishment of the Section for the Investigation of Justice Offenses (SIIJ) as a form of modern "coercive persuasion". Instrumenting control through judicial inspection and SIIJ led to the resilience of the old structures, which was seen in their capacity to create mechanisms that, under the pretext of legality, functioned as a brake on MCV. The elites controlled the legislative process to "dilute" the impact of the European recommendations, exactly as they did previously with the Lustration Law (through CCR Decisions 820/2010 and 308/2012).

The failure of the profound transformation of the judicial system under the MCV spectre demonstrates that the old power structures demonstrated acute resilience and managed to instrumentalize the verification mechanisms in favor of their own survival. Although administrative control should have functioned, according to the thesis supported by Dana Apostol Tofan (2012), as a "barometer" of the conformity of the decision with

its social and democratic purpose, it was captured by an intellectual and political elite marked by "delusions of grandeur". This elite controlled the transition through methods of coercive persuasion, which led to the emptying of content of European reforms and transformed control from a guarantor of independence into a filter for the protection of internal hierarchies. Under these conditions, the conflict of control in the MCV case was not a purely legal one, but a confrontation between the norms of modernization and an indigenous structure that, through constitutional and legislative blockages similar to those in the case of the Lustration Law, managed to maintain justice in a state of institutional captivity.

5. Conclusions: From external to hybrid control

When there is no critical mass of internal support, the effectiveness of the imposed instruments is limited, which has led to the current state that shows us a democracy that is procedurally consolidated but fragile in substance (disguised illiberal democracy).

Returning to the research questions from the introduction of this paper, we will conclude that public democratization policies in Romania suffered a severe gap between legislative adoption (imposed by the West) and administrative implementation (controlled by local elites). The Form-Substance dichotomy made Romania a "diligent student" at the level of discourse, but a resistant actor at the level of substance. From here we observe that the Efficiency of External Control was limited, the normative control instruments of the West (such as EU conditionality) were effective in the pre-accession phase, but lost their force as soon as the "stake" of accession disappeared, allowing the phenomenon of democratic backsliding.

Decommunization was not a linear process of justice, but a fragmented public policy, used by political actors to obtain the "certificate of democracy" necessary for integration into the Western club, without completely exposing the networks of influence of the old regime. Therefore, decommunization can be seen as a legitimizing tool used to create a positive image of the state. The survival and preservation of power behind the old communist elites or those who asserted themselves in the newly formed entrepreneurial field was achieved through adaptation. The resistance of the elites did not take the form of an overt anti-Western opposition (as in other Eastern states), but of an intelligent adaptation: the use of democratic mechanisms (such as the Constitutional Court or parliamentary procedures) to block or delay structural reforms aimed at bringing about real change and a strong democratic consolidation. We can also mention a future perspective, the paper suggesting that for real democratization, external control must be doubled by a more robust internal civilian control, capable of penalizing political mimicry and forcing the transition from "facade democracy" to a political culture of responsibility.

References:

Academia Română, Institutul de Lingvistică „Iorgu Iordan - Al. Rosetti". (2012). *DEX: Dicționarul explicativ al limbii române* (Ed. a 2-a rev.), București: Editura Univers Enciclopedic Gold.

Boia, L. (2013). *De ce este România altfel?*, (ediția a II-a, adăugită). București: Humanitas.

Copilaș, E. (coord.) (2017) *Marele jaf postcomunist: spectacolul mărfii și revanșa capitalismului*, Iași: Adenium.

Danileț, C. (2009). *Corupţia şi anticorupţia în sistemul juridic*. Bucureşti : Editura C.H. Beck.

Dujisin, Z. (2021). A history of post-communist remembrance: From memory politics to the emergence of a field of anticommunism. *Theory and Society*, 50(6), 867–896.

Iorga, N. (1993). „Sat și oraș". În Ș. Chimet (Ed.), *Dreptul la memorie* (Vol. 4, p. 93). Cluj-Napoca: Editura Dacia.

Mazilu, D. (1991). *Revoluția furată: Memoriu pentru țara mea*, București: Editura Cozia.

Morar, D. (2022). *Putea să fie altcumva: o istorie subiectivă a justiției după 1990*, București: Humanitas.

Mungiu-Pippidi, A. (2002). *Politica după comunism*, București: Editura Humanitas.

Opriș, O. (2016). *Democrația prin încercări și erori*, București: Ideea Europeană.

Palier, B. (2009). „Path dependence (dependența de calea urmată)" în coord: Boussaguet, L. Jacquot, S. Ravinet, P. *Dicționar de politici publice*, trad. de Iustina Cojocaru, Iași: Polirom.

Stan, L. (2013). *Transitional Justice in Post-Communist Romania: The Politics of Memory*, Cambridge: Cambridge University Press.

Tismăneanu, V. (2007). *Raportul Final al Comisiei Prezidențiale pentru Analiza Dictaturii Comuniste din România*, București: Editura Humanitas.

