Access to Justice in Eastern Europe
ISSN 2663-0575 (Print)
ISSN 2663-0583 (Online)
http://ajee-journal.com

Research Article

INSTITUTIONAL CONFIGURATION AND THE EFFECTIVENESS OF PAROLE: COMPARATIVE EVIDENCE FROM COUNCIL OF EUROPE MEMBER STATES

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DOI:
https://doi.org/10.33327/AJEE-18-9.4-a0002005

Date of submission: 09 Apr 2026
Date of acceptance: 03 Jul 2026
Online First Publication: 31 Aug 2026
Last Publication: 03 Nov 2026

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ABSTRACT

Background: *Parole research across Council of Europe member states has long debated which model to adopt: discretionary, mandatory, or mixed. Yet, this framing misses a more consequential variable: how deeply any model is institutionally embedded. In terms of justice, insufficiently institutionalized parole risks reducing early release to a formal entitlement detached from fair decision-making, whereas robust institutional design enables it to function as a corrective mechanism against disproportionate punishment and as a practical expression of fairness in the execution of sentences.*

Method: *The study employs a multi-method comparative legal approach combining documentary analysis, index construction, and non-parametric statistical testing. Standardized data for 2010–2024 were drawn from the World Prison Brief and SPACE I (Annual Prison Statistics of the Council of Europe — Statistiques Pénales Annuelles du Conseil de l'Europe) reports. We selected eight jurisdictions to maximise*

institutional variance: Kazakhstan, France, England and Wales, Sweden, Germany, the Netherlands, Poland, and Georgia. The IIP was constructed as a five-criterion composite instrument: standardized risk assessment tools, formalized decision-making body, court–probation coordination, mandatory post-release supervision, and institutionalized reintegration programmes, each scored 0–2 (composite range 0–10). Cohen's kappa (a statistical measure of agreement among independent appraisers) was used to assess inter-rater reliability. The Spearman rank correlation was used to test the association between IIP scores and average prison population rates. Formal model type (discretionary, mandatory, or mixed) served as an independent variable for comparative benchmarking.

Results and Conclusions: *A comparative analysis of eight Council of Europe jurisdictions for the period 2010–2024 shows that IIP indicators exhibit an inverse association ($r_s = -0.76$, $n = 8$), exceeding the critical threshold at $\alpha = 0.05$; given the small sample size, this result is considered preliminary. A robustness check on a core subgroup of four jurisdictions (France, England and Wales, Sweden, and Kazakhstan) yielded a weaker inverse association ($r_s = -0.63$).*

These preliminary findings are consistent with an institutional model of parole effectiveness in which outcomes may be more closely associated with the organization of procedures than with the legal framework for release. For Council of Europe member states and the ongoing discussion within the CEPEJ (European Commission for the Efficiency of Justice – Commission européenne pour l'efficacité de la justice), these findings suggest that the question of reform may concern not only which model to adopt, but also the depth of its procedural implementation.

1 INTRODUCTION

Comparative research on parole in Council of Europe member states has produced a rich body of knowledge on normative model typologies such as the distinction between discretionary, mandatory, and mixed systems (the discretionary model refers to a system in which the parole decision is made by a specialized body, a court or a commission, based on an individual assessment of the convict; the mandatory model provides for release by operation of law upon reaching a specified threshold of time served, without conducting a substantive assessment; the mixed model combines automatic release for certain categories of convicts with discretionary review of the remaining cases), yet a fundamental measurement gap persists: no validated, cross-nationally applicable instrument exists for capturing the degree to which parole governance is institutionally embedded at the procedural level. This absence matters because the same formal model can operate through radically different institutional architectures depending on whether standardised risk assessment tools are in place, whether courts and probation services exchange information through formalized procedures, and whether post-release supervision is integrated into a coherent social reintegration framework.

Without a measure of these procedural dimensions, comparative analysis of parole effectiveness remains incomplete.

This study contributes to the comparative literature on parole in three interrelated ways. Conceptually, it shifts the analytical focus from formal parole typologies to the degree of procedural institutionalization. Methodologically, it introduces the Index of Institutionalization of Parole (IIP), the first cross-national composite measure of procedural institutionalization in parole governance. Empirically, it provides the first systematic examination of the association between IIP scores and long-term prison population trends.

To address this measurement gap, the study develops the Institutionalization Index of Parole (IIP), designed to capture the degree of procedural embeddedness across jurisdictions. The IIP is a five-criterion composite instrument that operationalises the degree of procedural embeddedness of parole governance across eight jurisdictions: Kazakhstan, France, England and Wales, Sweden, Germany, the Netherlands, Poland, and Georgia, over the period 2010–2024. Each criterion (standardized risk assessment instruments; formalized decision-making body; court–probation coordination; mandatory post-release supervision; institutionalized reintegration programmes) is scored on a 0–2 scale, yielding a composite index from 0 to 10. The four main jurisdictions scored as follows: France—7, England and Wales—9, Sweden—9, and Kazakhstan—4; four additional jurisdictions: Germany – 9, the Netherlands – 9, Poland – 5, and Georgia – 3 (complete data for all eight jurisdictions are presented in Table 1).

In contemporary European criminological and penitentiary literature, research on parole has developed along three relatively independent lines. The first concentrates on the normative typology of models and addresses the legal framework of release, eligibility thresholds, and the allocation of authority between courts and specialized agencies.[1] The second strand is shaped by risk-based governance research and emphasizes risk assessment procedures, decision standardization, and the institutionalization of discretion.[2] The third strand draws on evidence-based probation and desistance research, shifting attention from formal release criteria to the quality of post-release support and the intensity of supervision.[3] A growing body of work additionally examines the

1 Martine Herzog-Evans, 'Conclusion: What Should the Ideal Release Process Look Like?' in Martine Herzog-Evans (ed), *Offender Release and Supervision: The Role of Courts and the Use of Discretion* (Wolf Legal Publishers 2015) 465; Nicola Padfield, Dirk van Zyl Smit and Frieder Dünkel, *Release from Prison: European Policy and Practice* (Routledge 2012).

2 Hazel Kemshall, 'Risk, Desistance and Engagement: Working with Adult Service Users in Probation' in Brian Taylor, Brian Whittaker and Clive McColgan (eds), *The SAGE Handbook of Decision Making, Assessment and Risk in Social Work* (SAGE 2022) 269, doi:10.4135/9781529614657.n36; Gwen Robinson, 'Exploring Risk Management in Probation Practice: Contemporary Developments in England and Wales' (2002) 4(1) Punishment & Society 5, doi:10.1177/14624740222228446.

3 José Cid, 'Is Imprisonment Criminogenic? A Comparative Study of Recidivism Rates between Prison and Suspended Prison Sanctions' (2009) 6(6) European Journal of Criminology 459, doi:10.1177/1477370809341128; Fergus McNeill, *Pervasive Punishment: Making Sense of Mass*

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institutional control mechanisms that govern compliance with release conditions.[4] What these three strands share, however, is the absence of a composite measure capable of situating individual jurisdictions along a single institutional continuum. The IIP is designed to provide precisely that.

The inclusion of Kazakhstan in this comparative study is theoretically motivated rather than incidental. As a Council of Europe observer state applying a discretionary parole model in the absence of standardised risk assessment tools and formalised court–probation coordination, Kazakhstan represents an institutionally contrasting case whose low IIP score provides the analytical leverage needed to detect any association between institutional configuration and penitentiary dynamics. In the logic of comparative case design, the inclusion of a jurisdiction that scores far from the cluster of high-IIP Western European states is necessary to avoid a truncated-range problem (a statistical artefact arising when the sample covers only a narrow portion of the key variable's distribution, which artificially attenuates observed correlations) and to test whether the institutional hypothesis holds beyond the relatively homogeneous European core.[5] Far from being a peripheral case, Kazakhstan functions as a critical test of the generalizability of the IIP framework.

The central research question of this study is therefore: does the formal typology of a parole model, discretionary, mandatory, or mixed, possess independent explanatory power with respect to long-run penitentiary dynamics, or is its influence mediated by the degree of institutionalization of risk assessment procedures and post-release support? We hypothesise that the organization of parole institutions is more closely associated with penitentiary outcomes than formal model typology, and that the IIP captures these institutional characteristics in a form suitable for cross-national comparison. Taken together, the conceptual, methodological, and empirical contributions of this study, as set out above, aim to fill the measurement gap in the comparative parole literature and provide a replicable framework for future cross-jurisdictional research in this field. The remainder of the article presents the conceptual framework (Section 1.1), research materials and methods

Supervision (Emerald Group Publishing 2018); Michelle S Phelps, 'The Paradox of Probation: Community Supervision in the Age of Mass Incarceration' (2013) 35(1-2) Law & Policy 51, doi:10.1111/lapo.12002; Peter Raynor, 'Evidence-Based Probation and Its Critics' (2003) 50(4) Probation Journal 334, doi:10.1177/0264550503504002; Efrat Shoham and Noam Haviv, '"There is More to It than Recidivism" – Outcome Scores among Released Prisoners who Participated in Prison-Based "Employment World" Programmes' (2024) 62(1) International Annals of Criminology 79, doi:10.1017/cri.2024.9.

