Index of Intergenerational Justice

Report 2025

Access to Services

Economic Fairness

Political Equality

Relational Equality

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Executive Summary

Europe is facing an unprecedented demographic transformation. Life expectancy has risen steadily, while fertility rates remain low, reshaping the balance between younger and older citizens. A smaller working-age population now sustains a growing number of retirees, placing new demands on pensions, healthcare, and long-term care. These demographic shifts are not only a fiscal or institutional challenge: they raise a more fundamental question about fairness between age groups. Do younger and older people today enjoy equal opportunities, access to resources, and political voice, or are systematic disadvantages borne disproportionately by one group?

The Index of Intergenerational Justice (IJI) provides a systematic and transparent way of addressing this question. It offers a multidimensional assessment of fairness between age groups, covering nineteen EU countries, and focusing on comparisons between today's younger adults (25–34) and older adults (55–64 for labor-market indicators, 65+ for broader measures). Unlike approaches that track birth cohorts over decades and rely on assumptions about the future, the Index takes a "snapshot" perspective. It identifies how different age groups fare today in terms of their resources, opportunities, and social standing. This makes the results more immediately relevant for policymakers who must respond to current imbalances.

The Index assesses four dimensions of justice, each corresponding to a core aspect of social life. **Economic fairness** considers poverty, unemployment, contract stability, wages, housing conditions, and financial resilience. **Access to essential services and public goods** captures healthcare, social transfers other than pensions, environmental quality, safety, and digital access. **Relational equality** looks at social connectedness, close networks, exposure to discrimination, and mental well-being. Finally, **political equality** examines voice, political interest, voting, party identification, the saliency of generational issues in party manifestos, and the age composition of national parliaments.

Indicators are harmonized across countries and coded according to a simple rule: "the more, the better." Positive values indicate that outcomes favor older adults, while negative values indicate advantages for younger adults. To ensure comparability, each indicator is normalized against an EU-19 benchmark. The four dimensions are then aggregated using three different weighting strategies: equal weighting (a transparent benchmark), empirical weighting (based on the extent to which indicators are associated with life satisfaction), and normative weighting (guided by principles of sufficiency, protection against scarring disadvantages, and equal citizenship).

Key Findings

The results show that intergenerational justice in Europe is multidimensional, uneven, and full of contrasts. No country is uniformly favorable to the young or the elderly. Most appear balanced overall only because inequalities in one area are offset by opposite inequalities in another.

In the economic domain, older adults enjoy clear advantages. They are more likely to hold stable jobs, earn higher wages, live in adequate housing, and have savings to buffer against unexpected shocks. Younger adults face persistently higher unemployment and precarious contracts. Housing overcrowding is also more common among the young, especially in Southern Europe. In countries like Italy and Greece, high youth unemployment and fragile housing conditions delay autonomy and family formation, while older adults continue to benefit from pensions and accumulated wealth. Exceptions exist: in Slovakia, Sweden, and Italy, poverty rates are higher among the young, a finding that points to the limits of pension protection in shielding younger adults from economic insecurity.

Access to essential services paints a more nuanced picture. Older adults more often report unmet healthcare needs, particularly in Italy, Greece, and Belgium, reflecting problems of access despite universal systems. Yet the elderly also report safer and cleaner environments, especially in Northern Europe. Younger adults are more likely to live in neighborhoods affected by pollution, grime, or crime. They nevertheless enjoy some advantages in health access and in receiving non-pension transfers, particularly in countries where family and labor-oriented benefits are stronger, such as Sweden and Hungary. Internet access is almost universal across age groups, and no systematic differences emerge in affordability.

Relational equality clearly favors younger adults. Across all countries, they participate more actively in leisure activities, meet friends more often, and sustain broader networks of close ties. Younger adults also report lower levels of depression in many countries, although in Germany and Ireland the elderly report better mental health outcomes. At the same time, younger cohorts are more likely to report discrimination, especially in Slovakia and Finland. This underlines that ageism is not confined to old age: it can affect younger people as well, often through stereotypes of immaturity or unreliability. Older adults, for their part, face greater risks of isolation, shrinking networks, and psychological vulnerability, underscoring the importance of community support in later life.

Political equality tilts strongly toward older adults. Seniors vote in higher numbers, show greater interest in politics, feel closer

to parties, and are disproportionately represented in parliaments. Political parties in several countries, including Ireland, Poland, and Germany, give greater programmatic attention to the concerns of older voters, while in others, such as Italy and Lithuania, more emphasis is placed on youth. Younger adults often feel optimistic about their political voice, but this confidence does not translate into consistent participation. The result is a mismatch between perception and practice: younger people believe they can influence politics, but older cohorts are the ones who dominate political outcomes.

When the four dimensions are aggregated, most countries appear balanced. However, this balance is often misleading. It conceals deep disparities that average out in the composite score. Ireland and Italy lean most clearly toward the elderly, while Croatia, Lithuania, and Slovenia lean toward the young. In most other countries, the aggregate picture hides offsetting inequalities: strongly pro-elderly outcomes in one dimension are balanced by pro-young outcomes in another. Italy illustrates this clearly: it is heavily pro-elderly in economic fairness, but pro-young in access to services and relational equality, with a more neutral position in political equality.

Policy Implications

The Index reveals a **dual imbalance**. Younger adults are disadvantaged above all in the economy and politics. They face higher unemployment, weaker job security, limited housing opportunities, financial fragility, and underrepresentation in political institutions. Older adults, by contrast, are disadvantaged in services and social life. They face unmet health needs, reduced social networks, risks of isolation, and in some countries higher levels of mental distress.

These findings highlight both trade-offs and complementarities. Pension systems that secure older adults may strain resources for younger families unless balanced by investments in education, housing, and youth employment. The strong political weight of seniors ensures their concerns are addressed but risks marginalising younger voices. At the same time, investments in younger adults generate long-term benefits for everyone by sustaining pension systems and economic growth, while improving services for older adults relieves pressure on younger families and strengthens solidarity.

Policy responses must therefore be comprehensive. Labor-market reforms

are needed to reduce dualism and expand opportunities for young workers. Investments in affordable housing, family benefits, and financial resilience are equally important to help younger adults achieve autonomy. At the political level, reforms to strengthen youth representation—through civic education, youth councils, lower voting ages, or party recruitment strategies—are essential to restore balance in democratic participation.

For older adults, improving healthcare accessibility and reducing unmet medical needs must be a priority. Community programs, social infrastructures, and mental health services can reduce loneliness and sustain dignity in later life. Welfare design must be recalibrated so that pensions do not crowd out other forms of social support, while ensuring that transfers also meet the needs of families and younger households.

Finally, intergenerational justice should be approached holistically. Policymakers must recognise that fairness across generations is not a zero-sum game. A society that invests in youth employment, education, and housing while also safeguarding elderly care and inclusion is a society that strengthens trust, cohesion, and the long-term sustainability of its welfare state and democracy.

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1. Introduction

Across Europe, societies are experiencing unprecedented demographic change. Rising life expectancy is one of the greatest achievements of the past century, but it also transforms the social contract between generations. At the same time, declining birth rates mean that the younger cohorts entering the labor market are fewer than those leaving it. This changing balance has profound consequences for how welfare systems, labor markets, and democratic institutions function.

