Sociological analysis through the Culture of Encounter Index: Methodological Insights

Análisis sociológico a través del Índice de la Cultura del Encuentro: perspectivas metodológicas

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ABSTRACT

This article presents the design, validation, and empirical application of the Culture of Encounter Index (CEI), a sociological tool for analysing social cohesion and democratic health. The CEI integrates primary survey data with secondary structural indicators on inequality, poverty, and unemployment, and is organised around five dimensions: socio-structural equality, recognition of diversity, intergenerational relations, civic culture, and sustainable development. Drawing on nationally representative surveys conducted in Spain in 2021 and 2023, the analysis reveals a moderate but statistically significant increase in the overall CEI score. This evolution is mainly driven by improvements in structural conditions, while sustainability-related attitudes remain stable and civic engagement shows modest growth. In contrast, intergenerational relations deteriorate, highlighting persistent challenges in generational equity, particularly affecting

younger cohorts. The sociodemographic analysis shows systematic differences in the distribution and evolution of the CEI by age, educational attainment, social class, and habitat type, including a reduction in the traditional urban–rural gap. Validation procedures, including reliability tests and sensitivity analysis, confirm the robustness and stability of the index over time. Overall, the CEI provides a theoretically grounded and empirically robust framework for capturing key dimensions of social cohesion and democratic quality. Its longitudinal and multidimensional design makes it a valuable instrument for sociological analysis and for informing public debate and policy discussions on inclusion and democratic sustainability.

KEY WORDS

Social cohesion, democratic health, inequality, sustainability, civic engagement.

RESUMEN

Este artículo presenta el diseño, la validación y la aplicación empírica del Índice de Cultura del Encuentro (ICE), una herramienta sociológica para el análisis de la cohesión social y la salud democrática. El ICE integra datos primarios de encuesta con indicadores estructurales secundarios sobre desigualdad, pobreza y desempleo, y se organiza en torno a cinco dimensiones: igualdad socioestructural, reconocimiento de la diversidad, relaciones intergeneracionales, cultura cívica y desarrollo sostenible. A partir de dos encuestas representativas a nivel nacional realizadas en España en 2021 y 2023, el análisis muestra un incremento moderado, pero estadísticamente significativo del valor global del ICE. Esta evolución está impulsada principalmente por la mejora de las condiciones estructurales, mientras que las actitudes relacionadas con la sostenibilidad permanecen estables y el compromiso cívico registra un crecimiento moderado. En contraste, las relaciones intergeneracionales presentan un deterioro, poniendo de relieve desafíos persistentes en materia de equidad generacional, que afectan especialmente a las cohortes más jóvenes. El análisis sociodemográfico revela diferencias sistemáticas en la distribución y evolución del ICE según la edad, el nivel educativo, la clase social y el tipo de hábitat, incluyendo una reducción de la brecha tradicional entre ámbitos urbanos y rurales. Los procedimientos de validación —que incluyen pruebas de fiabilidad y análisis de sensibilidad— confirman la robustez y estabilidad del índice a lo largo del tiempo. En conjunto, el ICE ofrece un marco teóricamente fundamentado y empíricamente sólido para captar dimensiones clave de la cohesión social y la calidad democrática. Su diseño longitudinal y multidimensional lo convierte en un instrumento valioso tanto para el análisis sociológico como para orientar el debate público y la formulación de políticas en materia de inclusión y sostenibilidad democrática.

PALABRAS CLAVE

Cohesión social, salud democrática, desigualdad, compromiso cívico.

1. INTRODUCTION

This study proposes the Culture of Encounter Index (CEI) as a new tool for sociological applied research on societal dynamics and change, with a commitment to rigorous but value-laden public sociology (Burawoy, 2005; Nez, 2012). The public sphere is undergoing a profound structural transformation with the advent of the digital world (Kraus et al., 2021), which provides society with infinite information but also fosters fragmentation of debates, social polarization, and the spread of misinformation, thereby weakening the conditions for deliberative judgment (Alexander, 2007, 2020; Habermas, 1992, 2022; Harper, 2017). In this context, the CEI is conceived not merely as a methodological instrument, but as an analytical framework for examining how structural conditions, social relations, and value orientations interact to shape the possibilities of democratic encounter. By aggregating multidimensional data relevant to public debate, the index seeks to illuminate patterns of inclusion, exclusion, and civic engagement that are central to democratic resilience in times of social and political uncertainty.

The article advances a dual contribution. Methodologically, it presents the theoretical foundations, design principles, and validation procedures underlying the construction of the CEI, including the conceptual model, survey design, indicator selection, data normalization, and aggregation strategies. Substantively, it applies the index to the empirical analysis of contemporary Spanish society, examining how the culture of encounter is distributed across social groups and how it evolves over time in relation to structural inequalities, intergenerational dynamics, civic engagement, and sustainability. The results section therefore goes beyond scale validation and statistical testing to offer a sociological interpretation of the observed patterns and their implications for social cohesion and democratic life.

From a longitudinal perspective, we hypothesize that changes in the CEI and in the sensitivity of its components will remain moderate in the short to medium term—largely insulated from random fluctuations—while becoming more pronounced as structural societal transformations unfold. To assess this assumption, the study combines empirical survey data with data simulation, uncertainty assessment, and sensitivity analysis, allowing for a robust evaluation of both the stability and the sociological significance of the index over time.

2. THEORETICAL FRAMEWORK AND CONCEPTUAL FOUNDATIONS

From the perspective of normative sociology, justice has historically constituted the central principle for understanding and evaluating social and political reality. Since classical Greek philosophy, justice has been the core of reflection on political and social order—understood as the criterion that organizes communal life and orients the common good of the *polis*. In Plato, justice appears as the principle harmonizing the parts of society and the soul, while Aristotle conceives it as the virtue regulating social relations and ensuring fairness in distribution and recognition within the political community. This tradition has endured through successive reformulations in modern and contemporary social theory, where justice continues to function as a normative benchmark for evaluating inequality, power structures, and the legitimacy of democratic institutions (Rawls, 1971; Fraser, 2008). Normative sociology, therefore, is not limited to the description of social facts, but incorporates justice as a guiding principle for the critical analysis of socio-political dynamics.

It is from this perspective—grounded in a robust theoretical tradition, sustained empirical research, and a clear normative horizon—that we propose the concept of the *culture of encounter* as an analytical and operational extension of Fraser's justice framework (2008; 2022). Normative approaches such as Fraser's multidimensional conception of justice or Honneth's theory of recognition (1996) have been successfully operationalized in applied research fields such as energy transition (Van Uffelen, 2022) or social inclusion (Ward et al., 2024). By contrast, their application within empirical sociology has been more limited, where analytical efforts have tended to focus on related but conceptually narrower constructs such as civic culture, social cohesion, or social capital (Almond & Verba, 1963; Chan et al., 2006; Putnam, 2000). While these approaches have generated valuable insights into democratic functioning, they often remain normatively implicit and analytically fragmented, treating structural inequalities, recognition dynamics, and participatory conditions as separate analytical domains.