4 Carmen L Diaz and others, 'A Retrospective Study of the Role of Probation Revocation in Future Criminal Justice Involvement' (2024) 93 Journal of Criminal Justice 102225, doi:10.1016/j.jcrimjus.2024.102225.

5 Mark Roberts, 'How Do Community Organizations Develop Successful Strategies of Resistance? Revisiting Institutional Embeddedness and Agency' (2023) 11(5) Territory, Politics, Governance 934, doi:10.1080/21622671.2023.2205882.

(Section 2), empirical results including IIP construction and comparative prison population analysis (Section 3), discussion (Section 4), and conclusions (Section 5).

This study aims to compare the formal typology of parole models with the institutional configurations of their implementation in Council of Europe member states during the period 2010–2024. The analysis focuses on a comparative examination of the relative association between the model's normative structure and the degree of institutionalization of its implementation procedures and long-term penitentiary dynamics.

The conceptual framework of the study is based on the institutional approach to the execution of sentences developed in European penitentiary law doctrine, according to which the sentence execution system is viewed as a set of normatively established and procedurally organized mechanisms aimed at ensuring legality, proportionality, and the resocialization of convicts.[6] The institutional configuration of law enforcement is determined not only by formal norms but also by the degree to which actors are embedded in the organizational structure and their ability to adapt normative requirements to the specific conditions of practice.

This institutional framework is situated within a broader comparative penal policy literature that identifies macro-level structural determinants of prison population dynamics. Foundational work in this tradition has shown that incarceration rates are shaped not only by release mechanisms but by the full architecture of penal governance, including sentencing policy, prosecutorial practice, crime rates, and socioeconomic context. Garland's analysis of the culture of control situates contemporary risk-based penal governance within a long-run transformation of late-modern societies;[7] Tonry's comparative work on sentencing demonstrates that penal severity varies systematically with political economy and institutional design;[8] Lacey's account of the prisoners' dilemma connects cross-national differences in imprisonment rates to coordinated versus liberal market economies;[9] Lappi-Seppälä's research on Nordic penal exceptionalism shows that low imprisonment rates reflect an integrated package of institutional, political, and welfare state factors rather than any single policy instrument;[10] and Cavadino and Dignan's comparative framework links penalty to varieties of capitalism.[11] Taken together, this body of scholarship makes clear that parole institutionalization as captured by the IIP is one

6 Dirk van Zyl Smit and Sonja Snacken, *Principles of European Prison Law and Policy* (OUP 2009).

7 David Garland, *Punishment and Modern Society: A Study in Social Theory* (University of Chicago Press 1990); David Garland, *The Culture of Control: Crime and Social Order in Contemporary Society* (University of Chicago Press 2001).

8 Michael Tonry, *Sentencing Matters* (OUP 1996).

9 Nicola Lacey, *The Prisoners' Dilemma: Political Economy and Punishment in Contemporary Democracies* (CUP 2008).

10 Tapio Lappi-Seppälä, 'Explaining National Differences in the Use of Imprisonment' in Sonja Snacken and Els Dumortier (eds), *Resisting Punitiveness in Europe? Welfare, Human Rights and Democracy* (Routledge 2012) ch 3.

11 Michael Cavadino and James Dignan, *Penal Systems: A Comparative Approach* (Sage 2006).

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structural factor among several, and that the association between IIP scores and prison population rates examined in this study operates within a wider causal architecture that the present pilot design cannot fully disentangle.

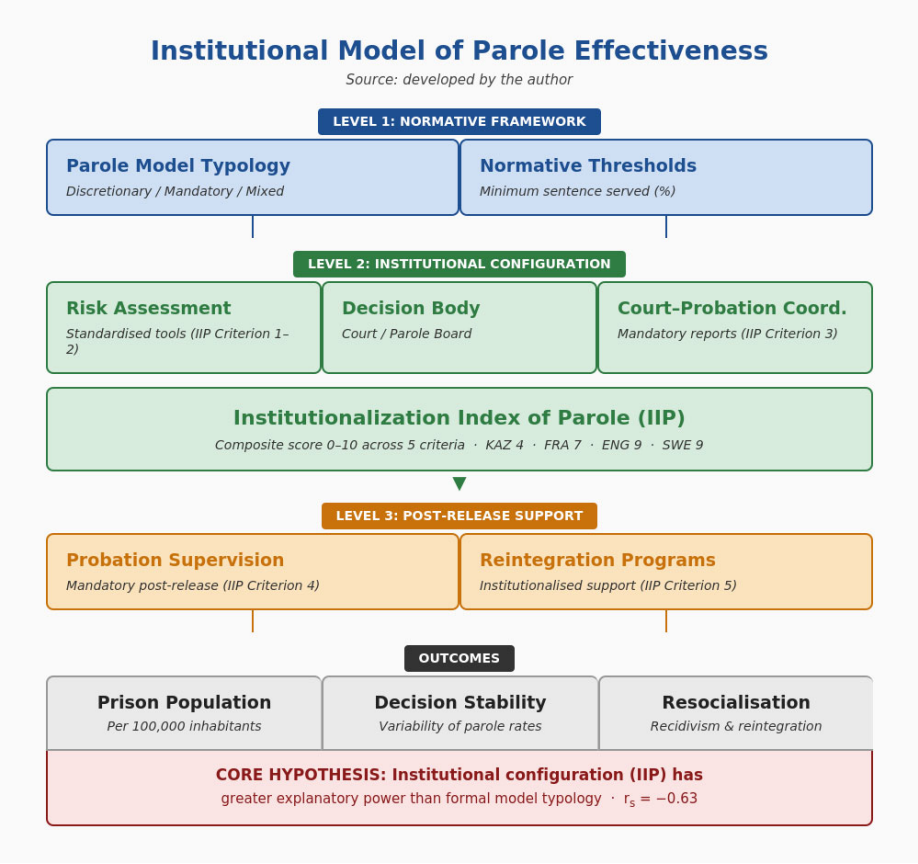


Figure 1. Institutional Model of the Effectiveness of Parole[12]

The model reflects the interrelationship between the normative, procedural, and post-penitentiary levels of parole implementation. The arrows indicate causal-structural links between the degree of institutionalization of risk assessment procedures, coordination among decision-making bodies, and the manageability of the prison population. The Institutionalization Index of Parole (IIP) is used to quantitatively operationalize the institutional block and compare jurisdictions based on the level of procedural organization of the parole mechanism. Figure 1 provides the analytical framework for the study. Within this framework, parole is conceptualized as a multi-level institutional process in which the

12 Source: developed by the author.

regulatory framework, procedural implementation, and post-release support form an interconnected system.

The degree of institutionalization of these levels serves as the key explanatory variable, the presence of standardized risk assessment tools, formalized procedures for interaction between the court and probation authorities, and robust mechanisms for supervision and social support.

The comparative analysis is conducted with this structure in mind, allowing for a comparison of the formal typology of models with the quality of their institutional implementation and an assessment of each level's contribution to the manageability of the prison population.

2 METHODOLOGY

To ensure the comparability of results, the comparative analysis was conducted using standardized statistical sources the World Prison Brief, and the annual reports of the Council of Europe's SPACE I covering the period from 2010 to 2024. The choice of time interval is dictated by the need to track the dynamics of the prison population amid the transformation of criminal policy and to ensure a sufficient duration of observation to identify stable trends.

The selection of jurisdictions is driven by the need to compare institutionally mature systems representing different configurations of the parole model (discretionary, predominantly mandatory, and mixed) while ensuring maximum institutional variance to avoid the truncated-range problem. The study sample comprises eight jurisdictions: Kazakhstan, France, England and Wales, Sweden, Germany, the Netherlands, Poland, and Georgia. The first four constitute the primary analytical group, selected to represent institutionally mature systems with well-documented parole data; the latter four extend the institutional range and are used to test the robustness of the observed association. These were selected to represent (a) a high-IIP Central European civil-law system (Germany), (b) a high-IIP mixed system with strong administrative parole structures (the Netherlands), (c) a transitional post-Soviet system within the EU context (Poland), and (d) a low-to-mid-IIP Caucasian system undergoing institutional reform (Georgia). Together, the eight jurisdictions cover a broad spectrum of institutional configurations and geographic contexts, increasing the analytical leverage of the IIP framework. IIP scores for all eight jurisdictions are reported in Table 1; criterion-level breakdowns are provided in Tables 2 and 3. The full eight-jurisdiction Spearman correlation ($r_s = -0.76$, $n = 8$) exceeds the critical threshold for a two-tailed test at $\alpha = 0.05$ ($|r_s| \geq 0.738$ at $n = 8$), though the sample remains too small for robust inference. The result is therefore treated as an exploratory pilot finding.