As the share of older adults increases, demands on health care, pensions, and long-term care grow. Meanwhile, the active working-age population—responsible for sustaining much of this system through taxes and contributions—is becoming smaller. This can generate tensions, as younger people may feel they carry disproportionate burdens, while older people worry about the security of their entitlements. Yet the issue goes beyond public finances: it touches on the fundamental fairness of opportunities, resources, and voice across generations.

In practice, younger and older citizens often experience very different realities. Younger adults face higher risks of precarious jobs, limited access to housing, financial insecurity, and barriers to starting an independent life. Older adults may benefit from relatively stable pensions and established welfare entitlements, but can also face loneliness, age discrimination, and health challenges. These differences are not only economic and social but also political: younger generations often report lower levels of political efficacy, turnout, and party attachment, while older citizens are typically overrepresented in electoral participation and legislative bodies. If these differences reflect legitimate age-specific needs, they can be justified. But if they represent systematic and unjust disadvantages, they undermine social justice and fuel perceptions of age-based inequality.

Intergenerational justice is about ensuring that individuals at different stages of life are treated with equal consideration and respect. Unlike other characteristics, such as gender or ethnicity, age is not fixed: every person moves through different age groups across the life course. This means that fairness between ages is not a concern for one group alone but a universal issue, since the advantages or disadvantages attached to any stage of life will eventually affect all individuals.

Some differentiation is justified. Children need special protection, and older adults require pensions and care services. These measures respond to well-documented vulnerabilities and are widely accepted as legitimate. The challenge lies in identifying and addressing unjust inequalities:

situations where one age group is persistently disadvantaged in ways that cannot be explained by need, but rather reflect structural barriers or discriminatory practices—what is often referred to as **ageism**.

An index of intergenerational justice helps to distinguish between these two situations. It allows us to measure whether differences between younger and older adults reflect **appropriate protection** or **unjust exclusion,** and it makes these assessments comparable across countries with different institutional backgrounds.

The objective of this report is to provide a **systematic and transparent measure of intergenerational justice** across European societies. We do so by introducing the **Intergenerational Justice Index**, which compares the situation of younger and older adults in nineteen EU countries. The Index is designed to be replicable, updatable, and accessible—not only to researchers but also to policymakers and the general public.

A key decision was to focus on **age groups today** rather than on birth cohorts over decades. In other words, we compare how today's 25–34 year-olds fare relative to today's 65+ year-olds, or in some labor market measures relative to 55–64 year-olds. This **snapshot approach** provides clear advantages: it avoids the heavy assumptions required for long-term cohort analysis, it uses reliable and comparable data, and it produces results that are immediately relevant for policymakers who need to respond to present challenges.

The Index evaluates fairness across four broad dimensions, each corresponding to a core aspect of social justice:

- **Economic fairness**, assessing poverty, employment, wages, housing, and financial resilience.
- **Access to essential services and public goods**, including healthcare, social transfers, environmental quality, safety, and digital infrastructure.
- **Relational equality**, capturing social connections, networks of trust, freedom from discrimination, and mental well-being.
- **Political equality**, measuring participation, representation, and responsiveness of institutions to generational concerns.

Taken together, these dimensions provide a multidimensional picture of fairness, going beyond economics alone to include social and political life.

The Index is built entirely on **open and harmonized datasets** to ensure transparency and comparability. The two core sources are the **European Union Statistics on Income and Living Conditions (EU-SILC)** and the **European Social Survey (ESS)**. These are complemented by the **Manifesto Project**, which codes political party programs, and the **WARP project**, which measures the age composition of national parliaments.

Indicators are coded according to a simple principle: **"the more, the better."** This means that for desirable outcomes (e.g., income, political participation), we compute the difference using older adults as the reference group, so a positive value indicates an advantage for older adults and a negative value an advantage for younger ones. For undesirable outcomes (e.g., unemployment, poverty), we reverse the order of subtraction so that the interpretation remains consistent: positive values still signal an advantage for older adults, while negative values indicate an advantage for younger adults.

To avoid conflating structural differences across countries with intergenerational disparities, all results are normalized using the average observed across our nineteen countries as a benchmark (hereinafter **EU-19**). This procedure ensures that we measure **within-country gaps**, rather than cross-country differences in overall levels.

Finally, to combine the individual indicators into an overall Index, we apply three complementary weighting strategies. First, an **equal weighting** approach, which assigns the same importance to each indicator and dimension. Second, an **empirical weighting** approach, which derives weights from the explanatory power of each component in predicting life satisfaction, using it as a common welfare benchmark. Third, a **normative weighting** approach, which reflects explicit principles of justice, namely the priority of meeting basic needs (sufficiency), the avoidance of life-course scarring, and the protection of free and equal citizenship. By presenting results under all three strategies, we ensure that the Index is both empirically grounded and normatively transparent, while also testing the robustness of our findings.

Our project builds on earlier attempts to measure generational fairness, such as the Intergenerational Justice Index (Vanhuysse, 2013), the European Fairness Index (Leach et al., 2016), and the Intergenerational Solidarity Index (McQuilkin, 2018).

These have provided important insights, but most concentrated on **economic or environmental aspects**. Our Index goes further by integrating **economic, social, and political dimensions**, thereby offering a more comprehensive perspective on fairness across age groups.

The findings of this Index are directly relevant for public policy. They can highlight, for instance, whether young adults face disproportionately high poverty risks, whether healthcare access is more limited for some age groups, or whether political institutions disproportionately represent older cohorts. Such evidence is essential for designing fair policies in welfare, education, healthcare, housing, and democratic reform.

In the Italian context, this analysis is particularly relevant to **Missione 4 (Istruzione e Ricerca)** of the National Recovery and Resilience Plan (PNRR), which emphasizes investment in education, research, and digital infrastructure. The Intergenerational Justice Index provides a way to identify where such investments are most needed to reduce age gaps, and to monitor whether they succeed in improving fairness over time.

The **Intergenerational Justice Index** is designed to provide a clear, evidence-based picture of how fairly different age groups are treated in European societies today. It highlights disparities not only in material resources, but also in services, social recognition, and political influence. By turning complex data into a systematic measure, it offers policymakers, researchers, and citizens a tool to track fairness, identify areas of concern, and debate how to adapt welfare states and democratic institutions to demographic change.

At stake is more than economic balance sheets. The sustainability of **solidarity between generations** depends on ensuring that no age group is systematically disadvantaged. By shining a light on intergenerational fairness, this report contributes to building societies where people can live with dignity, autonomy, and equal respect—at every stage of life.

Introduction

Europe is aging fast: people live longer, but fewer young adults are entering the labor market. This shift puts pressure on welfare systems, healthcare, and pensions, while raising questions about whether opportunities, resources, and political voice are shared fairly across generations. Younger adults today often face insecure jobs, financial precarity, and difficulties in housing and autonomy, while older adults, though supported by pensions, are more vulnerable to unmet health needs, discrimination, and social isolation. Some age-specific protections are legitimate, but systematic disadvantages that persist simply because of age undermine social justice and risk fueling conflict between generations.

The **Intergenerational Justice Index** provides a new way to measure these disparities. Covering 19 EU countries, it compares younger and older adults across four dimensions—**economic fairness, access to services, relational equality, and political equality**—using open, harmonized data. The Index applies three weighting strategies to balance transparency, empirical evidence, and normative principles.