From a normative sociological perspective, the *culture of encounter* is defined as a multidimensional configuration of structural conditions, social relations, and value orientations that make just and inclusive social interaction possible in democratic societies. Rather than referring to isolated attitudes or individual dispositions, the concept captures the relational and contextual conditions under which equality, mutual recognition, effective participation, and intergenerational and environmental responsibility can be realized in everyday social life. In this sense, the culture of encounter functions as a positive normative horizon against which empirical social dynamics may be assessed, in contrast to patterns of exclusion, disposability, or relational asymmetry. The concept is therefore not merely descriptive but evaluative, allowing sociological analysis to connect observed practices and attitudes with broader principles of justice and democratic quality.

Conceptually, the culture of encounter is operationalized through an explicit justice-based framework. Building on Fraser's extended conception of justice—redistribution, recognition, representation, and environmental justice—the model translates these normative scales into analytically distinct yet interrelated pillars. These pillars do not function as independent dimensions, but as complementary lenses through which the conditions of just social interaction can be examined.

Accordingly, the five pillars of the CEI represent a structured analytical decomposition of the concept rather than a technical aggregation strategy. Each pillar captures a core domain in which encounters are socially enabled or constrained: socio-structural conditions, recognition of diversity, intergenerational relations, civic commitment, and sustainable development. Together, they constitute an integrated analytical architecture linking normative theory with empirical observation, and providing the foundation for the subsequent specification of dimensions and indicators.

Within this framework, Fraser's four justice scales structure the analytical logic of the model (Table 1). Redistribution addresses socioeconomic equality as a foundational condition of democratic life, in contrast to exclusionary dynamics associated with the "culture of disposal". Recognition responds to demands for the social and cultural acknowledgment of identities related to gender, ethnicity, religion, or migration. Representation incorporates participation and political voice as essential components of democratic quality, extending classical approaches to civic culture (Almond & Verba, 1963; 1989). Finally, environmental justice integrates sustainability and the distribution of ecological risks as a constitutive dimension of contemporary justice (Fraser, 2022).

Table 1. Culture of Encounter and Scales of Justice

Scales of Justice	Scope
Redistribution	Socioeconomic equality
Recognition	Recognition of identity—cultural, religious, etc.
Representation	Sociopolitical participation and empowerment
Environmental justice	Sustainability and distribution of ecological risks

The operationalization of the culture of encounter bridges the normative and the empirical through five pillars and thirteen analytical dimensions (Table 2), guided by two criteria. First, the selection reflects the centrality attributed to these domains in the academic literature: socioeconomic inequality (Atkinson, 2015; Piketty, 2017); recognition of gender, cultural, religious, and generational diversity (Beckford, 2014; Daly, 2020; Giorgi, 2021; Mansouri & Elias, 2025; Shaw, 2019); civic engagement and participation (Almond & Verba, 1963; 1989); and sustainable development (Walker, 2009). Second, the pillars and

dimensions correspond to areas of heightened salience, conflict, and polarization in contemporary European public discourse, as evidenced by ESS data and their prominence in populist political narratives (Müller, 2016; Norris & Inglehart, 2019; Mau et al., 2023), including meritocracy, hate speech, authoritarianism, stealth democracy, democratic elitism, and ecological denial.

Table 2. Theoretical pillars and analytical dimensions of the Culture of Encounter Index (CEI)

Extended Scales of Justice	Pillars for the culture of encounter	Social dimensions for indicators selection	Populist Politics & messages
Redistribution	1.Socio-structural conditions	D_1 Socioeconomic conditions.	Meritocracy, inequality as an argument justifying certain policies.
Recognition	2.Recognition of diversity	D_2 Gender and sexual orientation. D_3 Religion. D_4 Immigrants/ Cultural and ethnic-racial diversity.	Hate speech (homophobic, xenophobic, racist, Islamophobic, anti-trans, etc.)
	3.Intergenerational relations	D_5 Discrimination. D_6 Reciprocity.	
Representation	4.Citizen commitment/ Civic culture	D_7 Trust and democratic values. D_8 Solidarity. D_9 Relational capital. D_{10} Security. D_{11} Public policies.	Authoritarianism, stealth democracy, democratic elitism.
Environmental justice	5.Sustainable development	D_{12} Natural environment. D_{13} Urban environment.	Ecological denial.

3. COMPOSITE INDEXES AND SOCIAL SCIENCES

Composite indexes have become indispensable tools in the social sciences, offering a structured way to synthesize complex and multidimensional phenomena into a single metric. A review of articles published between 1996 and 2023 reveals a marked increase in the use of composite indexes, particularly since

2000, as advancements in data analysis and theoretical frameworks have enhanced their applicability (Terzi et al., 2021). These indexes simplify the analysis of societal complexity while maintaining the nuances necessary for robust sociological insights.

3.1. Evolution and Applications

The development of composite indexes began with seminal efforts like the Human Development Index (HDI) in the 1990s. This approach has since expanded to encompass a range of multidimensional measures, including the Better Life Index (OECD, 2013), World Love Index (Cataldi et al., 2024) and the Social Progress Index (Green et al., 2024), that combine subjective opinion data and structural indicators such as employment, housing or health. These tools have found applications across diverse fields, such as econometrics and demography, examining economic freedom and quality of life (Cabello et al., 2021; Cavalletti & Corsi, 2018), political science and sociology, measuring democracy, social cohesion, and governance quality (Cavicchia & Vichi, 2021; Bottoni, 2018), and environmental studies, assessing sustainability and ecological impacts (Gan et al., 2017; García-Sánchez et al., 2015).

3.2. Methodological Considerations

Composite indexes are underpinned by methodological rigour to select conceptual dimensions, indicators and systems for aggregation. The number of dimensions is variable; for example, the Quality-of-Life Index (González et al., 2018) integrates eight dimensions; Quaranta's (2018) Democracy Index relies on nine attributes. Other indexes, such as the Canadian Index of Wellbeing (Michalos et al., 2011) and the Prosperity Index (Legatum Institute, 2023), further illustrate the versatility of this approach. Despite their utility, composite indexes must balance simplification with the preservation of complexity. As Maggino (2017a; 2017b) notes, constructing these tools involves inherent trade-offs, particularly in indicator selection and weighting schemes. This balance ensures that indexes remain both interpretable and theoretically grounded.

3.3. Relevance to the CEI

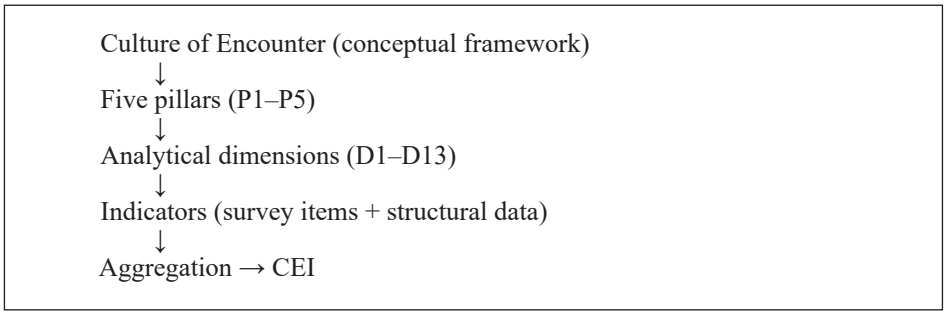
The CEI builds on these methodological foundations, proposing a multidimensional framework tailored to the analysis of deliberative democracy. Unlike traditional indexes focused on well-being or economic performance, the CEI emphasizes societal dimensions integral to democratic health, such as recognition, redistribution, and representation. By integrating subjective and objective

data, the CEI aligns with contemporary trends in the sociology of quantification, offering a robust tool for public debate and policymaking.