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The selection of eight jurisdictions follows the logic of maximum variation sampling as developed in comparative case research.[13] Rather than a random or representative sample, the eight jurisdictions were chosen to maximize the range of the key explanatory variable (IIP scores spanning 3 to 9) and the diversity of formal model types, while maintaining sufficient comparability on background conditions (Council of Europe membership or observer status; availability of standardised SPACE I prison statistics; documented probation structures). At n = 8, this design provides the maximum analytical leverage attainable within the constraints of data availability and resource scope at the pilot stage. The design-based diversity of the sample partially substitutes for statistical control: the inclusion of both Nordic welfare states (Sweden, IIP = 9) and post-Soviet transitional systems (Kazakhstan, IIP = 4; Georgia, IIP = 3), alongside established civil-law (France, Germany) and common-law (England and Wales) systems, means that the IIP range cannot be attributed to any single regional or political-economic cluster. Nevertheless, the authors acknowledge that design-based control is not equivalent to statistical control of named confounders. That expansion to a larger sample using multivariate methods remains the essential next step for confirmatory research. A target of n = 20–25 jurisdictions, using CEPEJ country profiles as the primary comparative source, would permit regression-based isolation of the IIP effect from sentencing policy, crime rates, and socioeconomic variables.

To enhance comparability, standardized indicators per 100,000 population were used, along with average values for the 2010–2024 period, which helped smooth out short-term fluctuations and minimize the impact of methodological differences between jurisdictions. The use of these methods made it possible to examine conditional early release not only as a legal construct but also as an element of criminal policy operating within specific institutional and social conditions. This study is based on aggregated statistical data and regulatory sources, which limits the ability to conduct a detailed analysis of individual parole cases. Furthermore, the public availability of comparable recidivism rates specifically among individuals released under parole remains limited, which prevents a comprehensive quantitative assessment of the models' effectiveness based on uniform criteria. Consequently, this study focuses on the institutional and procedural parameters of parole implementation.

To test the proposed hypothesis, a comparison of three groups of indicators was conducted:

1) normative parameters of the parole model (minimum sentence served, type of model);

2) institutional characteristics of implementation (availability of standardized risk assessment tools, structure of decision-making bodies, level of development of probation services);

13 Adam Przeworski and Henry Teune, *The Logic of Comparative Social Inquiry* (Wiley-Interscience, John Wiley & Sons 1970); Jason Seawright and John Gerring, 'Case Selection Techniques in Case Study Research' (2008) 61 Political Research Quarterly 294, doi:10.1177/1065912907313077.

3) indirect indicators of effectiveness (prison population level, proportion of approved parole applications, stability of the institution's application over time).

The comparative analysis therefore serves as an exploratory assessment of whether institutional characteristics may explain variation in prison population more effectively than formal parole model typologies. Any observed associations should be interpreted as preliminary and subject to validation in larger comparative samples.

3 RESULTS

To quantitatively test the hypothesis put forward in this study, a composite Institutionalization Index of Parole (IIP) has been introduced, which allows for a comparison of jurisdictions based on the degree of procedural organization of the parole system. The index is based on five criteria reflecting the principal procedural components of parole governance.

The selection of criteria is grounded in three strands of the comparative parole literature. The first, risk-based governance research, identifies standardized risk assessment instruments as a key marker of a system's procedural maturity. The second, comparative legal scholarship on normative models, highlights the institutional structure of the decision-making body and court–probation coordination as the defining parameters of procedural architecture. The third, evidence-based probation and desistance research, demonstrates that mandatory supervision and formalized reintegration programmes are structural conditions for the sustainability of post-release outcomes. Together, the five criteria cover the full procedural cycle, from risk assessment to reintegration, and correspond to the institutional dimensions set out in Council of Europe Recommendation CM/Rec(2017)3 and CEP standards.[14]

The construct validity of the IIP is supported by the correspondence between its five criteria and the dimensions of procedural institutionalization identified in the three bodies of literature cited above. Face validity is supported by the alignment of each criterion with a specific institutional function: standardized risk assessment instruments operationalize the procedural maturity of decision-making; a formalized decision-making body captures the structural independence and specialization of the release authority; court–probation coordination reflects the degree of interagency integration; mandatory post-release supervision measures the continuity of institutional oversight; and institutionalized reintegration programmes capture the availability of structured post-release support. Each

14 Recommendation CM/Rec (2017) 3 of the Committee of Ministers 'On the European Rules on Community Sanctions and Measures' (adopted 22 March 2017) <https://rm.coe.int/168070c09b> accessed 17 March 2026; European Directorate for the Quality of Medicines and HealthCare, 'Certification of Suitability (CEP)' (*Council of Europe*, 2025) <https://www.edqm.eu/en/certification> accessed 17 March 2026.

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criterion thus corresponds to a theoretically grounded institutional dimension rather than to an administrative convenience.

Convergent validity at the level of index scores is partially supported by the consistency between IIP rankings and qualitative assessments available in CEPEJ country evaluation reports and CEP probation monitoring data: jurisdictions scoring 9 on the IIP (England and Wales, Sweden, Germany, and the Netherlands) are characterised in those independent sources as having mature, procedurally developed parole and probation systems, while jurisdictions scoring 3–4 (Georgia, and Kazakhstan) are described as transitional systems with limited procedural infrastructure. This convergence between IIP scores and external qualitative assessments provides preliminary indicative support for the index's construct validity, while falling short of formal external validation.

The present study does not establish criterion validity; that is, it does not demonstrate that higher IIP scores predict better-measured parole outcomes such as individual recidivism rates or supervision quality, as comparable cross-national data on these outcomes are unavailable. This constitutes the principal outstanding validity limitation of the index, and external validation against independent outcome measures is identified as the priority for future research.

1. The presence of standardized risk assessment tools (validated scales, algorithmic models, formalized methodologies).[15]
2. A formalized structure of the decision-making body (a specialized parole board or a collegial body).
3. Institutionalized coordination between the court and the probation service (mandatory reports, procedural information exchange).
4. Mandatory post-release supervision.
5. The presence of formalized social reintegration programmes within the probation support structure.

Each criterion was assessed on a scale:

0 — lack of institutionalization;

1 — partial formalization;

2 — high degree of standardization and procedural codification.

The maximum index value is 10 points.

15 Melissa Hamilton, 'Evaluating Algorithmic Risk Assessment' (2021) 24(2) New Criminal Law Review 156, doi:10.1525/nclr.2021.24.2.156.

All index criteria were weighted equally. Scoring was based on an analysis of regulatory acts, official reports from probation services, the organizational structure of decision-making bodies, and other publicly available institutional sources. The assessment was conducted using a standardized 0–2 scale to ensure comparability across jurisdictions. Details of the regulatory and organizational sources used for each country are provided in the Appendix. Source verification followed a two-step protocol: each source was first identified and retrieved by the primary coder, then independently confirmed by the second coder before scoring. Where sources were available only in a national language (e.g., Kazakhstani or Georgian legal instruments), an authorised translation or an officially published English summary was used, which is noted in the Appendix. For each jurisdiction, at least two independent primary sources were required to support any score of 2, ensuring that the highest scoring level is not dependent on a single document. The classification of jurisdictions into discretionary, mandatory, and mixed parole models follows the typology established in Padfield, van Zyl Smit and Dünkel (2012) and Herzog-Evans (2015), cross-checked against CEPEJ country profiles and national legislation. IIP criterion-level scores and the primary documentary sources justifying each score are listed in the Appendix; the scoring rationale for each jurisdiction is documented there in sufficient detail to permit independent replication. Particular caution is warranted with respect to Kazakhstan and Georgia, where IIP scores depend on institutional sources that the authors have not independently verified; the authors note that these scores are based on publicly available legislative texts and official agency publications and flag this as a limitation of the present study.[16]

Equal weighting was adopted as a conservative methodological choice at the pilot stage of index development. This decision was based on three considerations. First, in the absence of a sufficient empirical basis for weight calibration, any differential weighting would inevitably be arbitrary and unverifiable within this sample (n = 8). Second, equal weighting is consistent with the methodological practice of comparable composite

16 The classification of parole model types follows Padfield, Zyl Smit and Dünkel (n 1) and Herzog-Evans (n 1). IIP criterion scores and supporting sources for all eight jurisdictions are documented in the Appendix. For Kazakhstan, principal sources include: Criminal Procedure Code of the Republic of Kazakhstan no 231 of 4 July 2014 (amended 8 March 2026) <https://adilet.zan.kz/eng/docs/K1400000231> accessed 17 March 2026; Law of the Republic of Kazakhstan no 38-IV LRK 'On Probation' of 30 December 2016 (amended 27 June 2022) <https://adilet.zan.kz/eng/docs/Z1600000038> accessed 17 March 2026; Committee on the Legal Statistics and Special Accounts of the State Office of Public Prosecutor of Republic of Kazakhstan, 'Reports' (*Gov.Kz: The Single Platform of Government Agencies*, 2026) <https://www.gov.kz/memleket/entities/pravstat/activities/directions?lang=en> accessed 17 March 2026. For Georgia, sources include Council of Europe advisory mission reports (2019–2022) and the annual report of the National Probation Agency (2022–2023). The authors acknowledge that independent editorial verification of these jurisdiction-specific sources is advisable given their role in IIP scoring.