Tofan, D. A. (2009). *Drept administrativ. Volumul II. Actul administrativ. Contenciosul administrativ. Domeniul public. Răspunderea administrativă*. București: Editura C.H. Beck.

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https://e-tidsskrifter.kb.dk/resolve?umlaut.locale=da&url_ver=Z39.88-2004&url_ctx_fmt=info%3Aofi%2Ffmt%3Akev%3Amtx%3Actx&ctx_ver=Z39.88-2004&ctx_tim=2020-04-11T21%3A23%3A41%2B02%3A00&ctx_id=&ctx_enc=info%3Aofi%2Fenc%3AUTF-8&rft.issn=1584-224X&rft.search_val=1584-224X&rft_val_fmt=info%3Aofi%2Ffmt%3Akev%3Amtx%3Ajournal&rfr_id=info%3Asid%2Fsfxit.com%3Acitation

Glasgow Caledonian University
https://discover.gcu.ac.uk/discovery/openurl?institution=44GLCU_INST&vid=44GLCU_INST:44GLCU_VU2&?u.ignore_date_coverage=true&rft.mms_id=991002471123103836

Open University Library Malaysia
http://library.oum.edu.my/oumlib/content/catalog/778733

Stanford University Libraries, Stanford, United States
https://searchworks.stanford.edu/?q=469823489

Cornell University Library, Ithaca, United States
https://newcatalog.library.cornell.edu/catalog?search_field=publisher+number%2Fother+identifier&q=469823489

University of Michigan Library,
https://search.lib.umich.edu/catalog?&library=All+libraries&query=isn%3A469823489

Pepperdine Libraries, Malibu, United States
https://pepperdine.worldcat.org/search?qt=wc_org_pepperdine&q=no:469823489

University of Victoria Libraries , Victoria, Canada
http://uvic.summon.serialssolutions.com/#!/search?ho=t&fvf=ContentType,Journal%20Article,f&l=en&q=1584-224X
Academic Journals database
http://journaldatabase.info/journal/issn1584-224X

University of Zurich Database
https://www.jdb.uzh.ch/id/eprint/21535/

California Institute of Techonology - Caltech Library
https://www.library.caltech.edu/eds/detail?db=poh&an=98646324&isbn=1584224X

Staatsbibliothek zu Berlin
http://kvk.bibliothek.kit.edu/view-title/index.php?katalog=STABI_BERLIN&url=http%3A%2F%2Fstabikat.de%2FDB%3D1%2FCHARSET%3DISO-8859-1%2FIMPLAND%3DY%2FLNG%3DDU%2FSRT%3DYOP%2FTTL%3D1%2FSID%3D8dda05f3-1%2FSET%3D1%2FSHW%3FFRST%3D1&signature=eBtSKEx2BuW-HASpUsCT39FB3vQpIm6cGAajCH-kz44&showCoverImg=1
Union Catalogue of Belgian Libraries
http://kvk.bibliothek.kit.edu/view-title/index.php?katalog=VERBUND_BELGIEN&url=http%3A%2F%2Fwww.unicat.be%2FuniCat%3Ffunc%3Dsearch%26query%3Dsysid%3A7330250&signature=Dxe-cVFWjMO1W4HpEAWW_ERyKR4oiGWXLGFinWk8fNU&showCoverImg=1

The National Library of Israel
http://merhav.nli.org.il/primo-explore/fulldisplay?vid=ULI&docid=NNL-Journals003477656&context=L&lang=en_US

Verbundkatalog GBV
http://kvk.bibliothek.kit.edu/view-title/index.php?katalog=GBV&url=http%3A%2F%2Fgso.gbv.de%2FDB%3D2.1%2FCHARSET%3DUTF-8%2FIMPLAND%3DY%2FLNG%3DDU%2FSRT%3DYOP%2FTTL%3D1%2FCOOKIE%3DD2.1%2CE900d94f2-d%2CI0%2CB9000%2B%2B%2B%2B%2B%2B%2CSY%2CA%2CH6-11%2C%2C16-17%2C%2C21%2C%2C30%2C%2C50%2C%2C60-61%2C%2C73-75%2C%2C77%2C%2C88-90%2CNKVK%2BWEBZUGANG%2CR129.13.130.211%2CFN%2FSET%3D1%2FPPNSET%3FPPN%3D590280090&signature=OmwA_NLtwvdaOmmyeo7SUOCEYuDRGtoZqGXIK-vTY1o&showCoverImg=1

COPAC, registered trademark of The University of Manchester
https://copac.jisc.ac.uk/search?&isn=1584-224x
ACPN Catalogo Italiano dei Periodici, Universita di Bologna
https://acnpsearch.unibo.it/journal/2601620

Bibliothèque Nationale de Luxembourg
https://a-z.lu/primo-explore/fulldisplay?vid=BIBNET&docid=SFX_LOCAL1000000000726583&context=L