4. METHODOLOGY

The methodology employed in this study is designed to construct, validate, and apply the CEI as a comprehensive analytical tool for societal dynamics. This section outlines the key steps in the design and implementation of the index, focusing on indicator selection, survey design, data normalization, and the aggregation of components.

Figure 1. Conceptual and analytical structure of the Culture of Encounter Index (CEI)



Departing from the theoretical framework and literature, the CEI design proposes five axis or pillars, building on Frazer's three-dimensional framework of redistribution, recognition and representation, and extending it to include environmental justice as a fourth analytical axis. From these five pillars, 13 social dimensions were specified as basic categories for indicator selection. Necessarily, other possible social and political dimensions are left out; always, a certain degree of reduction and simplification is required for the scientific study of complexity.

4.1. Indicator Selection

The selection of indicators was guided by the theoretical framework described earlier. Each pillar of the CEI was operationalized through a set of dimensions, and relevant indicators were identified for each dimension (see Appendix A). The indicators were chosen based on their relevance in terms of alignment with the theoretical constructs, reliability as consistent measurement across time and availability, with access to comparable data from secondary sources as European Social Survey, Eurostat, Eurobarometer, among others.

The dimension of socioeconomic conditions differs from the others in terms of the source of data, including indicators such as income inequality (Gini coefficient) and unemployment rates, while the recognition of diversity was assessed through measures of attitudes toward immigrants and gender equality. The following table includes all the dimensions with their connection to the pillars. To ensure the quality and accountability of the fundamental indicators, as well as the comparability of the results, in the questionnaire, we used questions and scales from the statistical office of the European Union (Eurostat) and Eurobarometer, European Social Surveys (ESS), World Value Surveys (WVS), International Social Survey Program (ISSP), the National Center for Sociological Research (CIS) and a national granted research on security, with five original questions designed by the research team. The secondary data (Gini coefficient, percentage of people at risk of poverty or exclusion and unemployment rate) were obtained from Eurostat and the National Statistics Institute (INE). The initial variables, multiple-item scales, scale items and specific questions were designed based on previously developed surveys with some exceptions (sources specified on (see Appendix A). With a total number of 26 indicators, of which the first three are derived from secondary sources, the rest originate from questions and items included in the ad hoc questionnaire designed for the Culture of Encounter survey.

4.2. Aggregation of Components

The CEI's composite structure required careful aggregation of individual indicators into dimensions, dimensions into pillars, and pillars into the overall index. Weighted aggregation was employed, with weights determined through expert consultation –input from sociologists and statisticians to reflect theoretical priorities– and empirical validation, through examination of factor loadings from principal component analysis (PCA). The aggregation process adhered to best practices for composite index construction, ensuring theoretical coherence and statistical robustness.

4.3. Survey Design

Primary data for the CEI was collected through a biennial, nationally representative survey of the Spanish population. The surveys included questions aimed at capturing attitudes, values, behaviors, and perceptions related to the five pillars of the culture of encounter. Standard sociodemographic variables, such as age, gender, education, and income, were also included to ensure robust analysis. The surveys draw on a representative sample of the population 18 years old and more stratified proportionally by territory, age, and sex groups, with a quota for the foreign population. The first was conducted in June 2021 with a sample of 1,209 interviews, and the second wave in June 2023 with 1.223 inter-

views.[1] The margin of error for global data is +2.80 (95% confidence level and p/q=50/50). The survey design adhered to rigorous methodological standards, incorporating a stratified random sampling approach to ensure representativeness across regions and sociodemographic groups. Pretesting of survey instruments was conducted to refine question-wording and response categories.

4.4. Data normalization

All data were normalized using a min-max scaling approach to ensure comparability across indicators with different scales. This method transformed indicator values into a standardized range (0 to 1), facilitating aggregation and interpretation. Data with different units of measurement requires recoding, standardising or transforming original data inputs in order to aggregate different measures depending on the type of data (different numerical scales, categorical with discrete numerical values, economic categories, etc.)[2].

4.5. Validation and Sensitivity Analysis

The CEI was validated through descriptive statistics, PCA, and uncertainty analysis (UA). PCA confirmed the dimensionality of the pillars, while UA assessed the robustness of the index to variations in data and methodological choices. Sensitivity analysis (SA) was conducted to evaluate the relative contribution of each pillar to the overall index. Findings indicate that first, the CEI is highly sensitive to changes in sustainable development, recognition of diversity, and intergenerational relations and, second, that socioeconomic factors and civic commitment showed moderate sensitivity.

The results of the PCA (Table 3) indicate that the intercorrelation between the dimensions is not high because four factors are needed to explain 50% of the variance.

[1] Fieldwork was conducted by a market research company adhering to the ESOMAR codes, with face-to-face computer-assisted personal interviews.

[2] The code script used in SPSS for coding and aggregation is available at syntax.

Table 3. Principal component analysis: Rotated Component Matrix [to]

	Eigen values: Rotation Sum of Square Loadings Components			
	C 1 (Diversity and tolerance)	C 2 (Solidarity and environment)	C 3 (Reciprocity and public policies)	C 4 (Trust and security)
2A. Gender and sexual orientation	**0.905**	-0.085	0.062	-0.060
2B. Religion	**0.816**	0.067	-0.109	0.101
2 C. Immigrants / Cultural and ethnic-racial diversity	**0.603**	0.386	0.052	0.211
3A. Discrimination	**0.814**	-0.173	0.129	-0.017
3B. Reciprocity	0.010	0.056	**0.680**	-0.172
4A. Trust and democratic values	-0.003	0.288	-0.171	**0.685**
4B. Solidarity	0.016	**0.795**	0.026	0.054
4C. relational capital	0.078	-0.098	**0.643**	0.205
4D. Security	0.225	0.074	0.182	**0.669**
4E. Public politics	-0.007	0.166	**0.680**	-0.086
5A. Environment	-0.063	**0.776**	0.084	-0.004
5B. Urban environment	0.087	0.288	0.117	**-0.553**
% Total Variance Explained (Rotation Sums of Squared Loadings Cumulative)	21.496	35.132	47.277	58.632

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
to. Rotation converged in 5 iterations.

If the elements are intercorrelated, two or three factors would be required at most to explain most of the variance; in this case, we need nine of total number of components (12) to achieve 89% of the explained variance. The rotated solution of the PCA reduces the dimensionality to four components in which each dimension contributes only to one factor with a significant weight (equal to or greater than +0.5) without overlapping of weights in more than one component.