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indices in the criminal justice field, including CEPEJ monitoring instruments.[17] Third, this decision ensures the transparency and reproducibility of the scoring procedure. The authors acknowledge that equal weighting is a simplifying assumption: future research with a larger number of jurisdictions should test the sensitivity of results to alternative weighting schemes, including data-driven approaches such as factor analysis or regression-based weighting. As a preliminary illustration of robustness, the authors tested an alternative weighting scenario at the pilot stage: doubling the weight of the standardised risk assessment instruments criterion (given its prominence in the risk-based governance literature) while retaining equal weights for the remaining four criteria and rescaling the composite to a 0–10 range. Under this alternative scheme, the rank ordering of the eight jurisdictions is unchanged (Kazakhstan 4.4; France 7.3; England and Wales 9.1; Sweden 9.1; Germany 9.1; Netherlands 9.1; Poland 5.2; and Georgia 2.9), and the Spearman correlation with average prison population rates remains $r_s = -0.76$. This stability across weighting schemes provides preliminary evidence that the inverse association is not an artefact of the equal-weighting assumption. However, comprehensive sensitivity analysis across a broader range of scenarios is reserved for future research with an expanded sample. A further limitation concerns construct validity: the present study demonstrates that the IIP can be constructed and applied consistently across jurisdictions but does not yet establish that the index fully captures the institutional dimensions it claims to measure. External validation against independent assessments of parole procedural quality, for instance, Council of Europe compliance monitoring reports or expert survey data is a necessary step before the index can be used for confirmatory inference and is identified as a priority for future research. To be explicit: this study does not claim criterion validity for the IIP; that is, it does not demonstrate that higher IIP scores predict directly measured parole outcomes such as individual recidivism rates or supervision compliance. Comparable cross-national data on such outcomes are currently unavailable, and criterion validity, therefore, remains an open research task for subsequent studies.

To assess the reliability of IIP scoring, each of the five criteria was coded independently by two members of the research team based on the same documentary sources (regulatory acts, official probation service reports, CEPEJ country profiles, and SPACE I data). Disagreements were resolved through discussion and reference to the primary source. Inter-rater agreement was calculated using Cohen's kappa (κ). The obtained values ranged from $\kappa = 0.72$ (court–probation coordination criterion) to $\kappa = 0.91$ (mandatory post-release supervision criterion), with an overall mean of $\kappa = 0.81$, indicating substantial to near-

17 European Commission for the Efficiency of Justice (CEPEJ), *European Judicial Systems: CEPEJ Evaluation Report, 2022 Evaluation Cycle* (Council of Europe 2024) <https://www.coe.int/en/web/cepej/dynamic-database-of-european-judicial-systems> accessed 17 March 2026.

perfect agreement.[18] All scoring decisions are documented in the Appendix, which lists the primary source and the rationale for each score assigned. To enhance the transparency and reproducibility of the scoring procedure, the decision rules for each scoring level (0, 1, and 2) were operationalized in advance of coding as follows. A score of 0 was assigned where no formal institutional provision was identifiable in primary legal or regulatory sources. A score of 1 was assigned where partial formalization was evidenced, for instance, where risk assessment tools exist. However, their application is discretionary rather than mandatory, or where interagency coordination mechanisms are stipulated in policy documents but lack procedural codification. A score of 2 was assigned where full standardization was confirmed by multiple convergent sources (e.g., statutory mandate, published assessment instrument, official probation service protocol). These decision rules were applied uniformly across all eight jurisdictions, and any case in which a discrepancy could not be resolved by reference to these rules was escalated to a documented arbitration step recorded in the Appendix. Researchers wishing to replicate or extend the IIP are encouraged to use these operationalized rules as the basis for independent scoring.

The mandatory post-release supervision criterion was revised following peer review to correct a ceiling effect identified in the pilot scoring. The initial operationalization did not distinguish between selective and universal mandatory supervision, resulting in a uniform score of 1 across all eight jurisdictions. The revised scoring assigns 2 to jurisdictions where mandatory supervision is legislatively universal for all conditionally released persons, accompanied by a formalized individual supervision plan and codified recall procedures upon breach of conditions (England and Wales, Sweden, Germany, and the Netherlands); 1 to jurisdictions where supervision is legally provided but applied selectively or inconsistently (France, Kazakhstan, Poland, and Georgia); and 0 where supervision is absent or purely voluntary. Specifically: in England and Wales, licence conditions are mandatory for all released on parole, an OASys-based supervision plan is recorded for each case, and recall is automatic upon breach; in Sweden, villkorlig frigivning imposes mandatory supervision for all conditionally released persons administered by Kriminalvården; in Germany, Führungsaufsicht establishes court-ordered supervision with judicially determined conditions; in the Netherlands, voorwaardelijke invrijheidsstelling mandates supervision with a reintegration plan. This revision increases analytical differentiation without altering the direction or substantive interpretation of the Spearman correlation.

18 J Richard Landis and Gary G Koch, 'The Measurement of Observer Agreement for Categorical Data' (1977) 33(1) Biometrics 159, doi:10.2307/2529310.

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Table 1. Institutionalization Index of Parole (IIP)

Country	Institutionalization Index of Parole (IIP) (0–10)
Kazakhstan	4
France	7
England and Wales	9
Sweden	9
Germany	9
Netherlands	9
Poland	5
Georgia	3

The IIP scores differ across jurisdictions, reflecting variation in the degree of procedural organization of parole implementation mechanisms. Table 1 presents IIP scores for all eight jurisdictions included in the study; Table 2 and Table 3 provide the criterion-level scoring breakdown for the core eight-jurisdiction sample, with Table 2 covering the four primary cases and Table 3 the four supplementary jurisdictions.

To ensure the reproducibility of the calculation, a breakdown of the score for each criterion is provided below.

Table 2. Calculation Methodology for the Institutionalization Index of Parole (IIP)

Institutional Criterion	Kazakhstan	France	England & Wales	Sweden
Standardized risk assessment instruments	1	2	2	2
Formalized decision-making body	1	2	2	2
Court – probation coordination	1	1	2	2
Mandatory post-release supervision	1	1	2	2
Institutionalized reintegration programmes	0	1	1	1
Total (IIP)	4	7	9	9

The criteria were assessed on a scale of 0–2 in accordance with the methodology outlined in the section "Operationalization of the Degree of Institutionalization." The scoring is based on an analysis of regulatory acts, the organizational structure of decision-making bodies, and official materials on probation supervision. One scoring decision warrants explicit note: the criterion "Institutionalized reintegration programmes" was assigned a score of 1 (rather than 2) for Sweden, France, and England and Wales. Although all three jurisdictions possess well-developed probation services and offer reintegration support, a score of 2 requires full standardization confirmed by multiple convergent sources, specifically, a statutory mandate for individual reintegration planning combined with a codified, universally applied reintegration programme framework. In Sweden, reintegration programmes exist but are administered on a discretionary rather than universally mandated basis within Kriminalvården. In France, SPIP provides reintegration support, but programme availability varies across regions without a single standardized national framework. In England and Wales, resettlement services lack the statutory codification required for a score of 2 under the adopted decision rules. Kazakhstan received a score of 0 on this criterion, reflecting the absence of a formalized reintegration programme structure within the probation service during the study period.

***Table* 3. IIP Criterion-Level Scores for Supplementary Jurisdictions**

Institutional Criterion	Germany	Netherlands	Poland	Georgia
Standardized risk assessment instruments	2	2	1	0
Formalized decision-making body	2	2	1	1
Court – probation coordination	2	2	1	1
Mandatory post-release supervision	2	2	1	1
Institutionalized reintegration programmes	1	1	1	0
Total (IIP)	9	9	5	3

IIP scores for Germany and the Netherlands are based on CEP country profiles (2022), CEPEJ evaluations, and probation service annual reports. Poland scores are derived from SPACE I data and the CEP country profile for Poland. Georgia scores are based on the Council of Europe advisory mission reports and the Georgian National Probation Agency annual report (2022–2023). All scoring decisions follow the same 0–2 scale applied to the primary sample. Key sources include CEPEJ country reports, SPACE I datasets, and national probation service publications (see Appendix for full list).

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3.1. Empirical Data and Comparative Context

During the 2010s, there was a significant decline in the prison population (from 393 per 100,000 people in 2010 to 157 per 100,000 in 2020), after which the rate stabilized and showed moderate growth by 2024 (163 per 100,000).[19]

These trends cannot be explained solely by the characteristics of the discretionary model of parole. The reduction in the prison population during the period under review coincided with a phase of humanization of criminal legislation, the decriminalization of certain offences, the expansion of alternatives to imprisonment, as well as the implementation of amnesties and a review of sentencing policies. Thus, the change in the prison population reflects the cumulative effect of criminal policy decisions, rather than the autonomous impact of the parole model per se.

Figure 2 presents the dynamics of the prison population in 2010–2024 across selected jurisdictions (Kazakhstan, France, Sweden, and England and Wales), calculated based on data from the World Prison Brief and the Council of Europe's SPACE I. To empirically test the hypothesis, a visualization of prison population trends in comparable jurisdictions for the period 2010–2024 is presented.