National Library of Sweden
http://libris.kb.se/bib/11702473

Harold B. Lee Library, Brigham Young University
http://sfx.lib.byu.edu/sfxlcl3?url_ver=Z39.88-2004&url_ctx_fmt=info:ofi/fmt:kev:mtx:ctx&ctx_enc=info:ofi/enc:UTF-8&ctx_ver=Z39.88-2004&rfr_id=info:sid/sfxit.com:azlist&sfx.ignore_date_threshold=1&rft.object_id=1000000000726583&rft.object_portfolio_id=&svc.holdings=yes&svc.fulltext=yes

Catalogue of Hamburg Libraries
https://beluga.sub.uni-hamburg.de/vufind/Search/Results?submit=Suchen&library=GBV_ILN_22&lookfor=1584-224x

Edith Cowan Australia
https://ecu.on.worldcat.org/search?databaseList=&queryString=1584-224X

University College Cork, Ireland
https://ucc.summon.serialssolutions.com/?q=1584-224X#!/search?ho=t&jt=Revista%20de%20Stiinte%20Politice&l=en-UK&q=

York University Library, Toronto, Ontario, Canada
https://www.library.yorku.ca/find/Record/muler82857

The University of Chicago, USA
https://catalog.lib.uchicago.edu/vufind/Record/sfx_1000000000726583

The University of Kansas KUMC Libraries Catalogue
http://voyagercatalog.kumc.edu/Search/Results?lookfor=1584-224X&type=AllFields

Journal Seek
http://journalseek.net/cgi-bin/journalseek/journalsearch.cgi?field=issn&query=1584-224X

State Library New South Wales, Sidney, Australia,
http://library.sl.nsw.gov.au/search~S1/?searchtype=i&searcharg=1584-224X&searchscope=1&SORT=D&extended=0&SUBMIT=Search&searchlimits=&sear

chorigarg=i1583-9583

Electronic Journal Library
https://opac.giga-hamburg.de/ezb/detail.phtml?bibid=GIGA&colors=7&lang=en&flavour=classic&jour_id=111736

Open University Malaysia
http://library.oum.edu.my/oumlib/content/catalog/778733

Wayne State University Libraries
http://elibrary.wayne.edu/record=4203588

Kun Shan University Library
http://muse.lib.ksu.edu.tw:8080/1cate/?rft_val_fmt=publisher&pubid=ucvpress

Western Theological Seminar
https://col-westernsem.primo.exlibrisgroup.com/discovery/fulldisplay?docid=alma991001225541104770&context=L&vid=01COL_WTS:WTS&lang=en&search_scope=MyInst_and_CI&adaptor=Local%20Search%20Engine&tab=Everything&query=any,contains,1584-224X&facet=rtype,include,journals&mode=Basic&offset=0

Swansea University Prifysgol Abertawe
http://whel-primo.hosted.exlibrisgroup.com/primo_library/libweb/action/search.do?vid=44WHELF_SWA_VU1&reset_config=true#.VSU9SPmsVSk

Vanderbilt Library
https://catalog.library.vanderbilt.edu/discovery/fulldisplay?docid=alma991043322926803276&context=L&vid=01VAN_INST:vanui&lang=en&search_scope=MyInst_and_CI&adaptor=Local%20Search%20Engine&tab=Everything&query=any,contains,1584-224X&offset=0

Wissenschftszentrum Berlin fur Sozial
https://www.wzb.eu/en/literature-data/search-find/e-journals?page=searchres.phtml&bibid=WZB&lang=en&jq_type1=IS&jq_term1=1584-224X&jq_bool2=AND&jq_type2=KS&jq_term2=&jq_bool3=AND&jq_type3=PU&jq_term3=&offset=-1&hits_per_page=50&Notations%5B%5D=all&selected_colors%5B%5D=1&selected_colors%5B%5D=2

Radboud University Nijmegen
https://zaandam.hosting.ru.nl/oamarket-acc/score?OpenAccess=&InstitutionalDiscounts=&Title=&Issn=1584-224&Publisher=
Elektronische Zeitschriftenbibliothek EZB (Electronic Journals Library)
http://rzblx1.uni-regensburg.de/ezeit/detail.phtml?bibid=AAAAA&colors=7&lang=de&jour_id=111736

The University of Hong Kong Libraries
https://julac.hosted.exlibrisgroup.com/primo-explore/search?query=any,contains,1584-224x&search_scope=My%20Institution&vid=HKU&facet=rtype,include,journals&mode=Basic&offset=0

Metropolitan University Prague, Czech Republic
https://s-knihovna.mup.cz/katalog/eng/l.dll?h~=&DD=1&H1=&V1=o&P1=2&H2=&V2=o&P2=3&H3=&V3=z&P3=4&H4=1584-224x&V4=o&P4=33&H5=&V5=z&P5=25
University of the West Library
https://uwest.on.worldcat.org/search?queryString=1584-224x&clusterResults=off&stickyFacetsChecked=on#/oclc/875039367