4.6. Longitudinal Analysis and Projections

The CEI was designed for longitudinal application, allowing for the analysis of societal dynamics over time. Mathematic modelling and data projections

were employed to simulate future variations. This approach will provide insights into potential trends and highlighted areas requiring policy intervention. The methodology ensures that the CEI is a robust, adaptable, and theoretically grounded tool for studying societal dynamics and fostering public debate.

5. RESULTS

This section presents the results of the application of the Culture of Encounter Index (CEI) to Spanish society using data from the 2021 and 2023 surveys. Beyond its statistical validation, the focus of the analysis is on the substantive meaning of the index and its components, as well as on the social dynamics they reveal over time. The CEI is therefore interpreted as an analytical lens through which to assess changes in the conditions that enable—or constrain—just, inclusive, and democratically meaningful social interaction.

The results are presented in four steps: first, the overall distribution, evolution, and interpretation of the CEI and its pillars; second, the assessment of internal consistency and dimensionality; third, the evaluation of robustness through sensitivity and uncertainty analysis; and finally, the examination of sociodemographic patterns and longitudinal trends.

5.1. Meaning, distribution and evolution of the Culture of Encounter Index

The CEI is scaled from 1 to 10 and is designed to capture the overall configuration of conditions that enable just and inclusive social interaction. Values around the midpoint of the scale therefore do not indicate neutrality or indifference but rather reflect a mixed configuration in which enabling and constraining factors coexist. Intermediate scores point to societies in which basic conditions for encounter are present yet unevenly distributed across social domains and population groups.

In this sense, the CEI should be interpreted as a relational and contextual indicator rather than as a measure of attitudinal consensus. Moderate values signal structural or normative tensions within society, revealing areas where equality, recognition, participation, or sustainability remain only partially realized. This interpretation is consistent with the conceptualization of the culture of encounter as a normative horizon rather than a binary condition.

Applying the CEI to Spanish society, the overall score increased from 5.35 in 2021 to 5.42 in 2023, indicating a modest but statistically significant improvement in the conditions for social encounter. This change reflects gradual progress rather than abrupt transformation and is unevenly distributed across the five pillars of the index. While some dimensions exhibit relative stability, others show divergent trajectories, underscoring the coexistence of enabling and constraining

factors within the culture of encounter. A substantial share of this improvement is driven by changes in socio-structural conditions, which increased by +0.78 points between 2021 and 2023 (Table 4). This evolution reflects reductions in inequality, poverty risk, and unemployment over the period. However, despite this notable improvement, socio-structural conditions remain the lowest-scoring pillar of the index, highlighting the persistence of material constraints that continue to limit the full realization of a culture of encounter.

Table 4. Socio-structural conditions: partial and total scores by year (scale 1-10)

	Year	
	2021	**2023**
Dimensions		
Inequality	3,89	4,47
Poverty	1,15	1,97
Unemployment	5,64	6,58
Total (mean score):	3,56	4,34

An analysis of the individual pillars reveals differentiated dynamics. Socio-structural conditions improved markedly over the period, reflecting reductions in inequality, poverty risk, and unemployment. Recognition of diversity shows slight positive change, suggesting incremental normalization of inclusive attitudes. By contrast, intergenerational relations display a decline, pointing to growing perceptions of generational imbalance, particularly among younger cohorts. Civic commitment exhibits a moderate increase, while sustainable development remains broadly stable, indicating limited short-term change in environmental orientations.

Taken together, these patterns suggest that the observed increase in the CEI does not reflect uniform progress across all dimensions of the culture of encounter, but rather a reconfiguration driven by structural recovery alongside persistent normative and relational challenges.

5.2. Reliability, dimensionality and internal validation

To support the substantive interpretation of the Culture of Encounter Index presented in the previous section, scale reliability tests were conducted for the seven multi-item scales used to construct the index (Table 5). The results indicate high levels of reliability, with Cronbach's alpha values ranging between 0.701 and 0.903. Even scales composed of a limited number of items—such as those with only three indicators—obtained high reliability values ($\alpha = 0.838$), while the largest scale, comprising twelve items, reached a reliability of 0.849. Based on the standardised elements, the results are consistent with the direct results, with only the immigration assessment scale decreasing (by less than 0.020).

Overall, the high reliability scores across all scales confirm their robustness and appropriateness for inclusion in the CEI, reinforcing the validity of the substantive patterns identified in the previous section.

Table 5. Scale reliability test.

	Reliability Statistics		
	Cronbach Alpha	**Cronbach Alpha standardised items**	**No. of items**
Scales, dimensions and questions			
Immigration assessment (D_3, A6.3)	0.701	0.685	4
Trust in institutions (D_5, 3A – A1.2)	0.849	0.849	12
Quality of relationships (D_9, 4B – B2.2)	0.739	0.780	5
Public investment (D_{11}, 4E – A9.1)	0.839	0.848	9
Environment (D_{12}, 5A – A10.1)	0.903	0.903	3
Urban environment (D_{13}, 5B – C12.1)	0.838	0.857	8

(*) The nomenclature in parentheses indicates the dimension and the variables in the questionnaire, as included in Table 1.

As a complementary assessment of the internal validity of the CEI dimensions, Kolmogorov-Smirnov and Shapiro-Wilk tests were conducted to evaluate the normality of data distributions for each pillar (Table 6): results indicate slight skewness in Diversity and Sustainability, while Intergenerational Relations and Civic Culture approximate normal distributions. While some deviations from normality are observed, these do not significantly impact the validity of the CEI.

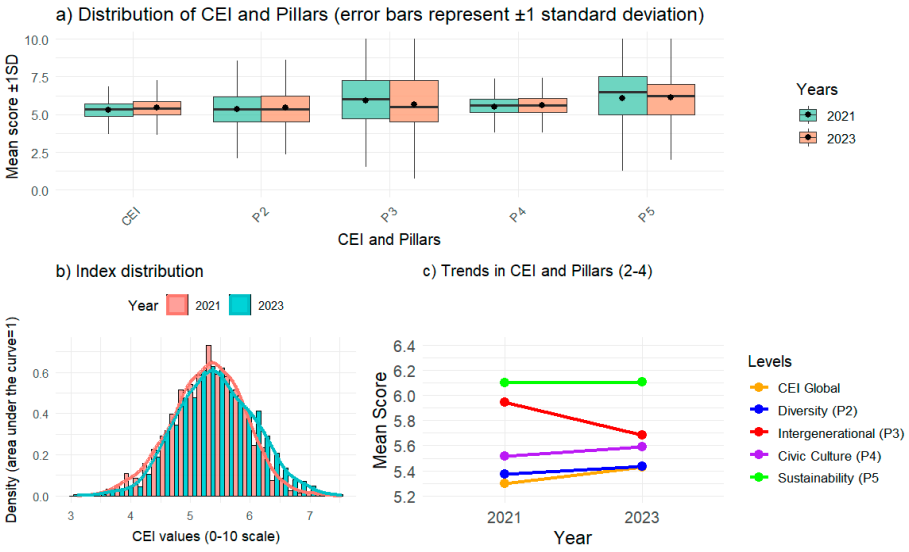
Table 6. Normality Test Results

	Kolmogorov-Smirnov	**Shapiro-Wilk**
	p-value	**p-value**
Dimension		
Diversity (P2)	0.021	0.035
Intergenerational (P3)	0.112	0.091
Civic Culture (P4)	0.089	0.072
Sustainability (P5)	0.045	0.048

The visual distribution of values for the CEI and the four pillars (Figures 1a and 1b) reveals key insights, aligning with the descriptive statistics. The CEI shows a slight negative skewness (-0.143), indicating a marginal inclination towards lower values, but this effect is minimal. Its kurtosis value (-0.031) suggests a distribution that is fairly flat, closely resembling a normal distribution.