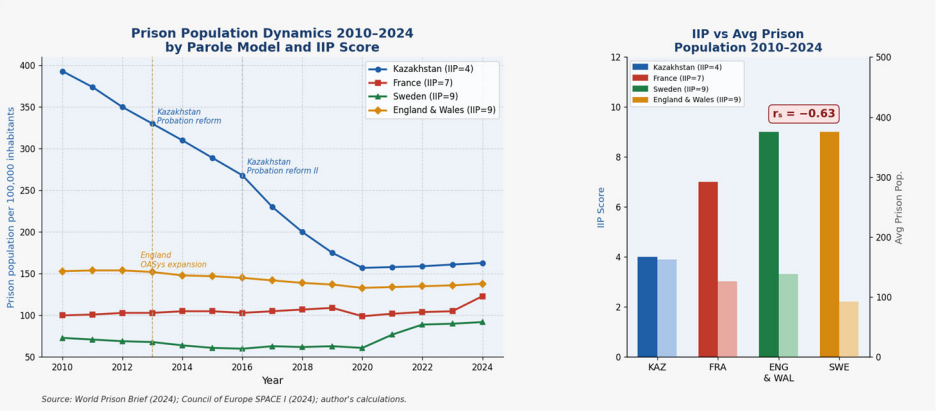


Figure 2. Prison Population Rate (2010-2024)[20]

19 Marcelo F Aebi and Edoardo Cocco, *Prisons and Prisoners in Europe 2023: Key Findings of the SPACE I Report* (Series UNILCRIM 2023/2, Council of Europe, University of Lausanne 2024); Penal Reform International and Thailand Institute of Justice, *Global Prison Trends 2023* (TIJ 2023) <https://www.penalreform.org/global-prison-trends-2023/> accessed 17 March 2026.

20 Source: *World Prison Brief (WPB): Database* (Institute for Crime & Justice Policy Research 2024) <https://www.prisonstudies.org/> accessed 17 March 2026; Council for Penological Co-operation (PC-CP), *SPACE – Council of Europe Annual Penal Statistics* (*Council of Europe*, 2024) <https://www.coe.int/en/web/prison/space> accessed 17 March 2026. Author's calculations and visualization.

Indicators are presented in a standardized format per 100,000 population. The authors aggregated the data based on comparable statistical sources to ensure cross-national comparability. The period 2010–2024 was selected as the analytical interval to identify long-term trends in the prison population.

The observed trends do not indicate a consistent association between formal parole model type and long-term prison population trajectories. Jurisdictions with different regulatory frameworks are characterized by comparable fluctuations in the indicator during the period under analysis.

According to judicial statistics for 2020–2024, courts reviewed 61,236 petitions for parole and for replacing the unserved portion of a sentence with a more lenient form of punishment. Of these, 24,774 concerned parole directly; 11,327 petitions were granted, corresponding to a grant rate of 45.7%.[21]

***Table* 4. Comparative Analysis of Parole Models**

Country	Model	Minimum eligibility threshold	Decision-making authority	Post-release supervision	Prison population rate (per 100,000)	Institutionalisation of risk assessment
Kazakhstan	Discretionary	1/2 or 2/3 of the sentence	Court	Probation supervision possible	163	Partially formalized
Sweden	Predominantly mandatory	Usually, 2/3 of the sentence	Administrative mechanism	Probation service supervision	92	High level of standardization
France	Discretionary	At least 1/2 of the sentence	Judicial authority	Conditional supervision	126	Formalized procedures
England and Wales	Mixed	Automatic at 1/2 of the sentence (general regime)	Automatic mechanism + Parole Board	Licence supervision	138	Standardized risk assessment

21 Arstan Nokeshevich Akhpanov, 'On the Status of the Specialized Public Monitoring Commission in Court Consideration of Issues of Parole and Replacement of the Unserved Part of a Sentence with a Milder One' (*Paragraph*, 23 February 2026) <https://prg.kz/document/?doc_id=36333635> accessed 17 March 2026.

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The classification of parole models (discretionary, mandatory, mixed) and the assessment of the degree of institutional organization of implementation procedures (including IIP parameters) were conducted by the authors based on an analysis of regulatory acts and official statistical sources listed in the "Research Materials and Methods" section.

Data on the proportion of granted applications are provided only for the Republic of Kazakhstan due to the public availability of judicial statistics. In European jurisdictions, grant rates are calculated using different methodologies and are not directly comparable, which limits the possibility of quantitative cross-national comparison.

3.2. Empirical Testing of the Relationship Between Institutionalization and Prison Population

To assess the association between the institutional configuration and penitentiary outcomes, a comparison was conducted between the IIP value and the average prison population for the period 2010–2024.

The Spearman rank correlation was computed between IIP scores and average prison population rates (per 100,000 inhabitants) for the period 2010–2024. For the full eight-jurisdiction sample, $r_s = -0.76$ ($n = 8$). At $n = 8$, the critical value for a two-tailed test at $\alpha = 0.05$ is $|r_s| = 0.738$;[22] the obtained coefficient exceeds the critical threshold for a two-tailed test at $\alpha = 0.05$. Although the sample remains too small for robust inference and the result is treated as an exploratory pilot finding. As a robustness check, restricting the analysis to the four-jurisdiction subset comprising Kazakhstan, France, England and Wales, and Sweden yielded ($r_s = -0.63$), after accounting for the tied IIP scores of England and Wales and Sweden. The association remains inverse in direction but is weaker in magnitude than the result obtained for the full eight-jurisdiction sample. Given the very small subgroup size, this coefficient should be interpreted only as a descriptive directional indicator and not as confirmatory evidence.

It should be noted that all results of this pilot study are exploratory in nature and do not permit causal interpretation. The small sample size ($n = 8$) precludes the possibility of statistical control of competing explanations. The identified inverse association between the IIP and the average prison population is preliminary, not an established causal relationship: the overall prison population is shaped by a multitude of factors such as demographic structure, the nature of crime, sentencing policy, and the intensity of the use of alternatives to imprisonment, none of which was controlled for in this analysis.

When comparing jurisdictions based on the formal type of model (discretionary, mandatory, mixed), no quantitatively interpretable relationship with the prison population level was identified within this sample. The difference between judicial

22 Jerrold H Zar, 'Significance Testing of the Spearman Rank Correlation Coefficient' (1972) 67(339) Journal of the American Statistical Association 578, doi:10.1080/01621459.1972.10481251.

discretion (France) and a hybrid mechanism involving a Parole Board (England and Wales) is offset by a similar degree of procedural standardization, the professionalization of the assessment of criminogenic factors, and coordination between decision-making bodies and probation services.

The structuring of discretion through specialized bodies (parole boards) and standardized risk assessment tools is viewed in contemporary literature as a means of institutionalizing discretion and reducing decision variability. It is emphasized that this shift enables the transformation of discretion from an intuitive to a procedurally organised form of professional judgment.

Across the jurisdictions examined, higher IIP scores were consistently associated with lower average prison population rates, whereas no interpretable pattern emerged for formal parole model typology. Given the exploratory design and the limited number of jurisdictions, this association should be regarded as hypothesis-generating rather than confirmatory.

4 DISCUSSION

The findings suggest that institutional characteristics deserve greater attention in comparative parole research than they have traditionally received. Rather than demonstrating the superiority of any single parole model, the analysis indicates that procedural implementation may represent an important dimension requiring further comparative investigation.

A dynamic analysis covering the period 2010–2024 did not reveal a consistent relationship between the formal typology of the conditional early release model and the long-term trajectory of the prison population. Jurisdictions with different regulatory frameworks demonstrated comparable trends in the indicator. At the same time, more stable trajectories were observed in systems where court decisions are institutionally coordinated with probation authorities through formalized procedures for information exchange and risk assessment. This allows us to consider institutional coordination as a potential structural factor in the system's manageability.

In this context, the evolution of approaches reflected in the Council of Europe's recommendations is particularly telling, as the emphasis shifts from the formal structure of release to broader institutional governance of criminal policy. This trend is characteristic not only of the sphere of parole but also of criminal justice as a whole: comparative legal studies document a widespread shift from retributive to rehabilitative and restorative approaches, based on institutionally organized assessment and support procedures.[23]

23 Razwana Begum Abdul Rahim, 'Advancing Restorative Justice in Offender Management' in Majeed Khader, Gabriel Ong and Carolyn Misir (eds), *Prepared for Evolving Threats* (World Scientific 2020) 59, doi:10.1142/9789811219740_0005; Theo Gavrielides, 'Ambitions and Critiques of Restorative Justice Post COVID-19' (2022) 11(1) Laws 6, doi:10.3390/laws11010006.

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Recommendation No. R (99) 22, adopted by the Committee of Ministers of the Council of Europe on September 30, 1999, proposes to address these phenomena through a multifaceted approach encompassing the entire criminal justice process: from examining "the possibility of decriminalizing certain types of offences or reclassifying them so that they do not entail punishment in the form of imprisonment" to developing measures that reduce the actual duration of the sentence served and, in particular, parole.[24]

Recommendation No. R (92) 16 of the Committee of Ministers of the Council of Europe distinguishes between two models of parole: discretionary and mandatory, highlighting differences in their legal structure and decision-making mechanisms.[25] At the same time, European doctrine emphasizes that these models do not form a rigid binary opposition but represent elements of a broader continuum of institutional solutions.[26]

The results obtained in this study are consistent with Herzog-Evans's position on the continuum of models, suggesting that the difference between discretionary and mandatory systems may be mitigated by a high degree of procedural standardization. On this reading, institutional design may function as a mediating factor between the normative model and the practical outcomes of its application. However, this interpretation requires confirmation on larger, multivariate samples.