Elektron ische Zeitschriften der Universität zu Köln
https://www.ub.uni-koeln.de/IPS?SERVICE=METASEARCH&SUBSERVICE=INITSEARCH&VIEW=USB:Simple&LOCATION=USB&SID=IPS3:2d1c5acebc65a3cdc057a9d6c64ce76e&SETCOOKIE=TRUE&COUNT=15&GWTIMEOUT=30&HIGHLIGHTING=on&HISTORY=SESSION&START=1&STREAMING=on&URLENCODING=TRUE&QUERY_alAL=1584-224x&SERVICEGROUP1.SERVICE.SEARCH_EDS=on&SERVICEGROUP1.SERVICE.SEARCH_KUGJSON=on&SERVICEGROUP1.SERVICE.SEARCH_KUGUSBWEB=on&SERVICEGROUP1.SERVICEGROUP.USB:Default=on

EKP Pulications
https://ekp-invenio.physik.uni-karlsruhe.de/search?ln=en&sc=1&p=1584-224X&f=&action_search=Search&c=Experiments&c=Authorities

Valley City State University
https://odin-primo.hosted.exlibrisgroup.com/primo-explore/search?query=any,contains,1584-224X&tab=tab1&search_scope=ndv_everything&sortby=rank&vid=ndv&lang=en_US&mode=advanced&offset=0displayMode%3Dfull&displayField=all&pcAvailabiltyMode=true

Impact Factor Poland
http://impactfactor.pl/czasopisma/21722-revista-de-stiinte-politice-revue-des-sciences-politiques

Universite Laval
http://sfx.bibl.ulaval.ca:9003/sfx_local?url_ver=Z39.88-2004&url_ctx_fmt=info:ofi/fmt:kev:mtx:ctx&ctx_enc=info:ofi/enc:UTF-8&ctx_ver=Z39.88-2004&rfr_id=info:sid/sfxit.com:azlist&sfx.ignore_date_threshold=1&rft.object_id=1000000000726583&rft.object_portfolio_id=&svc.fulltext=yes

Universität Passau
https://infoguide.ub.uni-passau.de/InfoGuideClient.upasis/start.do?Query=10%3d%22BV035261002%22

BSB Bayerische StaatBibliothek
https://opacplus.bsb-muenchen.de/metaopac/search?View=default&oclcno=502495838

Deutsches Museum
https://opac.deutsches-museum.de/TouchPoint/start.do?Query=1035%3d%22BV035261002%22IN%5b2%5d&View=dmm&Language=de
Technische Hochschule Ingolstadt
https://opac.ku.de/TouchPoint/start.do?Branch=3&Language=de&View=thi&Query=35=%22502495838%22+IN+[2]

Hochschule Augsburg, Bibliothek
https://infoguide.hs-augsburg.de/InfoGuideClient.fhasis/start.do?Query=10%3d%22BV035261002%22

Hochschule Weihenstephan-Triesdorf, Zentralbibliothek
Freising, Germany
https://ffwtp20.bib-bvb.de/TouchPoint/start.do?Query=1035%3d%22BV035261002%22IN%5b2%5d&View=ffw&Language=de

OTH- Ostbayerische Technische Hochschule Regensburg, Hochschulbibliothek
OTHBR, Regensburg, Germany
https://www.regensburger-katalog.de/TouchPoint/start.do?Query=1035%3d%22BV035261002%22IN%5b2%5d&View=ubr&Language=de

Staatliche Bibliothek Neuburg/Donau , SBND,
Neuburg/Donau, Germany
https://opac.sbnd.de/InfoGuideClient.sndsis/start.do?Query=10%3d%22BV035261002%22

Universitätsbibliothek Eichstätt-Ingolstadt, Eichstätt, Germany
https://opac.ku.de/TouchPoint/start.do?Branch=0&Language=de&View=uei&Query=35=%22502495838%22+IN+[2]

Bibliothek der Humboldt-Universität Berlin, Universitätsbibliothek der Humboldt-Universität zu Berlin
Berlin, Germany
https://hu-berlin.hosted.exlibrisgroup.com/primo-explore/search?institution=HUB_UB&vid=hub_ub&search_scope=default_scope&tab=default_tab&query=issn,exact,1584-224X

Hochschulbibliothek Ansbach, Ansbach, Germany

https://fanoz3.bib-bvb.de/InfoGuideClient.fansis/start.do?Query=10%3d%22BV035261002%22

Bibliothek der Europa-Universität Viadrina, Frankfurt (Oder)
Frankfurt/Oder, Germany
https://opac.europa-uni.de/InfoGuideClient.euvsis/start.do?Query=10%3d%22BV035261002%22

University of California Library Catalog
https://catalog.library.ucla.edu/vwebv/search?searchCode1=GKEY&searchType=2&searchArg1=ucoclc469823489

For more details about the past issues and international abstracting and indexing, please visit the journal website at the following address:
http://cis01.central.ucv.ro/revistadestiintepolitice/acces.php.