For the individual pillars, recognition of diversity (P2) displays a mild positive skewness (0.184), showing a tendency toward higher values, while its kurtosis (0.094) indicates a moderate peak and a fairly even distribution. Intergenerational relations (P3) exhibit a slight negative skewness (-0.248), leaning slightly towards lower values, and a near-zero kurtosis (0.070), reflecting a distribution close to normal. Citizen commitment/civic culture (P4) has a pronounced negative skewness (-0.736), indicating a notable concentration towards lower values, accompanied by a kurtosis of 1.096, revealing a sharper peak and heavier tails that show a more concentrated distribution. Lastly, sustainable development (P5) shows negative skewness (-0.567), leaning towards lower values, with a kurtosis (0.467) highlighting a moderately sharp peak, suggesting less variability around the mean. The visualizations in Figures 1a and 1b corroborate these distributional patterns and support the interpretation of the CEI and its pillars as analytically meaningful and empirically stable constructs.

Figure 2. Results and trends for the CEI and pillars (2-4).



The following section compares the results with those obtained through data simulations with the uncertainty and sensitivity analysis.

5.3. Sensitivity and Uncertainty Analysis

To assess the robustness of the Culture of Encounter Index and to evaluate the extent to which the observed results depend on methodological choices, sensitivity and uncertainty analyses were conducted. The sensitivity analysis revealed the relative influence of each pillar on the overall CEI. The pillars of sustainable development, recognition of diversity, and intergenerational relations demonstrated the highest sensitivity, indicating that changes in these dimensions significantly affect the overall index. Socioeconomic conditions and civic commitment showed moderate sensitivity, suggesting a stable contribution to the CEI over time. Rather than indicating instability, this pattern highlights the substantive relevance of specific domains within the culture of encounter.

Sensitivity analysis allows to examine the impact of studying the relationship between information flowing in and out of the composite index model (Saisana & Tarantola, 2002; Saisana et al., 2005). The sensitivity index is calculated from the variance of each element in the model. For this, the fraction of the total variance of the model's output stemming from the variance of each factor V_{ij} is calculated, and the sum of the different elements is obtained. The total effect sensitivity index ($S_{Ti)}$ is calculated as:

$$S_{Ti} = \frac{V_1}{V} + \frac{V_2}{V} + \frac{V_3}{V} + \frac{V_4}{V} + \frac{V_5}{V},$$

which takes the following values:

$$S_{Ti} = \frac{0{,}924}{0{,}487} + \frac{2{,}248}{0{,}487} + \frac{2{,}235}{0{,}487} + \frac{0{,}793}{0{,}487} + \frac{3{,}051}{0{,}487} = 18{,}9958932$$

We obtain the total sensitivity effect by performing a summation for the five factors (V_1, V_2... V_5) from the 2021 survey data for variables two to four, as shown in table and by using the simulation data as input by considering the total variance for the CEI (0,487).

$$S_{Ti} = 1{,}897(V_1) + 4{,}616(V_2) + 4{,}589(V_3) + 1{,}628(V_4) + 6{,}264(V_5)$$

The resulting reference value is 18,996. A comparison of the partial sensitivity of each S_i factor with S_{ti} using this reference value shows that the sensitivity of variables one and four have little impact on the output variations. Simultaneously, V_5 has the most significant weight, followed by V_3 and V_4, which have a significant interaction effect on the final output. This distribution of sensitivities is consistent with the conceptualization of the culture of encounter as a multidimensional configuration in which normative and relational domains play a central role alongside structural conditions. Sensitivity analysis revealed that the CEI is most influenced by changes in:

- Sustainability (P5): over 30% contribution to overall variance.
- Diversity (P2) and Intergenerational Relations (P3): 24% contribution to overall variance.
- Civic Culture (P4) and Socioestructural Conditions (P1): 8,5% and 9,9% contribution to overall variance.

The uncertainty analysis assessed how variations in data and methodological choices impact the CEI, allowing us to evaluate whether the observed patterns are driven by modelling assumptions or reflect stable underlying dynamics. The CEI exhibited low overall uncertainty, with results consistently robust across multiple scenarios and data imputations. The most significant sources of uncertainty were linked to the weighting of indicators within the sustainable development and recognition of diversity pillars, suggesting these areas require careful monitoring in future iterations of the index.

To perform the analysis, we simulated the data based on the types of probabilistic distributions that best reflect the data for the five pillars (Table 7). In the pillars of intergenerational relationships (P3) and sustainable development (P5), the probability closest to the transformed data follows the normal distribution. As pillar one (structural/socioeconomic conditions) has a fixed value, we simulated data with a mean of 4.47 (the current result for Spain on the scale) and a standard deviation of 1 to obtain a normal distribution model. For recognition of diversity (P2), the simulation takes the *gamma* distribution model, reflecting the behaviour of random variables with positive asymmetry. For citizen engagement and civic culture (4), the simulation takes *Weibull* type distribution, a versatile distribution used to model applications in engineering, medical research, quality control, finance, and climatology.

Table 7. Data simulation and Type of probability distributions.

	Type of probability		**Parameters Value**
Pillars			
Socio-structural conditions (P1)	Normal	Mean	4.488
Recognition of diversity (P2)	Gamma	Std. dev	0.965
		Scale	2.203
Intergenerational relations (P3)	Normal	Mean	6.082
		Std. dev	1.532
Citizen commitment/ Civic culture (P4)	Weibull	to	6.406
		b	8.083
		c	0.000
Sustainable development (P5)	Normal	Mean	6.098
		Std. dev	1.752

We performed data simulation using SPSS and applied the Monte Carlo method to generate the simulated values of these inputs. This simulation project resulted in 100,000 cases: the results obtained in the simulation differ only slightly from the direct survey results, with almost equal mean values and similar variance margins for the five variables (Table 8). The scales with low variance ranges are considered robust (Mazziota & Pareto, 2017) and confirm that the design and methodology allow low uncertainty. Alignment between simulated and real data confirms the robustness of the index and its suitability for longitudinal application. Overall, the sensitivity and uncertainty analyses demonstrate that the substantive patterns identified in the CEI are not driven by arbitrary modelling decisions but reflect stable and interpretable social dynamics.