In this context, parole is viewed as a variable institution whose configuration depends on a combination of normative thresholds, risk assessment procedures, and post-release supervision mechanisms.

However, the sustainability of release outcomes is determined not only by economic considerations but also by the quality of the institutional organization of post-penitentiary support.

What is analytically significant in the case of Kazakhstan is not the description of normative thresholds for time served, which are discussed in detail in Section 3, but rather that the discretionary model with a low IIP score (4/10) is not accompanied by standardized risk assessment instruments, which transforms judicial discretion from an analytically grounded tool into a source of procedural instability.[27] It is precisely this combination, a formally discretionary model without procedural institutionalization, that constitutes the analytically contrasting case that provides the necessary range of IIP values for testing the study's hypothesis.

24 Recommendation No R (99) 22 of the Committee of Ministers 'Concerning Prison Overcrowding and Prison Population Inflation' (adopted 30 September 1999) <https://rm.coe.int/168070c8ad> accessed 17 March 2026.

25 Recommendation No R (92) 16 of the Committee of Ministers 'European Rules on Community Sanctions and Measures' (adopted 19 October 1992) <https://search.coe.int/cm?i=09125948801c4d51> accessed 17 March 2026.

26 Herzog-Evans (n 1) 466.

27 Julia Dressel and Hany Farid, 'The Accuracy, Fairness, and Limits of Predicting Recidivism' (2018) 4(1) Science Advances eaao5580, doi:10.1126/sciadv.aao5580; Hamilton (n 15).

External socioeconomic and criminal-political factors, including GDP per capita, unemployment rates, and crime structure, can influence the dynamics of parole application and prison population levels independently of institutional configuration. The present study does not control for these variables, which constitutes a significant limitation. The observed associations should therefore be interpreted as hypothesis-generating rather than confirmatory, and future research should employ multivariate models that explicitly partition institutional effects from macroeconomic confounders.

What is analytically significant is that the mandatory model, by eliminating judicial discretion at the release decision stage, transfers the institutional burden to the quality of post-release supervision: it is here that procedural institutionalization, the presence of standardized supervision plans and reintegration programmes, becomes the decisive factor for outcomes, in direct correspondence with the study's hypothesis.

Within the framework of mandatory release, the establishment and maintenance of conditions applicable after the convict's release, aimed at monitoring their behaviour and ensuring compliance with assigned obligations during the post-penitentiary period, take on primary importance. Proponents of this model emphasize the difficulty of developing universal, scientifically grounded criteria for determining the point at which a convict may be deemed eligible for parole. To eliminate arbitrariness and disproportion in decisions that depend on the subjective approach of various law enforcement officials, it seems preferable to entrust the authority to make such decisions to a single authorized body.

From this perspective, the key factor is not the type of release model, but the quality of its procedural implementation.

The rates of petition approval in various jurisdictions are determined under differing procedural conditions (judicial proceedings, administrative decisions, automatic release), which makes direct comparison difficult. For this reason, the comparative analysis focuses primarily on the institutional configuration of implementation mechanisms rather than on formal approval rates.

The body of comparative research consistently suggests that the sustainability of parole outcomes is determined not by the formal model type but by the institutional capacity of probation services, human resources, assessment standards, interagency cooperation, and the consistency of post-release support.[28] This conclusion from the literature directly corresponds to the preliminary findings of this study: jurisdictions with high IIP scores, regardless of whether their formal model is discretionary or mixed, exhibit more stable prison population trajectories precisely because a high IIP score captures a well-developed system of probation coordination and reintegration programmes.

28 Ioan Durnescu and others (eds), *The Routledge Handbook on Global Community Corrections* (Routledge 2024); Phelps (n 3); Stephen Pitts and Leo Tigges, *Building Probation Capacity: What Works? Learning from the European Experience of Probation Service Development in the 21st Century* (CEP 2023).

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Recent empirical studies of recidivism in European and comparable legal systems do not reveal a consistent linear relationship between the formal model of release and recidivism rates. Meta-analytic reviews demonstrate significant variability in recidivism rates even within similar regulatory frameworks.[29] In this regard, systematic reviews of the evidence base indicate that reduced recidivism and successful resocialization are determined primarily by the availability of institutionally supported alternative approaches to the execution of sentences, rather than exclusively by the type of normative release model.[30] Studies on the effectiveness of probation supervision and desistance consistently suggest that the sustainability of release outcomes may be more closely associated with the quality of supervision, the consistency of contact, and the nature of professional interaction, than with the type of regulatory model. Relevant factors appear to include the intensity of supervision, access to rehabilitation programmes, and institutional coordination among agencies. On this basis, the institutional quality of post-release implementation may show a stronger association with outcomes compared to the formal typology of the model in the available literature. However, this conclusion requires further empirical testing across larger samples.

At the same time, it is noteworthy that in certain jurisdictions with a high level of institutionalization of procedures (in particular, in France and in England and Wales), the dynamics of the prison population do not demonstrate a proportionally pronounced decline. This suggests that the institutional organization of the parole mechanism primarily affects the predictability and stability of the system's functioning but is not the sole factor determining the absolute level of incarceration. This finding is consistent with cross-national studies showing that institutional differences in release procedures have a more significant impact on the manageability of prison populations and the variability of decisions than on the overall prison population, which is shaped by the broader socioeconomic and criminal justice context. In the European context, available evidence is consistent with the view that the prison population level correlates with crime rates and indicators of the quality of public administration; however, this relationship varies significantly between Western and Central-Eastern Europe, indicating the role of institutional and political factors that go beyond the normative framework of release.[31] These macro-level findings are consistent with the comparative penal policy literature, which has long demonstrated that prison population dynamics reflect structural factors such as political economy, welfare state design, prosecutorial culture, and sentencing legislation that lie largely beyond the reach of parole institutionalization. The IIP captures

29 Seena Fazel and Anna Wolf, 'A Systematic Review of Criminal Recidivism Rates Worldwide: Current Difficulties and Recommendations for Best Practice' (2015) 10 PLOS One e0130390, doi:10.1371/journal.pone.0130390.

30 Anamalia Su'esu'e, Dylan Pilger and Lorinda Riley, 'A Systematic Review of Evidence-Based Alternative Models of Incarceration' (2025) 14(2) Laws 11, doi:10.3390/laws14020011.

31 Beata Gruszczyńska and Marek Gruszczyński, 'Crime and Punishment — Crime Rates and Prison Population in Europe' (2023) 12(1) Laws 19, doi:10.3390/laws12010019.

one institutional dimension of this broader architecture; the present study does not claim that this dimension is dominant, only that it may carry independent associative weight within the limits of an exploratory pilot design.

The inferential bridge between the institutional design literature and the prison population outcome variable rests on a three-link theoretical chain that it is necessary to make explicit. At the first link, institutional design shapes the quality and consistency of individual parole decisions: standardized risk assessment instruments reduce subjectivity, formalized court–probation coordination ensures information exchange, and mandatory supervision structures post-release monitoring. This link is well established in the literature reviewed above (Herzog-Evans; Padfield et al.; Hannah-Moffat; McNeill).[32] At the second link, systematically more consistent and procedurally grounded individual decisions aggregate, across thousands of cases and over a multi-year period, into higher grant rates, shorter effective terms of imprisonment, and lower stock populations in custody. This aggregation mechanism requires no additional citation; it is an arithmetical property of the relationship between flow decisions and stock levels. At the third link, these aggregated decision effects are detectable in national prison population statistics, albeit in attenuated form owing to the concurrent influence of sentencing policy, prosecutorial practice, crime rates, and socioeconomic conditions documented by Garland, Tonry, Lacey, Lappi-Seppälä, and Cavadino and Dignan. The present study does not test all three links simultaneously; it provides a pilot test of whether the distal association between IIP scores and prison population rates is detectable at the national level over a fourteen-year observational window. This framing clarifies what the study can and cannot establish, and guards against the conflation of links one and three that would overstate the article's empirical claims.[33]

Emerging empirical research on reintegration processes suggests that the sustainability of post-penitentiary adaptation may depend on a combination of institutional support, social integration, and consistency of supervision, rather than exclusively on the formal type of release model. However, this remains an area requiring further systematic evidence.

A case-level examination of the principal confounders further clarifies the limits of the IIP association without invalidating it. Sweden (IIP = 9, average prison population = 92 per 100,000) presents the clearest pattern: low incarceration is consistent with both high

32 Herzog-Evans (n 1); Padfield, Zyl Smit and Dünkel (n 1); Kelly Hannah-Moffat, 'Algorithmic Risk Governance: Big Data Analytics, Race, and Information Activism in Criminal Justice Debates' (2018) 23(4) Theoretical Criminology 453, doi:10.1177/1362480618763582; McNeill (n 3).