By integrating economic, social, and political life, this Index goes further than earlier attempts. It equips policymakers, researchers, and citizens with a clear, evidence-based tool to identify where gaps are largest, to design fairer policies, and to track whether reforms succeed in strengthening solidarity between generations.

At stake is more than fiscal balance: **the sustainability of European welfare states and democracies depends on ensuring that no age group is left systematically disadvantaged**.

2. Theoretical and Methodological Framework

2.1. Normative foundations: what to compare?

A first challenge in building an index of intergenerational justice is deciding what to compare. Should we look at **age groups at a given moment in time** (for example, today's young, middle-aged, and older adults), or should we compare birth cohorts, meaning groups of people born around the same time who age together? Once someone is born a baby boomer (or millennials or Gen Z), they remain part of that cohort for life, but of course their age group changes with time.

Most of the theoretical literature on justice between coexisting generations (Daniels 1983, 1988, 2008; Bidadanure 2021; Gosseries 2023) has focused on birth cohorts and adopts a whole-life perspective. This view emphasizes the temporal dimension of human life, an idea central to theories of distributive justice since John Rawls (1971) and Thomas Nagel (1973). Human life alternates between phases of dependence and vulnerability (childhood, old age), when individuals are net beneficiaries of social cooperation, and phases of independence and productivity (adulthood), when they are net contributors.

From this perspective, fairness can allow for different transfers at different ages—as long as, across the entire life course, the total balance of benefits and contributions is fair. The principle of fairness applied may vary: egalitarian (Daniels 1983, 1988, 2008; Bidadanure 2021), sufficientarian (Gosseries 2023), prioritarian, and so forth. Accordingly, to evaluate fairness between generations, we should compare the lifetime balance of contributions and benefits of today's young and old with those of past generations. For example, did baby boomers receive and contribute a fair share of resources (through taxes, contributions, and public services) compared to what millennials are likely to receive and contribute by the end of their lives? This would provide a measure of cohortal fairness. However, such an assessment would require long-run, detailed data that are not currently available and would rely on strong assumptions about future economic conditions, policy choices, and demographic trends.

By contrast, the age-group perspective compares the distribution of resources between age groups at a single point in time. Such differences, however, are not automatically unjust, because age groups differ in capabilities, life expectancy, vulnerability, and autonomy. A disparity in wages between younger and older workers is not inherently unfair, since experience and competence increase over time. Yet, if low wages prevent young people from becoming independent or planning their lives, such disparities may indeed be unjust.

Thus, to judge fairness across age groups at a given moment, inequalities must be assessed in light of **age-specific needs and opportunities**. Justice requires not identical treatment across ages, but ensuring that people at every stage of life have the resources to live autonomously and with dignity.

2.2. Why compare age groups?

As noted, most scholars of justice between adjacent generations prefer to compare **whole-life distributions**, which allows assessing fairness between **birth cohorts**. In theory, this is the most comprehensive approach. In practice, however, it presents serious challenges. Measuring what different cohorts have received from the public sector (through services and social insurance) and what they have contributed (through taxes and social security payments) is extremely difficult. It requires reconstructing data from the past and making strong assumptions about the future. These problems become even more complex when resources change significantly over time or when demographic shifts alter the structure of the population. For these reasons, direct inter-cohort comparison is empirically demanding.

Moreover, from a **policy-analysis perspective**, focusing on long-term distributions between cohorts is not necessarily useful. Such comparisons cannot easily capture how policies that address age-related issues—such as pensions or youth loans—are perceived in terms of fairness, nor how this perception affects their legitimacy and intergenerational solidarity (Birnbaum & Nelson 2023). Perceptions of fairness are shaped more strongly by **simultaneous comparisons between age groups** than by retrospective analyses of how past cohorts

benefited from the welfare state (Birnbaum & Nelson 2023). While there is an important distinction between the actual legitimacy of policies and how they are perceived, a policy-oriented approach—like the one adopted in this Index—must take both into account. To align normative reasoning with perceptions of fairness, the unit of comparison should be **age groups**.

There is also a more fundamental reason why age groups are the right focus for this Index. The whole-life perspective can meaningfully assess fairness in the **distribution of resources**, which is the area where most studies on justice between coexisting generations have concentrated. However, when we turn to other dimensions of justice—such as **social relations** or **political equality**—the whole-life view yields counterintuitive results. For example, if applied to political influence, it might allow for unequal rights at different life stages, as long as these imbalances even out over the course of a lifetime. This position, known as "changing place egalitarianism" (McKerlie 2012; Bidadanure 2021; Cass 2023), implies that it is acceptable for people to have less status, respect, or political voice at one stage, provided they gain more later. Yet this clashes with our basic intuitions: **social standing and political rights should be equal throughout life, not just balanced in the end**.

For this reason, when it comes to social and political equality, the age-group perspective is more appropriate. Our Index therefore adopts this approach, in line with existing indexes (Gagné et al. 2016; Jefferson-Correia Da Serra 2023; Leach et al. 2016; McQuilkin 2018; Monti 2017; Vanhuysse 2014). We measure the distribution of resources, benefits, and services **between age groups at a given point in time**, relative to the resources available in that moment. The disparities that emerge from this synchronic comparison are then evaluated against an **age-specific distributive scale**, which considers differences in needs, capabilities, autonomy, and dependence across the life cycle.

2.3. Justification of the index-based approach

The theme of **intergenerational equity** has gained visibility in recent decades, especially among economists who questioned the fairness of public transfers between the young and the old (Thompson 1996; Beckett 2010; Howker & Malik 2010;

Willetts 2011). Their concern reflects the challenges of aging societies, where increasing longevity and declining birth rates threaten the sustainability of welfare systems.

According to this literature, the "pact" between overlapping generations needs to be renewed. The prevailing view is that **baby boomers** benefited from overly generous welfare provisions, leaving younger generations to bear the costs. Remedies proposed include scaling back welfare provisions and abolishing fixed retirement ages, with the aim of extending working lives.

This narrative, however, has been challenged by **critical gerontology** (Minkler & Estes 1999; Macnicol 2015a, 2015b; Higgs & Gillard 2015; Torp 2015; Colasanti, King & Carr 2021). These scholars argue that portraying baby boomers as a "welfare generation" is not only inaccurate but also reflects a neoliberal framing of intergenerational relations. They note that empirical evidence shows strong **intergenerational solidarity**—especially from younger people toward older generations—suggesting that the idea of a looming generational conflict is more ideological than real (Macnicol 2015b).

While this critical perspective rightly exposes biases in the economic literature, it does not fully address the pressing question: **are public transfers across age groups fair in the context of aging populations, low fertility, and recurrent economic crises?**

This is precisely where our Index comes in. Aging societies create undeniable pressures on welfare systems. To address them, we need systematic, evidence-based assessments of how different age groups fare in terms of **social insurance, services, contributions, power, and status**. Our Index aims to:

1. Provide a reliable snapshot of how different age groups are doing in today's social and demographic context, where the proportion of retirees is rising relative to the active population.

2. Enable evidence-based judgments about fairness and injustice.

3. Identify the areas where age disparities are strongest and where policy intervention is most urgent.

4. Offer guidance for remedial policies that promote justice across ages.

The European scope of our Index adds further value: it allows comparisons across countries and regions, showing how differences in welfare arrangements and demographic structures affect intergenerational fairness. Moreover, the indicators we have chosen come from datasets that are regularly updated. This means the Index can be replicated yearly or biannually, offering policymakers an ongoing tool to track whether interventions are reducing unfair disparities across age groups.