CONFERENCE INTERNATIONAL INDEXING OF THE PAST EDITIONS (2014-2026)

CEPOS Conference 2026

The **Sixteenth International Conference** After Communism. East and West under Scrutiny (Craiova, House of the University, 20-21 March 2026) was evaluated and accepted for indexing in 11 international databases, catalogues and NGO's databases
ConferenceAlerts
Conal Conference Alerts
https://conferencealerts.com/country-listing?country=Romania
CEPOS (site oficial – secțiunea Upcoming 2026)
https://cepos.eu/upcoming2026
Conferencelists.org
https://www.conferencelists.org/event/cepos-16th-international-conference-after-communism-east-and-west-under-scrutiny/?utm_source=chatgpt.com
ConfFinder (Conferences in Romania)
https://conffinder.com/pagesconference/ConferencesListing?country=Romania&utm_source=chatgpt.com
Events notification
https://eventsnotification.com/event/61037
Conferencesked
https://www.conferencesked.com/conference_details/15391/cepos-16th-international-conference-after-communism-east-and-west-under-scrutiny
Conffinder
https://www.conffinder.com/pagesconference/ConferencesListing?country=Romania
Sciencedz
https://www.google.com/search?q=16th+cepos+international+confernece+2026&oq=16th+cepos+international+confernece+2026&gs_lcrp=EgZjaHJvbWUyBggAEEUYOTIJCAEQIRgKGKABMgkIAhAhGAoYoAHSAQkxMDMyOWowajSoAgGwAgE&client=ms-android-motorola-rvo3&sourceid=chrome-mobile&ie=UTF-8#ip=1
Conference daily

https://conferencesdaily.com/european-studies-conferences
Scholarly meet
https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://scholarlymeet.com/country/fr&ved=2ahUKEwikirrDuqeSAxW7wAIHHfhgE2c4FBAWegQIKRAB&usg=AOvVaw3pIVukONrNS4lLm1n6yU_R
Conferencealertz
https://www.conferencealertz.com/conferenceslist?country=Romania

CEPOS Conference 2025

The **Fifteenth International Conference** After Communism. East and West under Scrutiny (Craiova, House of the University, 14-15 March 2025) was evaluated and accepted for indexing in 14 international databases, catalogues and NGO's databases:
Indexation links:
https://academic.oup.com/jcs/article-abstract/67/1/csaf001/7997508?redirectedFrom=PDF
https://scholarlymeet.com/events/ca73318d-42a7-4b5e-bcca-635e0aa1c46b
https://conferences365.com/conferences-in-romania
https://conferencewiki.com/conference-listing/MzA4
https://www.conferencelists.org/event/cepos-15th-international-conference-after-communism-east-and-west-under-scrutiny/
https://www.sciencedz.net/en/conference/110381-cepos-15th-international-conference-after-communism-east-and-west-under-scrutiny
https://conferencealerts.com/show-event?id=262202
https://conferencesdaily.com/cities/craiova
https://cepos.org/upcoming/
https://10times.com/after-communism-east-and-west-under-scrutiny
https://www.researchgate.net/publication/379144286_CENTER_OF_POST-COMMUNIST_POLITICAL_STUDIES_CEPOS_Book_of_abstracts_of_the_14th_International_Conference_After_Communism_East_and_West_under_Scrutiny_Craiova_Romania_15-16_March_2024
https://conferencewiki.com/conference-detail/Cepos-15th-International-Conference-After-communism-East-and-West-under-scrutiny
https://www.conferencelists.org/romania/
https://www.conferencesked.com/conference_details/10148/cepos-15th-international-conference-after-communism-east-and-west-under-scrutiny
https://conffinder.com/pagesconference/ConferencesListing?country=Romania

CEPOS Conference 2024

The **Fourteenth International Conference** After Communism. East and West under Scrutiny (Craiova, House of the University, 15-16 March 2024) was evaluated and accepted for indexing in 11 international databases, catalogues and NGO's databases:
Indexation links:
CEEOL https://www.ceeol.com/search/article-detail?id=1195305
ProQuest, Part of Clarivate
https://www.proquest.com/docview/2863220849/CC02F21AE4DB44F1PQ/1?accountid=50247&sourcetype=Scholarly%20Journals
Oxford Academic (Oxford University Press)
https://doi.org/10.1093/jcs/csad066

Oxford Journal of Church and State-Oxford Academic (Oxford University Press) (Vol. 65, nr 4/2023) în secțiunea Calendar of Events JCS (publicare 28 Noiembrie 2023)
Conference Alerts
https://conferencealerts.com/show-event?id=254313
Science DZ
https://www.sciencedz.net/.../100575-14th-international...
10 Times
https://10times.com/after-communism-east-and-west-under...
The Free Library
https://www.thefreelibrary.com/CEPOS+NEW+CALL+FOR+PAPERS...
Conference 365
https://conferences365.com/.../14th-international...
World University Directory
https://worlduniversitydirectory.com/edu/event/...
Conferences daily
https://conferencesdaily.com/eventdetails.php?id=1625192
Gale Cengage Learning USA https://go.gale.com/ps/i.do?id=GALE%7CA766112846...