Table 8. Simulation and survey data (first wave year 2021)

	Simulation data (n=100000)				Survey data (n=1197)	
	Mean	**Std Deviation &Variance**	**Minimum**	**Maximum**	**Mean**	**Std. Deviation & Variance**
Pillars						
Socio-structural conditions (P1)	4.491	0.961 0.924	0.10	8.60	-	
Recognition of diversity (P2)	5.008	1.499 2.248	0.90	13.13	4.975	1.452 2.108
Intergenerational relations (P3)	6.087	1,531 2,345	-1.29	12.71	6.084	1.536 2.361
Citizen commitment/ Civic culture (P4)	6.039	0.890 0.793	1.31	8.64	6.037	0.855 0.731
Sustainable development (P5)	6.098	1.747 3.051	-1.78	13.37	6.109	1.745 3.048

5.4. Sociodemographic differentiation and longitudinal patterns

Beyond its aggregate evolution, the Culture of Encounter Index reveals marked sociodemographic differentiation, indicating that the conditions for encounter are unevenly distributed across social groups and life-course stages. This section examines how the CEI varies across key sociodemographic categories and how these patterns evolve between 2021 and 2023, highlighting differentiated trajectories rather than uniform change.

Analyzing specific trends within the other four pillars reveals notable insights into societal trends (Figures 1a, 1c and Table 9). Diversity scores remained relatively stable, with a slight improvement in 2023 (+0,6) that reflects a gradual shift toward inclusivity and emphasizing its growing importance as a cornerstone of societal cohesion. In contrast, intergenerational relations showed a significant decrease ($F=1.136$, $p=0.000$), highlighting a growing awareness of intergenerational inequity, primarily driven by younger generations' struggles with employment and housing costs. Civic culture exhibited a modest yet meaningful increase from 5.51 to 5.58 ($F=5.34$, $p=0.019$), indicating enhanced engagement with civic values and commitments. Finally, sustainability scores remained stable, showing no significant changes in public commitment to environmental issues.

The analysis focuses on differences in the overall CEI score across key sociodemographic categories, including gender, age, educational level, nationality, social class, religious identification, and political ideology (Table 9). Among these, the highest significance in the variance in both years is for educational level ($p<0.001$), social class ($p=<0.001$), followed by religious identification ($p<0.001$ in 2021 and 0,013 in 2023), and political ideology ($p=0.008$ in 2021 and <0.001 in 2023). Nationality reveals more significative en 2023 ($p=0,005$) than in 2021 and age group, on the contrary, is more significant in 2021 ($p>0,001$).

The CEI results provide a comprehensive overview of the evolution of the culture of encounter over the two survey waves. Young people scored higher than the general population in both years. However, their progress between 2021 and 2023 was less marked than that observed among other age groups. This may reflect a ceiling effect, where younger individuals already exhibit higher engagement with values aligned with the culture of encounter, leaving less room for improvement. In contrast, older groups, starting from lower initial scores, showed greater potential for growth in their CEI outcomes. Individuals with university education consistently scored higher than those with lower educational attainment. Significant differences were also observed across nationality, where foreign population scored more similar to Spanish in the second wave, medium and medium-high social class determined higher scores in both years, religious beliefs are associated with higher scores for no believers than for Catholics o other religions believers, and in political ideology, people at the left of the scale score consistently higher than those positioned at the middle or right.

In the age group analysis, younger respondents consistently scored the highest across both surveys, with CEI scores decreasing as age increased. Notably, the youngest group (under 25) exhibited the least variation between 2021 and 2023, maintaining a stable score of 5.44, while the 18-35 age group saw a modest increase of +0.10 points.

Table 9. Mean differences (2021-2023): Analysis of Variance (ANOVA) for CEI and pillars

		Descriptives								ANOVA	
						95% Confidence Interval for Mean					
		N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Min.	Max.	F	Sig.
Culture of Encounter Index	2021	1197	5,2937	0,61420	0,01776	5,2588	5,3285	3,36	7,17	25,514	0,000
	2023	1223	5,4231	0,64515	0,01845	5,3869	5,4593	3,11	7,53		
	Total	2420	5,3591	0,63322	0,01287	5,3339	5,3843	3,11	7,53		
Recognition of diversity	2021	1197	5,3546	1,24742	0,03606	5,2839	5,4254	0,96	9,79	1,136	0,287
	2023	1223	5,4088	1,25078	0,03577	5,3386	5,4789	1,86	9,68		
	Total	2420	5,3820	1,24915	0,02540	5,3322	5,4318	0,96	9,79		
Intergenerational relations	2021	1197	5,9358	1,62204	0,04689	5,8438	6,0278	0,00	10,00	13,416	0,000
	2023	1223	5,6833	1,76483	0,05046	5,5843	5,7823	0,00	10,00		
	Total	2420	5,8082	1,70007	0,03456	5,7404	5,8759	0,00	10,00		
Citizen commitment/ Civic culture	2021	1197	5,5110	0,79275	0,02292	5,4661	5,5560	1,69	7,86	5,534	0,019
	2023	1223	5,5873	0,80111	0,02291	5,5423	5,6322	1,91	8,38		
	Total	2420	5,5496	0,79773	0,01622	5,5178	5,5814	1,69	8,38		
Sustainable development	2021	1197	6,1092	1,74583	0,05047	6,0102	6,2082	0,00	10,00	0,041	0,840
	2023	1223	6,0955	1,58067	0,04520	6,0068	6,1842	0,50	10,00		
	Total	2420	6,1023	1,66406	0,03383	6,0359	6,1686	0,00	10,00		

Table 10. Analysis of Variance (ANOVA) for each sociodemographic factor: mean differences between groups in each category

	Sum of Squares		df		Mean Square		F		p	
	2121	2023	2121	2023	2121	2023	2121	2023	2121	2023
Gender	0,013	0,367	1	1	0,013	0,367	0,036	0,881	0,851	0,348
Age group	9,911	2,865	6	6	1,652	0,478	4,453	1,148	< 0,001	0,332
Educational level	31,895	18,838	4	4	7,974	4,709	22,660	11,712	< .001	< 0,001
Nationality	0,406	3,291	1	1	0,406	3,291	1,076	7,953	0,300	0,005
Social class	8,921	12,520	4	4	2,230	3,130	6,586	7,685	< .001	< 0,001
Religious identification	11,904	6,713	4	4	2,976	1,119	8,072	2,711	< .001	0,013
Political ideology	3,674	7,855	2	2	1,837	3,927	4,899	9,569	0,008	< 0,001

Estimated values for Confidence Intervals = 0,95

Categories (levels) in the variables:

Gender=Male, Female. Age group:=<25, 25-34, 35-44, 45-54, 55-64, 65-74, 75 and more. Educational level= Primary or lower, Secondary/Vocational Training (intermediate level), High Scholl / Vocational Training (Higher level), University, Others. Nationality=Spaniard, Other nationality. Social class=High, Upper-Middle, Middle, Lower-Middle, Low. Religious identification=Catholic, Believer of another religion, Agnostic, Indifferent, non-believer, Atheist. Political ideology=Left(8-10), Center (wide), Right (1-3).