2.4 Distributive principle used

Before explaining the principle that guides our Index, it is important to clarify what we mean by justice. Broadly, most normative theories agree that a society is just when all its members are treated with equal consideration and respect. To achieve this, four dimensions of justice must be addressed:

1. **Distribution of resources.**
2. **Access to essential services and public goods.**
3. **Social status and social relations.**
4. **Political standing and influence.**

On this basis, our Index builds on the normative premise that a just society should pursue four goals:

1. **Distributive fairness**: capturing how people of different ages fare economically.
2. **Justice in accessing essential services**: measuring how they benefit from or are excluded from public services and goods.
3. **Relational equality**: recognition, respect, and status of people of different ages in society.
4. **Political equality**: the extent to which age groups are equally represented and able to influence political decisions.

The distributive principle used in the index is age-specific sufficiency. To evaluate distributions across age groups, we propose the principle of sufficiency, specified as age-specific sufficiency. When comparing age groups at a fixed moment in time, inequalities cannot automatically be seen as injustices. This is because age groups differ in their needs and moral claims. For example, young adults need opportunities to start a career and a family, while older people need respectful care.

Thus, fairness requires not just covering *basic* human needs at all ages, but meeting the **specific needs of each age group**, so that everyone can live with dignity and pursue appropriate life projects at each stage of life (Arulampalam, Gregg & Gregory 2001).

Some needs are particularly urgent in early life because their neglect creates scarring effects. For instance, if infants are not screened and treated for congenital hip dysplasia, they may develop a permanent disability. The damage in adulthood is an unjust outcome of insufficient resources at an earlier stage.

From this, the age-specific sufficiency principle leads to two recommendations:

a) Each age group should have enough resources, benefits, and opportunities to live with dignity and pursue age-appropriate life plans.

b) More generous transfers should go to early life stages to prevent inequalities that would otherwise multiply across the lifespan.

This approach is both synchronic (ensuring dignity at each stage of life) and diachronic (considering how resource allocation at one age affects fairness across the whole lifespan). It also helps detect cohortal injustice: if young people are deprived of resources today, and this leads to lasting inequalities, their whole cohort suffers an unjust disadvantage.

Finally, giving greater resources earlier in life also addresses issues of differential longevity (Lazenby 2011; Valente & Gosseries 2023). Those who die before reaching old age contribute to pay-as-you-go pensions but never benefit from them. More generous investments in childhood and youth partially offset this imbalance, ensuring fairness even for those who do not live to retirement.

Theoretical and Methodological Framework

- Our Index compares **age groups today**, not birth cohorts, because this approach is both feasible and more relevant for policymaking.
- Fairness is judged through an **age-specific sufficiency principle**: each age group must have enough resources to live with dignity at its stage of life, with extra support for the young to prevent lasting disadvantages.
- The Index covers four dimensions—**economic, services, social relations, and political voice**—and offers a practical, repeatable tool to identify unjust disparities and guide corrective policies across generations.

3. Dimensions of the Intergenerational Justice Index

Translating the principles of intergenerational justice into a measurable framework requires identifying the key areas in which fairness between age groups can be meaningfully assessed. Our Index is built on four such dimensions, which together capture the essential conditions for a just society across generations.

The first dimension is **economic fairness**, which concerns whether resources and opportunities are distributed in a way that does not systematically privilege some age groups over others. The second is **access to essential services**, which refers to the ability of people of all ages to rely on core public goods and protections. In our framework, this includes health care, social transfers, environmental quality, safety, and digital access—factors that shape well-being and opportunity in everyday life. The third dimension is **relational equality**, which highlights the importance of recognition and respect in social interactions, aiming to prevent age-based stigmatization, exclusion, or marginalization. Finally, the fourth dimension is **political equality**, which ensures that individuals of different ages are fairly represented in the political process and have equal capacity to influence collective decisions, so that no generation's voice dominates over others.

Taken together, these four dimensions reflect the normative conviction that a society can only be considered just when it distributes resources fairly, guarantees equal access to essential services, ensures respect and recognition across ages, and safeguards equal political standing. The Index builds on this foundation to provide a systematic tool for assessing whether these goals are being achieved in practice.

3.1. Economic Fairness

Economic fairness captures how different age groups fare in terms of their **material living conditions**. This dimension focuses on objective, structural features of economic life that shape people's opportunities: whether they can find work, earn a stable income, live in adequate housing, and cope with unexpected expenses. By concentrating on **objective measures**, rather than self-assessed perceptions, we maximize comparability across countries and minimize reporting biases. For this reason, the indicators are drawn from the **EU-SILC**, a high-quality, harmonized dataset widely used in cross-national research.

The six indicators included in this dimension are:

- **Risk of poverty**
- **Unemployment**
- **Incidence of permanent contracts**
- **Labor income**
- **Residential overcrowding**
- **Financial distress**

Each of these indicators speaks to basic conditions for a decent life. Falling below the poverty line often means being unable to meet essential needs such as adequate nutrition, clothing, or heating, and it restricts access to opportunities like higher education or cultural participation. Prolonged unemployment not only reduces income but can also erode skills, self-confidence, and social networks, creating barriers to reintegration into the labor market. Living in overcrowded housing affects physical and mental health, educational achievement, and family life, since the lack of personal space undermines both privacy and productivity.

Similarly, lacking a permanent contract or earning too little undermines stability and has long-term consequences. Job insecurity makes it harder for individuals to plan ahead, access credit, or invest in housing. It also affects deeply personal decisions, such as whether to start a family, when to have children, or whether to migrate in search of better opportunities (Alderotti et al. 2021). These are not just private matters, but issues with wider demographic and social implications.

Finally, financial distress—the inability to cover unexpected expenses, such as urgent medical bills or sudden job loss—captures whether individuals and households have the resilience to withstand shocks. Without a financial buffer, even temporary setbacks can push people into long-term hardship, forcing them to rely on family networks or public assistance. Financial resilience is thus a crucial indicator of whether people can maintain independence and dignity when facing life's inevitable uncertainties.

Measurement strategy and age group disaggregation

Our strategy follows a simple principle: **"more is better"** and will be discussed in detail in Chapter 5. Desirable conditions (such as income) are coded so that higher values reflect an advantage, while undesirable conditions (such as unemployment) are reversed, so that higher values always indicate a disadvantage for one group relative to another. This ensures comparability across indicators.

Equally important is the choice of **age brackets**. Not all indicators can be meaningfully compared across the same groups. For example, retirees are not meaningfully "unemployed," so unemployment and labor income are compared between **25–34 year-olds** and **55–64 year-olds**, where both groups are active in the labor market. By contrast, poverty, overcrowding, and financial distress are compared between **25–34 year-olds** and those **65 and older**, since these conditions affect people across the entire population, not just workers.

This design allows us to capture **intergenerational disparities** in a way that is both sensitive to the specificities of each indicator and coherent across countries.