CEPOS Conference 2023

The **Thirteenth International Conference** After Communism. East and West under Scrutiny (Craiova, 17-18 March 2023) was evaluated and accepted for indexing in 5 international databases, catalogues and NGO's databases:
Oxford Church & State Journal:
https://academic.oup.com/jcs/articleabstract/65/1/168/7044222?redirectedFrom=fulltext

10 Times: https://10times.com/after-communism-east-andwest-under-scrutiny

Conferencesite.eu:
https://index.conferencesites.eu/conference/57510/13th-international-conference-after-communism-eastand-west-under-scrutiny;

Schoolandcollegelistings
:https://www.schoolandcollegelistings.com/RO/Craiova/485957361454074/Center-of-Post-Communist-Political-Studies-CEPOS

Conferencealerts : https://conferencealerts.com/showevent?id=247851

CEPOS Conference 2022

The **Twelfth International Conference** After Communism. East and West under Scrutiny (Craiova, 18-19 March 2022) was evaluated and accepted for indexing in 6 international databases, catalogues and NGO's databases:
https://www.conferenceflare.com/events/category/social-sciences-and-humanities/art-history/

Vinculation International Diciembre 2021 newsletter n 99
https://issuu.com/fundacionargeninta5/docs/diciembre_2021_fundaci_n_argeninta-ai_ok?fr=sZjg2NjE5NTg3OTY

https://www.schoolandcollegelistings.com/RO/Craiova/485957361454074/Center-of-Post-Communist-Political-Studies-CEPOS

https://10times.com/company/cepos
https://10times.com/after-communism-east-and-west-under-scrutiny

https://conferencealerts.com/show-event?id=238529

https://www.sciencedz.net/conference/82995-cepos-international-conference-2022-after-communism-east-and-west-under-scrutiny

CEPOS Conference 2021

The Eleventh International Conference After Communism. East and West under Scrutiny (Craiova, House of the University, 19-20 March 2021) was evaluated and accepted for indexing in 5 international databases, catalogues and NGO's databases:

https://academic.oup.com/jcs/advance-articleabstract/doi/10.1093/jcs/csaa064/5941887?redirectedFrom=fulltext

https://conferencealerts.com/show-event?id=229654

https://www.sciencedz.net/en/conference/72628-1thinternational-conference-after-communism-east-and-west-underscrutiny

https://10times.com/after-communism-east-and-west-underscrutiny

https://worlduniversitydirectory.com/edu/event/?slib=1thinternational-conference-after-communism-east-and-west-underscrutiny-2

CEPOS Conference 2020

The Tenth International Conference After Communism. East and West under Scrutiny (27-28 March 2020) was evaluated and accepted for indexing in 7 international databases, catalogues and NGO's databases:

Scichemistry
http://scichemistry.org/ConferenceInfosByConferenceTopicId?conferenceTopicId=57

Oxford Journals
https://academic.oup.com/jcs/advance-articlepdf/doi/10.1093/jcs/csz078/30096829/csz078.pdf

Conference alerts
https://conferencealerts.com/show-event?id=215370
https://www.sciencedz.net/en/conference/57625-10thinternational-conference-after-communism-east-and-west-underscrutiny

Intraders

https://www-intradersorg.
cdn.ampproject.org/v/s/www.intraders.org/news/romania/10
th-international-conference-after-communism-east-and-westunderscrutiny/
amp/?amp_js_v=a2&_gsa=1&usqp=mq331AQCKAE%3D#a
oh=15737604302246&referrer=https%3A%2F%2Fwww.google.co
m&_tf=De%20pe%20%251%24s&share=https%3A%2F%2Fwww.i
ntraders.org%2Fnews%2Fromania%2F10th-internationalconference-
after-communism-east-and-west-under-scrutiny%2F

10 times
https://10times.com/after-communism-east-and-west-underscrutiny

The conference alerts
https://theconferencealerts.com/event/46428/10th-internationalconference-
after-communism-east-and-west-under-scrutiny

Scirea
https://www.scirea.org/ConferenceInfosByConferenceCountryId?c
onferenceCountryId=75

CEPOS Conference 2019

The Ninth International Conference After Communism. East and West under Scrutiny (Craiova, House of the University, 29-30 March 2019) was evaluated and accepted for indexing in 6 international databases, catalogues and NGO's databases:

Oxford Academic Journal of Church & State https://academic.oup.com/jcs/article-abstract/60/4/784/5106417?redirectedFrom=PDF

10 Times
https://10times.com/after-communism-east-and-west-under-scrutiny

Conference Alerts
https://conferencealerts.com/show-event?id=205682

Researchgate
https://www.researchgate.net/publication/327905733_CEPOS_9TH_INTERNATIONA
L_CONFERENCE_AFTER_COMMUNISM_EAST_AND_WEST_UNDER_SCRUTI
NY_2019?_iepl%5BviewId%5D=sjcOJrVCO8PTLapcfVciZQsb&_iepl%5Bcontexts%5
D%5B0%5D=publicationCreationEOT&_iepl%5BtargetEntityId%5D=PB%3A3279057
33&_iepl%5BinteractionType%5D=publicationCTA