Interestingly, the index increased most among individuals aged 65 and over, suggesting a post-pandemic reconfiguration of social perceptions among older cohorts. This improvement may reflect restored social interaction, greater institutional stability, and improved living conditions following the acute phase of the pandemic. By contrast, younger cohorts—despite consistently higher CEI scores—showed more limited progress over the period.

Educational level and nationality also showed significant differences in CEI outcomes. As expected, higher educational attainment was associated with higher CEI scores. The largest increase between 2021 and 2023 was observed among individuals with primary or lower education, a group predominantly composed of respondents aged over 65, whereas those with university education exhibited more limited change, maintaining consistently high scores across both waves.

Regarding nationality, differences between Spaniards and foreign residents were negligible in 2021, but in 2023 foreigners scored significantly higher than Spaniards (5.90 vs. 5.72). Although the number of foreign respondents was limited (n=200), this pattern points to a sociologically relevant shift that merits further investigation.

Social class and religious identification also structured CEI outcomes. Individuals from lower social class positions consistently scored lower than middle- and upper-class respondents. Nevertheless, improvements between 2021 and 2023 were relatively uniform across social classes, with only slightly weaker gains among upper-middle and upper groups. With respect to religious identification, Catholics and followers of other religions scored lower on the CEI than non-believers in both waves. However, these differences narrowed over time due to rising scores among religious respondents, while the scores of non-believers remained largely stable.

When analyzing employment status, students—predominantly younger respondents—consistently scored the highest on the CEI in both survey waves, while unemployed individuals and homemakers recorded the lowest values. Notably, between 2021 and 2023, the most pronounced increases were observed among retirees and unemployed respondents (+0.21 in both cases), suggesting a partial convergence driven by improved structural conditions and post-pandemic normalization processes. These shifts indicate that changes in the CEI are not uniform across labour-market positions, but rather reflect differentiated trajectories linked to both material conditions and life-course dynamics.

Political ideology reveals two analytically distinct patterns. First, individuals positioning themselves further to the left of the ideological spectrum consistently attained higher CEI scores in both years, a result that aligns with the normative orientation of the index toward values of equality, inclusiveness, and social justice. Second, the largest increases in CEI scores between 2021 and 2023 were registered among respondents identifying with centrist (+0.18) and far-right positions (+0.16). Importantly, this evolution should be interpreted with caution, as it appears to be largely associated with compositional changes within ideological categories rather than a substantive convergence in value orientations.

A more detailed examination of ideological self-placement by age, nationality, and social class supports this interpretation. Across all age groups, a modest but systematic shift from centrist positions toward the right and far-right was observed, affecting approximately 4–5% of respondents in each cohort. Among foreign-born respondents, identification with right-wing or far-right positions increased from negligible levels in 2021 to around 15% in 2023, compared to 29% among Spanish nationals. From a class perspective, the upper-middle and upper classes exhibited the most marked shift, with approximately 40% aligning with right-wing or far-right positions in 2023. These patterns suggest that the observed CEI variations by ideology are closely intertwined with broader processes of political realignment.

Household composition and habitat type further illuminate the social diffusion of the culture of encounter. Single-parent households displayed the highest CEI scores in both waves, alongside the most substantial increase in 2023 (+0.29), while single-person households also experienced a notable improvement (+0.19). In contrast, households composed of couples with children showed only marginal change (+0.08). These differences may reflect varying degrees of social exposure, institutional reliance, and sensitivity to changes in socioeconomic conditions.

Finally, habitat type reveals a persistent but narrowing urban–rural gradient. Urban residents consistently achieved higher CEI scores, plausibly linked to greater access to diversity, social interaction, and civic resources. However, the 2023 wave shows a significant reduction in these disparities, driven by pronounced increases among rural (+0.41) and semi-rural populations (+0.27). This convergence points to a broader diffusion of the culture of encounter across territorial contexts and reinforces the CEI's capacity to capture dynamic patterns of social change beyond traditional urban advantages. Beyond their substantive interest, these sociodemographic gradients also contribute to the external validity of the CEI. The systematic alignment of CEI scores with well-documented patterns observed in the literature on social cohesion, civic culture, and political attitudes—such as educational stratification, urban–rural divides, ideological positioning, and life-course effects—suggests that the index behaves consistently with established empirical findings. In this sense, the CEI does not merely aggregate heterogeneous indicators, but produces results that are externally coherent and comparable with those obtained through related composite measures and survey-based analyses of democratic values and social inclusion.

6. CONCLUSIONS

Taken together, the results presented in the previous sections demonstrate that the Culture of Encounter Index is capable of capturing both structural constraints and value-oriented dispositions shaping contemporary social cohesion. The observed patterns are not only statistically robust, but also sociologically meaningful, as they reproduce well-established cleav-

ages while remaining sensitive to short- and medium-term social change. This combination of internal consistency, empirical differentiation, and substantive interpretability provides the basis for a broader assessment of the CEI's analytical contribution, which is developed in the concluding section. The Culture of Encounter Index offers a novel approach to understanding and addressing societal dynamics in contemporary democracies by integrating subjective and objective data across multiple dimensions, fostering a comprehensive analysis that bridges theoretical frameworks with actionable insights. By integrating multidimensional data on values, behaviors, and structural conditions, the CEI provides a robust analytical framework for assessing the health of democratic societies and fostering public debate.

Anchored in the pillars of socioeconomic equality, recognition of diversity, intergenerational relations, civic commitment, and sustainability, the multidimensional design of the CEI allows for a holistic reading of social cohesion and democratic health. The modest increase in the overall score between 2021 and 2023—driven primarily by improvements in structural conditions—highlights incremental progress, while simultaneously underscoring the need for sustained and balanced advances across all dimensions to foster a more inclusive, equitable, and sustainable society.

The validation processes confirmed the reliability and robustness of the CEI. High internal consistency across dimensions, together with strong alignment between empirical results and the underlying theoretical framework, supports the internal validity of the index. Moreover, sensitivity and uncertainty analyses demonstrate the stability of the CEI under different methodological scenarios, reinforcing its suitability for longitudinal analysis and comparative research.

Substantively, the longitudinal application of the CEI reveals differentiated patterns of change. While improvements in inequality, poverty, and unemployment contributed positively to the overall index, these structural dimensions remain those with the lowest scores. At the same time, diversity indicators showed slight improvement, civic commitment increased modestly, and sustainability attitudes remained largely stable. In contrast, intergenerational relations deteriorated, reflecting persistent structural challenges faced by younger cohorts, particularly in relation to employment opportunities and housing access.

The sociodemographic analysis further illustrates the CEI's capacity to discriminate meaningfully across social groups. Younger respondents consistently scored higher, albeit with limited change over time, suggesting a ceiling effect linked to already high baseline values. Older adults, by contrast, exhibited the most pronounced improvements, likely associated with post-pandemic normalization and enhanced perceptions of social stability. Educational attainment, social class, nationality, political ideology, and religious identification all structured CEI outcomes in systematic ways, while household composition and habitat type revealed a gradual diffusion of the culture of encounter beyond traditional urban and socioeconomically advantaged contexts.