3.2. Access to Essential services and Public Goods.

Access to essential services reflects how different age groups benefit from, or are excluded from, **public goods and infrastructures that sustain well-being and shape life opportunities**. These services matter for everyday life: they influence health, security, mobility, and the ability to participate fully in society. The indicators in this dimension are drawn from self-reported measures of accessibility to concrete resources such as healthcare, housing, and digital infrastructure. They capture experienced access to essential services, moving beyond subjective perceptions or attitudes, and highlight domains where public policy and institutional arrangements are central to equalizing opportunities across generations. For comparability, we rely on nationally representative and harmonized data from the **EU-SILC** and **ESS surveys**.

The indicators included in this dimension are:

- **Unmet health needs**
- **Social transfers received relative to total income**
- **Exposure to pollution, grime, and noise**
- **Perceived problems of crime, violence, or vandalism**
- **Internet connection accessibility**

When it comes to health, our focus is not on how much public spending is directed at younger versus older people—since it is well established that the elderly have greater health needs—but rather on whether **basic health needs go unmet** across age groups. We use self-reported unmet health needs: the share of individuals who needed but

could not access medical treatment or an examination, Unmet health needs are coded for reasons we consider unjust, such as the inability to afford treatment or excessive waiting times. These situations reflect barriers to essential care that lie beyond individual choice and instead signal failures in accessibility and service provision. While imperfect, this measure can reveal troubling inequalities in access—for instance, if younger adults are more likely than older people to forgo necessary care, or vice versa.

Social transfers, such as unemployment benefits or family allowances, are another crucial indicator. These transfers are especially important during vulnerable phases of life, such as the transition from school to work or the child-rearing period, when incomes may be unstable. We deliberately exclude pension benefits here, as they belong to a distinct life-stage mechanism rather than transfers designed to cushion short-term risks. The relative weight of transfers in total income shows how public policy cushions risks and supports autonomy across the life course.

Environmental conditions and neighborhood safety are central to how people experience everyday life. Exposure to pollution, grime, and noise undermines health and quality of life, with older adults often more at risk because reduced mobility and chronic conditions make them especially vulnerable. At the same time, feelings of insecurity linked to crime, violence, or vandalism—though subjective—also have concrete consequences. When people perceive their neighborhoods as unsafe, they may avoid going out, limit social activities, and become more isolated. Together, these factors capture how external environments and local safety shape intergenerational differences in well-being and participation.

Finally, internet accessibility has become a vital condition for inclusion in modern societies. A reliable connection is not only about communication and social ties but also about access to basic services, from banking to transport to health information. Lack of internet access can therefore translate into exclusion from many of the conveniences and opportunities of everyday life.

Taken together, these indicators measure how equally different age groups can rely on the public goods and services that make life secure, dignified, and connected. Poor health access or inadequate transfers can prevent people from meeting basic needs. A deteriorated environment or insecurity in one's neighborhood can erode quality of life, particularly for the most vulnerable.

And limited digital connectivity risks creating new forms of exclusion. Ensuring fair access to these services is thus a cornerstone of intergenerational justice.

3.3 Relational Equality

Relational equality captures the quality and scope of social relations across age groups, with a focus on detecting social ageism—the marginalization, exclusion, or discrimination of people based on age. Such practices undermine the principle of equal status and respect for all members of society. This dimension asks whether individuals of different ages are equally able to participate in social life, maintain meaningful connections, and avoid discriminatory treatment. To measure it, we rely on EU-SILC and ESS data, which provide complementary evidence on social participation, interpersonal ties, and experiences of discrimination.

The indicators used are:

- **Regular leisure activity**
- **Social relations**
- **Close relations**
- **Discrimination**
- **Mental well-being**

The first three indicators capture different aspects of social connectedness, with social isolation serving as a proxy for marginalization. Social isolation—defined as the lack of meaningful connections and interactions (Zavaleta, Samuel & Mills 2014)—is not only a social condition but also a public health issue. It is associated with increased morbidity and mortality (Cacioppo et al. 2011), reduced life satisfaction (Clair et al., 2021), and a greater likelihood of poverty and vulnerability. To assess the degree of connectedness, we consider three complementary dimensions. Regular leisure activities—such as cultural participation, hobbies, or sports—indicate how far individuals can sustain an active and socially integrated life. Broader social relations, including friendships and community networks, reflect everyday support and opportunities for belonging. Finally, close relations, such as intimate ties or family connections, capture the depth of personal support structures that are essential for well-being throughout the life course. These dimensions are shaped by generational circumstances: younger adults may enjoy larger, more fluid networks through education, work, and digital platforms, while older adults often

face shrinking networks due to retirement, declining health, or widowhood. Unequal access to leisure opportunities, social relations, or close ties—whether due to institutional barriers, cultural participation gaps, or limited digital access—translates into unequal chances of living well. By tracking these three dimensions, the Index highlights how far different age groups are supported or excluded by the fabric of social life.

The fourth indicator addresses age-based discrimination, a form of injustice that undermines equal standing in society. Discrimination can manifest in subtle ways, such as patronizing or dismissive attitudes, or in overt forms, including insults, abuse, or denial of services (Ferris & King 1992; Garstka, Hummert & Branscombe 2005; Roscigno et al. 2007). Its consequences extend beyond individual harm: it perpetuates inequality, restricts access to opportunities, and entrenches stereotypes about competence, responsibility, or worth (Manning, Carroll & Carp 2004). Importantly, ageism is not confined to old age. While older people are often perceived as less productive or burdensome, younger people may be seen as immature, reckless, or unreliable (Finkelstein, Burke & Raju 1995). Both forms of ageism lead to exclusion from full participation in society, weakening intergenerational solidarity. By capturing experiences of discrimination, this indicator exposes how prejudice distorts the equal respect and recognition that justice requires.

Finally, the fifth indicator captures mental well-being, with depressive symptoms used as a tangible measure of the psychological costs of relational inequality. Social isolation and discrimination often have cascading effects, producing stress, anxiety, and depression (Dobrowolska et al. 2019). These outcomes reflect not only individual suffering but also structural failures to provide equal respect and inclusion. Mental well-being thus acts as both a consequence and a signal: it reveals how relational inequalities—when sustained over time—undermine dignity, resilience, and life satisfaction. By including this dimension, the Index acknowledges that justice is not only about material distribution but also about the ability of people at all ages to enjoy lives free from stigma, exclusion, and psychological harm.

Age is a particularly sensitive factor in shaping social relations, since it affects how individuals are perceived and treated in daily life. Isolation, lack of support, or

disrespect not only harm well-being but also increase the risk of mistreatment, exclusion, and declining mental health. While ageism often targets older people—seen as frail or dependent—it can also affect the young, who may be dismissed as immature or unreliable. These stereotypes limit opportunities, weaken intergenerational solidarity, and, if unaddressed, risk fragmenting society.

Recognizing these dynamics is crucial for designing policies that strengthen social integration, combat stereotypes, and guarantee equal respect across the life course. Such measures reduce discrimination, foster intergenerational trust, and uphold the principle that justice requires equal standing for all, regardless of age (Bidadanure 2016).

3.4 Political Equality

Political equality concerns the extent to which citizens of different ages enjoy equal political standing, both through their participation in democratic processes and through their influence over collective decisions. This dimension asks whether younger and older generations are treated with equal political consideration, whether their voices are equally heard, and whether the institutional framework provides them with comparable opportunities to shape outcomes. Without such equality, democracy risks privileging some age groups over others, undermining fairness between generations.