33 For the broader comparative penal policy framework situating release mechanisms within macro-level determinants of imprisonment, see Garland (n 7); Tonry (n 8); Lacey (n 9); Lappi-Seppälä (n 10); Tapio Lappi-Seppälä, 'Penal Policy in Scandinavia' (2007) 36(1) Crime and Justice 217, doi:10.1086/592812; Cavadino and Dignan (n 11). These works collectively establish that prison population dynamics are determined by a multi-factorial institutional architecture, of which release mechanisms constitute only one component.

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procedural institutionalization and a comprehensive Scandinavian welfare state, meaning the two structural factors operate in the same direction and cannot be disentangled within this single case. England and Wales (IIP = 9, average prison population = 138 per 100,000) is the more diagnostically useful case: despite a high IIP score equal to Sweden's, it maintains a substantially higher prison population. This divergence is explained by a documented history of "tough on crime" sentencing legislation during the 1990s and 2000s that increased custody rates independently of parole institutionalization, precisely the kind of sentencing policy confounder that Tonry's comparative work identifies as a major determinant of cross-national incarceration differences. Far from undermining the IIP hypothesis, this case illustrates it: even with high procedural institutionalization, countervailing sentencing policy can sustain elevated prison populations, confirming that IIP is one factor among several rather than a dominant determinant. Kazakhstan (IIP = 4, average prison population = 163 per 100,000) is included as a theoretically motivated contrasting case rather than a comparator matched on background conditions; its post-Soviet institutional context, including lower judicial independence and limited probation infrastructure, compounds the effect of low IIP scores. These case-level observations do not substitute for multivariate control. However, they demonstrate that the authors have considered the principal confounders at the level of individual jurisdictions and that the observed pattern is not obviously artifactual.

The question of the effectiveness of release shifts from the "discretion versus mandatory" framework to the institutional architecture governing the application of risk assessment tools. Further research on algorithmic decision-making practices in probation shows that digital tools do not eliminate discretion but redistribute it within the institutional structure, thereby increasing demands for procedural transparency and professional training of specialists.[34] In the context of the legal systems of Commonwealth countries and European states, the use of risk assessment tools in making decisions on release raises the question of the balance between algorithmic predictability and individualized judicial discretion, which requires institutional regulation.[35]

Finally, studies on the transformation of probation highlight the influence of managerial rationality on release practices. In the context of the managerial turn, law enforcement officials increasingly focus on measurable indicators of effectiveness and risk manageability.[36] From this perspective, the differences between discretionary and

34 Hannah-Moffat (n 32); Pamela Ugwudike, 'Predictive Algorithms in Justice Systems and the Limits of Tech-Reformism' (2022) 11(1) International Journal for Crime, Justice and Social Democracy 85, doi:10.5204/ijcjsd.2189.

35 Michael Law-Smith, 'Algorithmic Sentencing and Human Dignity' (2026) 45(1) Criminal Justice Ethics 70, doi:10.1080/0731129X.2026.2644706.

36 McNeill (n 3).

mandatory systems lose their explanatory autonomy, giving way to an analysis of procedural organization and institutional design.

Recent comparative studies of European probation systems suggest a pattern of institutional standardization and the strengthening of risk assessment mechanisms across various jurisdictions.[37] The application of evidence-based approaches in probation and post-release supervision systems is viewed not only as a methodological tool but also as a prerequisite for the legitimacy of criminal justice decisions in modern legal systems. Earlier works emphasize that the expansion of community-based supervision transforms the very nature of punishment, shifting the focus from isolation to risk management and the conditional nature of the released individual's social status.

Comparative studies of cross-border enforcement of sentences in EU countries show that formal harmonization of regulatory mechanisms does not in itself guarantee uniformity of practice in the absence of sustained interagency coordination and procedural consistency.[38] In this regard, the effectiveness of parole should be assessed within the context of the entire post-penitentiary risk management system, rather than in isolation through the normative framework of the model.

The combination of empirical comparisons and theoretical arguments is consistent with the view that the institutional organization of risk assessment procedures and post-release support may serve as a systemic factor structuring the effectiveness of parole across various models. The IIP data indicate that it is precisely the standardization of risk assessment that addresses the principal weakness of the discretionary model (subjectivity of decisions). At the same time, a well-developed system of reintegration programmes compensates for the key weakness of the mandatory model (reduced incentives for participation in programmes). In other words, a high degree of procedural institutionalization functions as a structural corrective mechanism for both model types, capturing a dimension that formal typology alone cannot explain, and that the present pilot study identifies as warranting further investigation on larger, multivariate samples.

Returning to the central research question, whether formal model typology possesses independent explanatory power with respect to long-run penitentiary dynamics, the discussion adds three analytical clarifications to the quantitative findings of Section 3. First, court–probation coordination functions as a mediating mechanism between the normative model and practical outcomes: this explains why France and England, with different formal models, display comparable prison population trajectories despite both having high IIP

37 Fergus McNeill, Miranda Boone and Niall Carr, 'Probation and Parole in Europe' (2025) 54 Crime and Justice 415, doi:10.1086/736991.

38 Robin Hofmann and Hans Nelen, 'Cross-Border Cooperation in the Execution of Sentences between the Netherlands, Germany and Belgium: An Empirical and Comparative Legal Study on the Implementation of EU Framework Decisions 2008/909/JHA and 2008/947/JHA' (2020) 74 Crime, Law and Social Change 381, doi:10.1007/s10611-020-09900-7.

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scores. Second, the algorithmization of risk assessment does not eliminate but redistributes judicial discretion, meaning that future increases in IIP scores will require the simultaneous development of procedural safeguards. Third, the gap between Georgia (IIP = 3) and Germany (IIP = 9), with both having mandatory features in their models, demonstrates that model reform towards a mandatory or discretionary structure, without corresponding development of institutional infrastructure, cannot by itself alter system dynamics. All three propositions are preliminary and subject to verification on expanded samples using multivariate models controlling for socioeconomic context.

The identified limitations determine the directions for further empirical research on this topic. First, overcoming the environmental error effect requires a shift from aggregated national indicators to individual-level data. A promising approach would be to form panel samples of released individuals and track their trajectories for three to five years following conditional early release. This would allow for a comparison of the institutional parameters of the procedure with individual recidivism rates and test the hypothesis regarding the mediating role of the quality of probation supervision.

Second, further research could be conducted by expanding the number of jurisdictions and applying multivariate regression models that control for socioeconomic variables (unemployment rate, social spending, crime patterns). Such an approach would allow us to separate the institutional effect from the influence of macroeconomic context and to assess the robustness of the observed association.

Third, the use of quasi-experimental designs (difference-in-differences) is methodologically promising in cases of institutional reforms regarding parole. An analysis of pre- and post-reform periods within a single jurisdiction can reveal the causal effect of standardizing risk assessment and strengthening interagency coordination.

Finally, the development of digital risk assessment tools creates the possibility of integrating administrative data from probation services with judicial statistics. Provided that procedural safeguards and personal data protection are ensured, such databases could serve as the foundation for more accurate modelling of post-penitentiary trajectories and assessment of the sustainability of resocialization.

5 CONCLUSIONS

Preliminary findings from the comparative analysis indicate that the formal typology of parole models does not appear to be an independent determinant of long-run prison population dynamics. The Spearman rank correlation between IIP scores and average prison population rates for 2010–2024 was ($r_s = -0.76$) for the full eight-jurisdiction sample, while the robustness check for the core subgroup of four jurisdictions yielded a weaker coefficient of ($r_s = -0.63$).

Data for 2010–2024, drawn from eight jurisdictions across Council of Europe member and partner states, indicate a more stable association between prison population manageability and the degree of institutionalization of implementation procedures, above all the standardization of risk assessment, court–probation coordination, and the consistency of post-release support. However, the small sample size does not permit competing explanations to be excluded.

The observed association is probabilistic rather than causal. It suggests that a high level of procedural institutionalization is associated with greater decision-making predictability and lower variability in prison population dynamics.

The practical implication of this study is that improvements to parole should be directed not at altering formal eligibility thresholds but at strengthening the procedural infrastructure for its implementation. Priority areas include the standardization of risk assessment, the formalization of interagency cooperation, and the enhancement of transparency in community supervision mechanisms.

Parole should accordingly be understood not as an isolated legal construct but as an element of a broader institutional framework for managing post-release risks. The findings of this study indicate that it is precisely those elements of this framework captured by the IIP, standardisation of risk assessment, court–probation coordination, mandatory supervision, and reintegration programmes, which are associated with more stable prison population trends across the jurisdictions compared.