Overall, these results highlight the importance of life-course dynamics, structural position, and territorial context in shaping engage-

ment with the culture of encounter. They also point to the CEI's potential as a tool for both academic inquiry and policy-oriented analysis, particularly in the design of interventions aimed at strengthening intergenerational equity, inclusive urban and rural development, and civic participation. Future research should seek to further enhance the applicability and external validity of the CEI by refining methodological choices, ensuring consistency across waves, and expanding cross-national comparisons. Systematic comparison with existing composite measures—such as the OECD Better Life Index or the World Love Index—would allow for a more comprehensive assessment of convergence and divergence across approaches, and help identify both general and context-specific patterns. In this sense, the CEI constitutes a significant contribution to the sociology of quantification, providing a theoretically grounded and empirically robust instrument for analyzing social cohesion and informing efforts to foster more inclusive, participatory, and sustainable democracies.

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Appendix A. Operationalization of the CEI

Table A1. Measures included for the index by pillars (P), dimensions (D) and sources.

P	D	Indicators/Questions/Scales	Sources & surveys questionnaires
1	1	Inequality Gini indicator.	INE, Eurostat.
1	2	Population at risk of poverty or exclusion (AROPE).	INE, Eurostat.
1	3	Unemployment rate.	INE, Eurostat.
2	4	A7.1 Now let's ask you about the gender differences between men and women. Please indicate your degree of agreement with the following statements. In each one, please say whether you would "strongly agree, agree, disagree, or strongly disagree": (full 6 items scale)	World Vales Survey Wave (WVS7)
2	5	A5.2 And among the following types of discrimination, please indicate whether, in your opinion, they are widespread, fairly widespread, little or not at all widespread in Spain. How widespread would you say discrimination is in terms of... (3 items): “Sexual orientation”, “gender identity” and “gender”.	Eurobarometer 77.4 ZA 6595
3	6	A5.2. See above (1 item): discrimination by “religious belief”.	Eurobarometer 77.4 ZA 6595
3	7	A5.4 Many people living in Spain has different religious beliefs; Do you think these people have the right to exercise their religious practices... (Nominal/ categorical)	CIS 2752 (Q30)
4	8	A5.2. See above (1 item): discrimination by “ethnic origin”.	Eurobarometer 77.4 ZA 6595
4	9	A6.1 Does the arrival of people from other countries contribute to Spain being a worse or better place to live? Please place yourself on a scale of 0 to 10, with 0 meaning "Worst place to live" and 10 meaning "Best place to live".	European Social Survey (ESSp-2018, B43).
4	10	A6.3 To what extent do you agree with the following statements, please tell me whether you strongly agree, disagree, agree or disagree, agree or strongly agree (scale 4 items): "The immigrants are the group that receives the most social protection from the State." "Immigrants take on jobs that Spaniards do not want to do." "Immigrants take away jobs from Spaniards." "When providing a social benefit, it should be given to a Spanish person before an immigrant."	CIS, study 3190 (Q21).
5	11	A5.2. See above (2 items): discrimination by “being over 55”, “under 30”.	Eurobarometer 77.4 ZA 6595

P	D	Indicators/Questions/Scales	Sources & surveys questionnaires
6	12	A3.2 You strongly disagree, disagree, agree or strongly agree with the following statements (2 items from the scale): “The elderly receive more from society than they contribute or have contributed”: “Society offers young people fewer opportunities than they deserve for their efforts”.	Original question.
7	13	A1.1 Would you say that most people can generally be trusted, or that you are never wise enough in dealing with others? Please put yourself on a scale of 0 to 10, with 0 meaning "you can never be wise enough" and 10 meaning "most people can be trusted."	European Social Survey, CIS 3265.
7	14	A1.2 I am going to name a number of organizations. For each of them, indicate how much confidence they inspire in you, whether it would be: "a lot of confidence, a lot of confidence, little confidence, or no confidence at all".	World Values Survey-W7 (Q64-89).
7	15	A2.2 How would you place your assessment of corruption in Spain, on a 10-point scale where "0" means "there is no corruption in my country" and "10" means "there is abundant corruption in my country"?	World Values Survey-W7.
8	16	A3.1 Would you say that most of the time people try to help others or that they mainly look out for themselves? Please place yourself on a scale of 0 to 10, with 0 meaning "Most of the time people look out for themselves" and 10 meaning "Most people try to help others."	European Social Survey Round 9 (ESS), CIS study 3265.
8	17	A3.2 See above (1 item): “I would be willing to contribute more than what I receive if it is to help people who are in situations of economic hardship”.	Original question.
8	18	B1.1 In the last 12 months, have you collaborated financially with any association or social organization? scale with three items.	Original question.
8	19	B1.2 Are you currently involved as a volunteer in any association-social organization? scale with three items.	Original question.
9	20	B2.2 Do you have someone who can help you when you have problems? (e.g. to lend you money, take care of you, give you emotional support, or run errands)	Promotion of Social Studies and Applied Sociology Foundation (FOESSA): QH122.
9	21	B2.3 Is there anyone you help or have helped when they are in trouble?"	FOESSA, (QH124).
10	22	A4.2 To what extent do you feel safe walking alone in your area or neighborhood at night?	ESS9, CIS Study 3265 (C6).

P	D	Indicators/Questions/Scales	Sources & surveys questionnaires
10	23	A4.3 Do you consider Spain to be a safe country? Please place yourself on a scale of 0 to 10, with 0 meaning "Spain is a very unsafe country" and 10 meaning "Spain is a very safe country".	Insecurity Survey II, National Research + Development Plan.
11	24	A9.1 Changing the subject now, I am going to mention several chapters of public expenditure. Tell me, please, for each of them, if you think it is very important, important or unimportant for public administrations to invest in them. (Full 10 items scale)	Based on CIS, Barometer 3384 (modified wording).
12	25	A10.1 To what extent would you be in favor of... (full 3 item): "Paying higher prices to protect the environment", "Paying more taxes to protect the environment", "Accepting cuts in their standard of living to protect the environment".	ISSP 2020 - Environment IV: p11a, 11b y 11c.
13	26	C12.1. And in the place where you live, tell me if within a radius of 1km or 15-minute walk from your home you have, within reach... (full 8 item scale).	Original question.

P.: Pillars (1=Socio-structural conditions; 2=Recognition of diversity; 3=Intergenerational relations; 4=Citizen commitment/Civic culture; 5=Sustainable development).

D.: Dimensions (1=Socioeconomic conditions; 2=Gender and sexual orientation; 3= Religion; 4=Immigrants/Cultural and ethnic-racial diversity; 5= Discrimination; 6=Reciprocity; 7=Trust and democratic values; 8=Solidarity; 9= Relational capital; 10=Security; 11= Public policies; 12= Natural environment; 13=Urban environment).

The questionnaire comprises 43 questions aimed at capturing opinions, behaviours, and values across various study areas. Seventeen of these questions involve scales with items, while the remainder consist of specific nominal or quantitative questions. Additionally, there are 18 questions for sociodemographic, ideological-political, and religious classification (download questionnaire).