To measure political equality, we combine **individual-level indicators** of engagement **and influence with institutional measures** of responsiveness. **On the individual side,** data from the **European Social Survey (ESS)** allow us to capture how citizens perceive their political voice, how interested they are in politics, and whether they participate in core democratic practices such as voting or identifying with a political party. These indicators highlight both subjective dimensions—such as the feeling of having a say—and behavioral dimensions like actual participation.

On the institutional side, we turn to comparative political science resources. The **Manifesto Project** provides systematic evidence on how political parties incorporate age-related issues into their programs, offering a way to assess whether generational concerns are visible in the political agenda. The **Age Representation Index (ARI)** from the **WARP dataset** complements this by showing whether national parliaments reflect the age composition of society, thereby capturing the degree of **descriptive representation** for younger and older groups. Together, these measures go beyond individual attitudes and behaviors, enabling us to evaluate how responsive and inclusive political systems are to different generations.

The indicators included in this dimension are:

- **Having a say in politics**
- **Perceived ability to influence politics**
- **Voting in the latest election**
- **Feeling close to a political party**
- **Interest in politics**
- **Manifesto group topic saliency**
- **National chamber's Age Representation Index (ARI)**

The first two indicators capture **perceptions of political efficacy**: whether citizens feel their voices matter and whether they believe they can influence political outcomes. These perceptions are important because they often shape future participation: people who feel politically powerless are less likely to remain engaged. The next three indicators—voting, party identification, and political interest—reflect **actual engagement** in democratic life. Voting, in particular, is the most direct form of political participation, while party attachment and political interest reflect longer-term ties to the political system.

The last two indicators shift the focus from citizens to **institutions**, asking whether political parties and legislatures take generational concerns seriously. Manifesto saliency shows whether age-related issues—such as pensions, youth employment, or education—are given programmatic weight by parties competing for power. Importantly, we only consider quasi-sentences that constitute **credible statements entailing fiscal consequences**, either through expenditure expansion or cuts. References without such consequences are excluded, as they do not reflect binding programmatic commitments.

The ARI reveals whether different generations are present in decision-making bodies: for example, whether parliaments are dominated by older politicians, or whether younger voices are also present to represent their cohort's interests.

By combining these perspectives, the Index is designed to capture both sides of the political equation: **the capacity of citizens to engage** and **the responsiveness of institutions to their concerns**. This allows us to test whether today's demographic imbalance—where older cohorts outnumber younger ones—translates into unequal political agency. If younger people vote less, feel less influential, or are underrepresented in parliaments and party agendas, there is a risk that democratic outcomes will systematically favor older generations. Measuring political equality is therefore crucial to understanding not only participation patterns, but also whether democratic institutions uphold the principle of **equal voice across ages**, a cornerstone of intergenerational justice.

3.5 How to compose the Intergenerational Equity Index

Constructing the Intergenerational Justice Index involves two levels of aggregation.

1. Within dimensions: combining 5–7 components (e.g. poverty, unemployment, health access) into one composite indicator for each of the four dimensions (economic fairness, access to services, relational equality, and political equality).

2. Across dimensions: combining the four dimension scores into a single, overall index of intergenerational justice.

In both cases, the core challenge is the same: components and dimensions measure different aspects of justice, and it is not self-evident that they should count equally. Assigning weights is therefore unavoidable, and different strategies reflect different views on how fairness should be measured. To ensure robustness, we apply the same three complementary approaches at both levels of aggregation.

3.5.1. Equal weighting

The first approach takes a **straightforward path**: each of the four dimensions, and each of the individual components within a dimension, is assigned the same weight, and the Index is calculated as a simple average. The advantage of this strategy is its **transparency and interpretability**. Policymakers and the public can immediately understand the result without needing to navigate complex statistical models or normative debates. It also serves as a useful **benchmark**, providing a clear starting point against which more elaborate weighting schemes can be compared.

Yet this very simplicity is also the main source of its weakness. Assigning equal weight is not a "neutral" choice—it is itself a **normative assumption**. It implicitly claims that economic fairness, access to services, relational equality, and political equality are **equally important** to intergenerational justice, and that within each dimension, each individual component matters equally. While this may appear reasonable, it is far from self-evident. For example, one might argue that meeting basic needs through income or health care should count for more than having equal party attachment, or conversely, that without political equality other dimensions cannot be properly secured. By treating all dimensions as equivalent, the equal-weighting method risks obscuring these debates and flattening real differences in the significance of each domain.

In short, the equal-weighting approach is valuable for its **clarity and accessibility**, but it should be interpreted as only one possible perspective—one that makes a strong and contestable claim about the equal importance of the different building blocks of intergenerational justice.

3.5.2. Empirical weighting

The second approach turns to **empirical evidence** to assign weights, aiming to capture how strongly each dimension of the Index relates to individuals' overall well-being. Specifically, we examine the correlation between each component in a given dimension and **self-assessed life satisfaction**, a widely used indicator in social science research. Life satisfaction serves here as a benchmark, or numéraire, for evaluating the relative contribution of economic fairness, access to services, relational equality, and political equality to people's quality of life.

A key methodological challenge is that the dimensions are not independent of one another: for example, higher income often improves housing conditions, while stronger social relations can also enhance mental well-being. To address this overlap, we apply **dominance analysis**, a statistical technique designed to disentangle the relative importance of correlated predictors. This method allows us to estimate, in a more robust way, how much each individual component within a dimension contributes to explaining differences in life satisfaction, even when the components are closely interrelated. To weight across dimensions, we then use the relative contribution of each dimension to overall life satisfaction, expressed as a share of the combined explanatory power of all four dimensions.

The strength of this approach lies in its **empirical grounding**. It does not assume in advance how much weight each dimension *should carry,* but instead lets the data suggest which aspects of intergenerational justice are most strongly associated with people's lived experiences. At the same time, it has an important limitation: it relies heavily on the assumption that **life satisfaction is a valid and sufficient proxy for justice outcomes**. While life satisfaction is informative, it may not fully capture deeper normative concerns—such as the fairness of political representation or the protection if rights—that matter independently of how satisfied people report themselves to be.

3.5.3 Normative weighting

The third approach adopts a **philosophical lens**, assigning weights to each dimension according to principles drawn from theories of social justice. Unlike the equal-weighting or empirical approaches, this method explicitly acknowledges that some aspects of justice may carry **greater moral urgency** than others. In our scheme, three normative commitments guide the distribution of weights.

- **Meeting basic needs (sufficiency)**. Every person, regardless of age, must have enough resources and opportunities to live with dignity. This principle justifies assigning higher weight to dimensions that secure essential conditions of life, such as income, health care, or housing. Without these, participation in other areas of society becomes meaningless.

- **Avoiding scarring disadvantages**. Certain deprivations—if they occur at key stages of life—can leave lasting effects that accumulate over the life course. For example, lack of education or untreated health problems in childhood can permanently limit opportunities in adulthood and old age. Because such disadvantages create enduring and sometimes irreversible inequalities, they warrant greater emphasis in the index.

- **Safeguarding free and equal citizenship**. Justice is not only about material sufficiency but also about ensuring that all citizens, regardless of age, have an equal voice in shaping collective decisions. Political equality thus receives particular weight, since without fair representation and influence, the interests of some generations risk being systematically overlooked.