The Free Library
https://www.thefreelibrary.com/9th+INTERNATIONAL+CONFERENCE+AFTER+C
OMMUNISM.+EAST+AND+WEST+UNDER...-a0542803701
Science Dz.net
https://www.sciencedz.net/conference/42812-9th-international-conference-after-
communism-east-and-west-under-scrutiny

CEPOS Conference 2018

The Eighth International Conference After Communism. East and West under Scrutiny (Craiova, House of the University, 23-24 March 2018) was evaluated and accepted for indexing in 15 international databases, catalogues and NGO's databases:

Conference Alerts, https://conferencealerts.com/show-event?id=186626
Sciencesdz, http://www.sciencedz.net/conference/29484-8th-international-conference-after-communism-east-and-west-under-scrutiny

ManuscriptLink, https://manuscriptlink.com/cfp/detail?cfpId=AYAXKVAR46277063&type=event

Maspolitiques,http://www.maspolitiques.com/ar/index.php/en/1154-8th-international-conference-after-communism-east-and-west-under-scrutiny

Aconf, https://www.aconf.org/conf_112399.html

Call4paper,https://call4paper.com/listByCity?type=event&city=3025&count=count
Eventegg, https://eventegg.com/cepos/

10 times, https://10times.com/after-communism-east-and-west-under-scrutiny
Biblioteca de Sociologie, http://bibliotecadesociologie.ro/cfp-cepos-after-communism-east-and-west-under-scrutiny-craiova-2018/

Science Research Association http://www.scirea.org/topiclisting?conferenceTopicId=5
ResearcherBook http://researcherbook.com/country/Romania

Conference Search Net, http://conferencesearch.net/en/29484-8th-international-conference-after-communism-east-and-west-under-scrutiny

SchoolandCollegeListings, https://www.schoolandcollegelistings.com/RO/Craiova/485957361454074/Center-of-Post-Communist-Political-Studies-CEPOS

Vepub conference, http://www.vepub.com/conferences-view/8th-International-Conference-After-Communism.-East-and-West-under-Scrutiny/bC9aUE5rcHN0ZmpkYU9nTHJzUkRmdz09/

Geopolitika Hungary, http://www.geopolitika.hu/event/8th-international-conference-after-communism-east-and-west-under-scrutiny/

CEPOS Conference 2017

The Seventh International Conference After Communism. East and West under Scrutiny (Craiova, House of the University, 24-25March 2017) was evaluated and accepted for indexing in 10 international databases, catalogues and NGO's databases:

Ethic & International Affairs (Carnegie Council), Cambridge University Press-https://www.ethicsandinternationalaffairs.org/2016/upcoming-conferences-interest-2016-2017/

ELSEVIER GLOBAL EVENTS
LIST http://www.globaleventslist.elsevier.com/events/2017/03/7th-international-conference-after-communism-east-and-west-under-scrutiny

CONFERENCE ALERTS-http://www.conferencealerts.com/show-event?id=171792

10TIMES.COM-http://10times.com/after-communism-east-and-west-under-scrutiny

Hiway Conference Discovery System-http://www.hicds.cn/meeting/detail/45826124
Geopolitika (Hungary)-http://www.geopolitika.hu/event/7th-international-conference-after-communism-east-and-west-under-scrutiny/

Academic.net-http://www.academic.net/show-24-4103-1.html

World University Directory-
http://www.worlduniversitydirectory.com/conferencedetail.php?AgentID=2001769

Science Research Association-
http://www.scirea.org/conferenceinfo?conferenceId=35290

Science Social Community-https://www.science-community.org/ru/node/174892

CEPOS Conference 2016

The Sixth International Conference After Communism. East and West under Scrutiny (Craiova, House of the University, 8-9 April 2016) was evaluated and accepted for indexing in the following international databases, catalogues and NGO's databases:

ELSEVIER GLOBAL EVENTS-
http://www.globaleventslist.elsevier.com/events/2016/04/6th-international-conference-after-communism-east-and-west-under-scrutiny/
Oxford Journals – Oxford Journal of Church & State-
http://jcs.oxfordjournals.org/content/early/2016/02/06/jcs.csv121.extract

Conference Alerts-http://www.conferencealerts.com/country-listing?country=Romania
Conferences-In - http://conferences-in.com/conference/romania/2016/economics/6th-international-conference-after-communism-east-and-west-under-scrutiny/

Socmag.net - http://www.socmag.net/?p=1562

African Journal of Political Sciences-
http://www.maspolitiques.com/mas/index.php?option=com_content&view=article&id=450:-securiteee-&catid=2:2010-12-09-22-47-00&Itemid=4#.VjUI5PnhCUk

Researchgate-
https://www.researchgate.net/publication/283151988_Call_for_Papers_6TH_International_Conference_After_Communism._East_and_West_under_Scrutiny_8-9_April_2016_Craiova_Romania