Several limitations must be acknowledged. The most critical constraint is the small sample size (n = 8): although the coefficient ($r_s = -0.76$, n = 8) nominally exceeds the critical value for a two-tailed test at $\alpha = 0.05$ ($|r_s| \geq 0.738$), Spearman's rank correlation requires substantially more than the minimum of seven observations for such a result to be considered statistically robust, and the finding should therefore be treated as exploratory rather than confirmatory.The findings are strictly exploratory and must not be generalised beyond the pilot context. IIP scores were derived from documentary analysis of publicly available sources; direct access to administrative microdata, individual release decisions and supervision records was unavailable, which constrains the granularity of the institutional assessment. Most significantly, from an interpretive standpoint, prison population dynamics are shaped by a wide range of external factors that were not controlled for in this analysis: GDP per capita, unemployment rates, crime structure, sentencing policy, and legislative reform. The confounding potential of these factors is considerable: high-IIP jurisdictions (Sweden, Germany, the Netherlands) are simultaneously characterised by high levels of economic development and low crime rates, whereas low-IIP jurisdictions (Kazakhstan, Georgia) operate in a markedly different socioeconomic context. It follows that part of the observed correlation between IIP scores and prison population rates may reflect differences in developmental level or crime structure rather

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than the direct influence of the institutional configuration of the parole system. Disentangling the institutional effect from macro-contextual influences requires multivariate regression models incorporating appropriate control variables, and this constitutes the primary direction for future research. The equal weighting of all five IIP criteria is a simplifying assumption; future studies should test alternative weighting schemes through sensitivity analysis. Notwithstanding these limitations, the pilot study establishes the conceptual framework and scoring protocol of the IIP, laying the methodological foundation for cross-national research with an expanded sample of Council of Europe member states and multivariate controls.

A further limitation concerns the construct and criterion validity of the IIP as a measurement instrument. The present study establishes that the index can be constructed and applied consistently across jurisdictions, as evidenced by inter-rater reliability of $\kappa = 0.81$, and that its criteria correspond to theoretically grounded institutional dimensions documented in the comparative parole literature. However, it does not yet demonstrate that the index fully captures the institutional reality it claims to measure. Three specific validity gaps remain. First, the IIP has not been externally validated against independent assessments of parole procedural quality, such as Council of Europe compliance monitoring reports, CEPEJ peer evaluation findings, or expert survey data; such validation would establish whether IIP scores converge with assessments produced by sources independent of the authors. Second, criterion validity, the ability of IIP scores to predict directly measured parole outcomes such as individual recidivism rates, supervision compliance, or reintegration success, cannot be established at present due to the absence of comparable cross-national data on these outcomes. Third, the sensitivity of IIP scores to the choice of primary sources has not been tested through systematic variation of the documentary evidence base. In practical terms, this means that had coders drawn on a different subset of available national legal instruments or agency reports, some criterion-level scores, particularly for jurisdictions with limited English-language documentation, such as Kazakhstan and Georgia, might have differed by one point on the 0–2 scale, with corresponding effects on the composite IIP. A formal sensitivity analysis, in which IIP scores are recalculated under alternative source selections and the Spearman correlation is recomputed for each variant, was not conducted in the present study; this constitutes a recognized limitation, and such analysis is identified as a priority task for the next stage of index development. Addressing these three gaps, through replication by independent research teams, external validation against CEPEJ and Council of Europe monitoring data, and expansion to a sample of $n = 20–25$ jurisdictions that would permit regression-based analysis, constitutes the methodological agenda for the next stage of IIP development.

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Competing interests: No competing interests were disclosed.

Disclaimer: The authors declare that their opinions and views expressed in this manuscript are free from the impact of any organization.

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EDITORS

Managing Editor – Mag. Yuliia Hartman.

ABOUT THIS ARTICLE

Cite this article

Shayakhmetova Zh, Bishmanov K, Kairzhanova S, Bekbauova A and Urbissinova N, 'Institutional Configuration and the Effectiveness of Parole: Comparative Evidence from Council of Europe Member States' (2026) 9(4) Access to Justice in Eastern Europe 127-61 <https://doi.org/10.33327/AJEE-18-9.4-a0002005>

DOI: https://doi.org/10.33327/AJEE-18-9.4-a0002005

Summary: 1. Introduction. – 2. Methodology. – 3. Results. – *3.1. Empirical Data and Comparative Context*. – *3.2. Empirical Testing of the Relationship Between Institutionalization and Prison Population*. – 4. Discussion. – 5. Conclusions.

Keywords: *parole; institutional configuration; Institutionalization Index of Parole; procedural institutionalization; risk assessment; probation; Council of Europe.*

DETAILS FOR PUBLICATION

Date of submission: 09 Apr 2026
Date of acceptance: 03 Jul 2026
Online First Publication: 31 Aug 2026
Last Publication: 03 Nov 2026
Was the manuscript fast-tracked? - No
Number of reviewer reports submitted in the first round: 2 reports
Number of revision rounds - 1 round with major revisions

Technical tools used in the editorial process

Plagiarism checks - Turnitin from iThenticate
https://www.turnitin.com/products/ithenticate/
Scholastica for Peer Review
https://scholasticahq.com/law-reviews

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AI DISCLOSURE STATEMENT

The authors confirm that they prepared the manuscript. AI tools were employed exclusively for spelling, grammar, and stylistic refinement. No generative AI was used to produce original content, research ideas, or analysis.

АНОТАЦІЯ УКРАЇНСЬКОЮ МОВОЮ

Дослідницька стаття

ІНСТИТУЦІЙНА КОНФІГУРАЦІЯ ТА ЕФЕКТИВНІСТЬ УМОВНО-ДОСТРОКОВОГО ЗВІЛЬНЕННЯ: ПОРІВНЯЛЬНИЙ ДОСВІД ЮРИСДИКЦІЙ ДЕРЖАВ-ЧЛЕНІВ РАДИ ЄВРОПИ

Жанна Шаяхметова, Какімжан Бішманов, Солідат Каїржанова, Ассель Бекбауова* та Нургуль Урбіссінова

АНОТАЦІЯ

Передумови. *Дослідження умовно-дострокового звільнення в державах-членах Ради Європи тривалий час зосереджувалися на дискусії щодо того, яку модель слід застосовувати — дискреційну, обов'язкову чи змішану. Проте такий підхід не враховує більш значущої змінної — ступеня інституційної сформованості відповідної моделі. З погляду справедливості недостатньо інституціоналізований механізм умовно-дострокового звільнення створює ризик того, що це право матиме суто формальний характер та буде відірване від справедливого процесу ухвалення рішень, тоді як належне інституційне забезпечення дає змогу цьому інституту функціонувати як механізму запобігання непропорційному покаранню та практичного втілення принципу справедливості під час виконання кримінальних покарань.*

Методи. *У дослідженні застосовано комплексний порівняльно-правовий підхід, що поєднує аналіз документів, формування індексу та непараметричне статистичне тестування. Стандартизовані дані за 2010–2024 роки було отримано з бази даних World Prison Brief та звітів SPACE I (Щорічна пенітенціарна статистика Ради Європи). Для забезпечення максимальної інституційної варіативності було відібрано вісім юрисдикцій: Казахстан, Францію, Англію та Уельс, Швецію, Німеччину, Нідерланди, Польщу та Грузію. Індекс інституціоналізації умовно-дострокового звільнення (IIP) було сформовано як комплексний інструмент, що охоплює п'ять критеріїв: стандартизовані інструменти оцінки ризику, формалізований орган ухвалення рішень, координацію між судом і службою пробації, обов'язковий нагляд після звільнення та інституціоналізовані програми реінтеграції. Кожен критерій оцінювався за шкалою від 0 до 2 балів, що забезпечувало загальний діапазон індексу від 0 до 10. Для оцінки міжекспертної*

узгодженості використовувався коефіцієнт каппа Коена. Для перевірки зв'язку між значеннями індексу ІІР та середніми показниками чисельності ув'язнених застосовано коефіцієнт рангової кореляції Спірмена. Формальний тип моделі умовно-дострокового звільнення (дискреційний, обов'язковий або змішаний) використовувався як незалежна змінна для порівняльного аналізу.

Результати та висновки. *Порівняльний аналіз восьми юрисдикцій держав-членів Ради Європи за період 2010–2024 років показав, що індекс інституціоналізації умовно-дострокового звільнення (ІІР) демонструє обернений зв'язок із показниками чисельності ув'язнених ($r_s = -0,76$; $n = 8$), який перевищує критичне значення за рівня значущості $\alpha = 0,05$. З огляду на невеликий обсяг вибірки цей результат слід розглядати як попередній. Перевірка стійкості результатів для основної підгрупи, що охоплює чотири юрисдикції (Франція, Англія та Уельс, Швеція і Казахстан), підтвердила той самий напрям кореляційного зв'язку ($r_s = -0,63$). Отримані попередні результати узгоджуються з інституційною моделлю ефективності умовно-дострокового звільнення, відповідно до якої ефективність може бути тісніше пов'язана з організацією процедур, ніж із законодавчою моделлю звільнення. У контексті актуальних дискусій у межах Європейської комісії з питань ефективності правосуддя (CEPEJ) ці результати свідчать про те, що для держав-членів Ради Європи реформування має охоплювати не лише вибір моделі умовно-дострокового звільнення, а й рівень її процедурної інституціоналізації.*

Ключові слова. *Умовно-дострокове звільнення; інституційна конфігурація; індекс інституціоналізації умовно-дострокового звільнення; процедурна інституціоналізація; оцінка ризику; пробація; Рада Європи.*

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