This normative approach brings **clarity and coherence**, aligning the Index with well-established ethical reasoning about fairness. It explicitly connects measurement choices to moral principles, avoiding the false impression that indicators are simply "neutral" numbers. At the same time, it has its limitations. Because it relies on **expert judgment**, the resulting weights may reflect particular philosophical traditions and may not fully capture institutional or cultural differences across countries. What counts as most urgent in one context—for example, health care access—may be perceived differently in another, where political exclusion or environmental degradation are more pressing concerns.

In short, the normative weighting approach grounds the Index in a **principled vision of justice**, ensuring that its construction is not

only empirical but also ethically meaningful. Yet it must be interpreted with caution, as it reflects a particular normative stance that may be contested or differently prioritized in diverse contexts.

3.5.4 Balancing the three approaches

By presenting the three weighting strategies side by side, the Index achieves a balance between **transparency, empirical grounding, and normative reasoning**. Each method captures a different aspect of what it means to measure justice fairly. The equal-weighting approach offers a clear and easily interpretable benchmark; the empirical approach ties the Index to observed patterns of well-being; and the normative approach ensures that the measure is aligned with ethical commitments about fairness.

No single method, on its own, can fully reflect the complexity of intergenerational justice. Equal weighting risks oversimplification, empirical weighting depends on the adequacy of life satisfaction as a proxy, and normative weighting reflects contestable philosophical judgments. But considered together, these approaches **complement each other's strengths and offset their weaknesses**. The comparison across methods also allows us to test the **robustness of results**: if a certain disparity appears consistently across all three strategies, we can be more confident that it reflects a genuine injustice rather than an artifact of methodological choice.

This **triangulation strategy** makes the Index both scientifically credible and normatively meaningful. It speaks to different audiences—researchers interested in empirical validity, policymakers concerned with clarity and applicability, and ethicists attentive to principles of justice—without privileging one perspective alone. In practice, it provides a tool that is at once **interpretable, evidence-based, and ethically grounded**, offering a richer and more reliable picture of how age groups fare relative to one another. By integrating transparency, data, and normative reasoning, the Index becomes a more effective instrument for diagnosing disparities and guiding policy interventions toward greater intergenerational fairness.

Reader's Takeaway

Dimensions of the Intergenerational Justice Index

The Index translates the idea of intergenerational justice into **four measurable dimensions**:

- **Economic fairness** (income, jobs, housing, financial resilience).
- **Access to essential services** (health care, transfers, environment, safety, digital access).
- **Relational equality** (social connections, freedom from ageism, mental well-being).
- **Political equality** (participation, representation, and institutional responsiveness).

Each dimension captures a vital aspect of what it means to live with dignity, respect, and equal opportunity at any age. Together, they provide a comprehensive framework for assessing fairness across generations.

To combine these into a single measure, we use three complementary strategies: **equal weighting** (transparent but simplistic), **empirical weighting** (anchored in life satisfaction data), and **normative weighting** (guided by justice principles). This triangulation balances clarity, evidence, and ethical reasoning, making the Index both scientifically credible and normatively meaningful.

4. Data Sources and Country Coverage

The Intergenerational Justice Index draws on a set of high-quality, harmonized datasets that allow us to capture economic, social, and political disparities across generations in a consistent way. This chapter provides an overview of the main sources, explains why they were selected, and clarifies their scope and limitations.

4.1 EU-SILC and ESS: Core Data Sources

The Index relies most heavily on two pan-European surveys: the **European Union Statistics on Income and Living Conditions (EU-SILC)** and the **European Social Survey (ESS)**.

EU-SILC was established to provide timely and comparable data on income, poverty, social exclusion, and living conditions across European countries. It is regulated by EU legislation, which ensures harmonization and comparability. Around 90% of EU-SILC variables are collected annually, drawing on a mix of administrative records and field surveys. Additional rotating or ad-hoc modules are introduced every few years to respond to emerging policy needs. Data are transmitted to Eurostat following common procedures, guaranteeing consistency across participating countries.

EU-SILC offers two main types of data:

- **Cross-sectional data**, capturing living conditions and income distributions at a given moment in time.
- **Longitudinal data**, following individuals and households over a four-year period, allowing researchers to track dynamics over time.

Information on income, labor, education, and health is collected from individuals aged 16 and over, while variables on housing and social exclusion are usually collected at the household level. For the purposes of this Index, we focus exclusively on the **cross-sectional data**. This is because our aim is to characterize **country-level differences** in outcomes at a given point in time, rather than to follow individuals longitudinally. EU-SILC thus provides the foundation for measuring the economic and service-access dimensions of the Index.

The **European Social Survey (ESS)** complements this by focusing not only on socio-demographic conditions but also on **attitudes, values, and behaviors**.

Conducted every two years since 2002, the ESS combines a stable core of questions with rotating modules, enabling both time-series analysis and in-depth study of specific themes. Core variables cover ancestry, education, employment, financial circumstances, household composition, gender, and parental information. Attitudinal data address topics such as democracy and government, crime and justice, immigration, health and wellbeing, trust in institutions, political participation, perceived discrimination, identity, media use, and religion (Ess-Eric, 2022).

The ESS is invaluable for this project because it allows us to capture **how people of different ages perceive their political voice, social relations, and access to opportunities**—crucial elements for the relational and political dimensions of intergenerational justice.

4.2 Additional Sources for Political Equality Dimension: Manifesto Project and WARP

While the **European Social Survey (ESS)** provides valuable information on how individuals perceive and engage with politics, survey data alone cannot fully capture whether political systems are genuinely responsive to the needs and interests of different generations. Political equality depends not only on what citizens *do*—their voting, party attachment, or political interest—but also on how institutions and parties *respond*. To address this institutional dimension, we draw on two additional sources: the **Manifesto Project** and the **WARP project**.

The Manifesto Project.

The Manifesto Project is one of the most widely used resources in comparative political science. It collects, digitizes, and codes electoral programs from more than **1,600 political parties in over 60 countries**, encompassing **more than 5,000 manifestos since 1945**. For our purposes, the key advantage is its **comprehensive coverage of all 19 EU Member States** included in our Index. Using this dataset, we can apply **text-analysis techniques** to systematically examine how parties frame intergenerational issues in their electoral programs. For example, do parties place more emphasis on youth employment, education, and housing, or do they prioritize pensions and elderly care? How frequently do they refer to "intergenerational solidarity" as a guiding principle? Such analyses allow us to measure the salience of **age-related topics** in party competition, thereby offering insight into whether political systems are attentive to the specific challenges faced by different generations.

The WARP Project.

The **Weighted Age Representation in Parliaments (WARP)** project complements the Manifesto Project by focusing on **descriptive representation**. It provides harmonized, cross-national data on the **age distribution of members of national parliaments**, which can then be directly compared with the age distribution of the populations they represent. This comparison allows us to evaluate whether legislatures mirror the generational make-up of their societies, or whether certain age groups—especially younger adults—are systematically underrepresented in formal political institutions. Such underrepresentation can signal unequal political influence, as decisions may be disproportionately shaped by older cohorts.

Together, the Manifesto Project and WARP bring an **institutional perspective** that complements the ESS survey data. Where the ESS captures citizens' **perceptions and behaviors**, the Manifesto and WARP data capture the **supply side of politics**: how parties frame intergenerational issues and how representative parliaments are in demographic terms. By combining the demand side (citizen engagement) with the supply side (party responsiveness and parliamentary representation), the Index provides a more complete picture of **political equality across generations**.