World Conference Alerts-
http://www.worldconferencealerts.com/ConferenceDetail.php?EVENT=WLD1442
Edu events-http://eduevents.eu/listings/6th-international-conference-after-communism-east-and-west-under-scrutiny/

Esocsci.org-http://www.esocsci.org.nz/events/list/

Sciencedz.net-http://www.sciencedz.net/index.php?topic=events&page=53
Science-community.org-http://www.science-community.org/ru/node/164404/?did=070216

CEPOS Conference 2015

The Fifth International Conference After Communism. East and West under Scrutiny (Craiova, House of the University, 24-25 April 2015) was evaluated and accepted for indexing in 15 international databases, catalogues and NGO's databases:

THE ATLANTIC COUNCIL OF CANADA, CANADA-
http://natocouncil.ca/events/international-conferences/

ELSEVIER GLOBAL EVENTS LIST-
http://www.globaleventslist.elsevier.com/events/2015/04/fifth-international-conf

GCONFERENCE.NET-
http://www.gconference.net/eng/conference_view.html?no=47485&catalog=1&cata=018&co_kind=&co_type=&pageno=1&conf_cata=01

CONFERENCE BIOXBIO-http://conference.bioxbio.com/location/Romania

10 TIMES-http://10times.com/Romania

CONFERENCE ALERTS-http://www.conferencealerts.com/country-listing?country=Romania

http://www.iem.ro/orizont2020/wp-content/uploads/2014/12/lista-3-conferinte-internationale.pdf
http://sdil.ac.ir/index.aspx?pid=99&articleid=62893

NATIONAL SYMPOSIUM-http://www.nationalsymposium.com/communism.php
SCIENCE DZ-http://www.sciencedz.net/conference/6443-fifth-international-conference-after-communism-east-and-west-under-scrutiny

ARCHIVE COM-http://archive-com.com/com/c/conferencealerts.com/2014-12-01 5014609 70/Rome 15th International Academic Conference The IISES/

CONFERENCE WORLD-http://conferencesworld.com/higher-education/
KNOW A CONFERENCE KNOW A CONFERENCE-http://knowaconference.com/social-work/

International Journal on New Trends in Education and Their Implications (IJONTE) Turkey http://www.ijonte.org/?pnum=15&

Journal of Research in Education and Teaching Turkey-http://www.jret.org/?pnum=13&pt=Kongre+ve+Sempozyum
CEPOS CONFERENCE 2015 is part of a "consolidated list of all international and Canadian conferences taking place pertaining to international relations, politics, trade, energy and sustainable development". For more details see http://natocouncil.ca/events/international-conferences/

CEPOS Conference 2014

The Fourth International Conference After Communism. East and West under Scrutiny, Craiova, 4-5 April 2014 was very well received by the national media and successfully indexed in more than 9 international databases, catalogues and NGO's databases such as: American Political Science Association, USA-http://www.apsanet.org/conferences.cfm

Journal of Church and State, Oxford-http://jcs.oxfordjournals.org/content/early/2014/01/23/jcs.cst141.full.pdf+html;
NATO Council of Canada (section events/ international conferences), Canada, http://atlantic-council.ca/events/international-conferences/

International Society of Political Psychology, Columbus, USA-http://www.ispp.org/uploads/attachments/April_2014.pdf

Academic Biographical Sketch, http://academicprofile.org/SeminarConference.aspx;
Conference alerts, http://www.conferencealerts.com/show-event?id=121380
Gesis Sowiport, Koln, Germany, http://sowiport.gesis.org/; Osteuropa-Netzwerk, Universität Kassel, Germany, http://its-vm508.its.uni-kassel.de/mediawiki/index.php/After_communism_:_East_and_West_under_scrutiny_:_Fourth International Conference

Ilustre Colegio Nacional de Doctores y Licenciados en Ciencias Politicas y Sociologia, futuro Consejo Nacional de Colegios Profesionales, Madrid, http://colpolsocmadrid.org/age

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For books
Olimid, A. P. (2009a). *Viaţa politică şi spirituală în România modernă. Un model românesc al relaţiilor dintre Stat şi Biserică*, Craiova: Aius Publishing.
Olimid, A. P. (2009b). *Politica românească după 1989,* Craiova: Aius Publishing.
For chapters in edited books
Goodin, R. E. (2011). The State of the Discipline, the Discipline of the State. In Goodin, R. E. (editor), *The Oxford Handbook of Political Science*, Oxford: Oxford University Press, pp. 19-39.

For journal Articles
Georgescu, C. M. (2013a). Qualitative Analysis on the Institutionalisation of the Ethics and Integrity Standard within the Romanian Public Administration. *Revista de Ştiinţe Politice. Revue des Sciences Politiques*, 37, 320-326.

Georgescu, C. M. (2013b). Patterns of Local Self-Government and Governance: A Comparative Analysis Regarding the Democratic Organization of Thirteen Central and Eastern European Administrations (I). *Revista de Ştiinţe Politice. Revue des Ştiinţe Politice*, 39, 49-58.

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