4.3 Country Coverage

The Intergenerational Justice Index is constructed for **19 EU Member States**: Austria, Belgium, Croatia, Cyprus, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Lithuania, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, and Sweden.

The selection of these countries follows a clear methodological principle: they represent the **maximum intersection** between the most recent releases of the **EU-SILC** and the **ESS**, both of which provide data for the year 2023. This overlap is essential because the Index relies on combining indicators from both surveys across its four dimensions—economic fairness, access to services, relational equality, and political equality. Without coverage in both sources, it would not be possible to compute the Index in a way that is **consistent, comparable, and reliable across countries**.

This choice has several implications:

- **Comparability**. By restricting the sample to countries covered by both datasets, we avoid gaps or inconsistencies that would arise if some dimensions were missing for certain countries. This ensures that every country is assessed against the same set of criteria.
- **Balance of diversity.** The 19 countries cover a wide geographic and institutional spread within the EU, including Northern, Southern, Eastern, and Western Europe. They also vary in welfare state models, labor market institutions, demographic trends, and political systems. This diversity allows us to examine how different contexts shape intergenerational justice, while maintaining methodological rigor.
- **Limitations of coverage.** The choice also means that some EU countries are excluded because they were not present in both surveys in the relevant year. As a result, the Index cannot claim to represent the EU as a whole. Rather, it offers a large but selective cross-section of Member States, providing a robust but not exhaustive picture of intergenerational fairness across Europe.

In short, the 19-country sample reflects a deliberate balance between **scope and quality**: it maximizes coverage while preserving the comparability necessary for a valid index. Future iterations of the Index may extend coverage if additional countries participate in both EU-SILC and ESS in the same reference year, thereby enhancing the breadth of analysis.

4.4 Limitations and Harmonization Strategy

As with any cross-national analysis, there are **limitations**. Not all variables are collected with identical precision across countries, and some are more vulnerable to cultural or institutional biases in reporting. Self-assessed indicators, for instance, may reflect national differences in survey response styles rather than objective disparities. In addition, while EU-SILC and ESS are harmonized at the European level, there are occasional gaps in coverage and differences in national implementation.

To mitigate these issues, we adopt a **harmonization strategy** that standardizes variable definitions, applies consistent coding rules, and uses established quality controls to maximize comparability. We also triangulate across multiple sources where possible (for example, combining survey data with Manifesto and WARP institutional measures). Finally, by anchoring our analysis in 2023—the most recent year where EU-SILC and ESS overlap—we ensure that all dimensions are assessed within the same temporal framework.

5. Construction of the Index

Building the Intergenerational Justice Index involves several key methodological steps: normalizing and scaling indicators, choosing a weighting scheme, aggregating the results into a composite measure, addressing missing data, and testing the robustness of outcomes through sensitivity analyses. This chapter explains how these steps were carried out, ensuring that the Index is both **statistically rigorous and normatively meaningful.**

5.1 Normalization and scaling of indicators

To ensure **comparability across countries and across dimensions**, we adopt a common and transparent strategy for constructing each indicator. The starting point is the raw data, from which we identify the variables most relevant to intergenerational disparities. These variables are then recoded according to a simple but powerful guiding principle: **"the more, the better."** This means that outcomes which are desirable—such as higher income, better housing conditions, or greater political participation—are always coded so that higher values represent an advantage, while outcomes that are undesirable—such as unemployment, overcrowding, or unmet health needs—are recoded so that higher values may reflect an advantage.

Older adults are taken as the **reference group** for all comparisons. This choice reflects the fact that in most European contexts, people above the age of 55—

particularly those 65 and older—benefit from relatively stable entitlements, such as public pensions, retirement-related social transfers, and established access to welfare services.

This approach has several advantages. First, it guarantees a **uniform direction of interpretation** across the entire Index: a positive sign always means that older adults are better off than the younger adults, while a negative sign means they are worse off than the younger adults. This greatly simplifies comparisons across indicators and countries, reducing the risk of misinterpretation. Second, it makes the **Index intuitively accessible**, since policymakers, researchers, and the public can immediately see whether an indicator points to an advantage or disadvantage without needing to reverse or re-interpret its scale. Third, it facilitates the **aggregation of different measures**—from poverty rates to political participation—into a single composite index, since all indicators are expressed in a common evaluative framework.

Finally, this recoding ensures that the Index captures disparities in a way that is **normatively meaningful**. By aligning all indicators with the sufficiency principle introduced earlier, the method ensures that each measure directly reflects whether age groups enjoy enough resources, opportunities, or recognition to live with dignity at their stage of life. In this way, a methodological choice—"the more, the better"—is also a substantive commitment to clarity, comparability, and fairness.

Each indicator is first computed at the **individual level**, ensuring that the measure reflects actual experiences of people in the sample, rather than only aggregate statistics. These individual-level values are then aggregated to the age-group level using the **survey analytical weights** provided in EU-SILC and ESS. The application of these weights is essential, because it corrects for sampling design and response patterns, ensuring that the results are **nationally representative** rather than skewed by over- or under-representation of particular groups within the survey data.

The **age brackets used for comparison** vary depending on the substantive meaning of the indicator. For **labor market outcomes**—such as unemployment, wages, or contract type—we compare those aged 25–34 (young adults) with those aged 55–64 (older working-age adults). This choice avoids the distortions that would arise if we included individuals who are still in education (under 25) or those who have already retired (65 and older), since their participation in the labor market is structurally different. By focusing on those who are active in the labor market, the comparison remains meaningful.

By contrast, for **broader measures** such as relative poverty, housing conditions, or financial resilience, the comparison is made between 25–34 year-olds and those aged

65 and above. These dimensions capture general living conditions that affect the whole population, not just workers, and therefore require a benchmark that includes the retired population. Comparing the young to older adults in retirement provides a sharper picture of whether different generations enjoy comparable standards of living and security outside the labor market.

To make indicators **comparable across countries**, we normalize results using what we call the **EU-19 standard**: the average value of each variable among the population aged 25 and older across all 19 countries in our sample. This step is crucial, because without normalization, the Index would conflate **cross-country structural differences** with genuine **intergenerational imbalances**. For example, unemployment rates are structurally higher in some countries than in others, just as average wages or housing conditions may vary widely due to institutional arrangements, economic development, or cost-of-living differences. Normalization places all indicators on a common scale. The EU-19 average provides a shared reference point, allowing us to interpret results as deviations from a European benchmark rather than as reflections of national economic structures. Once normalized, the values represent relative **age gaps within each country**, not absolute levels of performance.

This strategy has the additional advantage of ensuring **comparability across dimensions**: poverty, housing, labor markets, and political participation can all be expressed in standardized percentage terms, making them suitable for aggregation into a single Index.

By anchoring the analysis to the EU-19 standard, the Index thus produces a clearer, fairer, and more policy-relevant measure of **intergenerational disparities**, one that highlights inequalities between age groups without being distorted by broader national characteristics.

Finally, the coding ensures interpretability:

- **Positive values** indicate that outcomes favor older adults.
- **Negative values** indicate that outcomes favor younger adults.

This provides a coherent scale across all indicators, simplifying interpretation and enabling aggregation across dimensions.

5.1.1 Economic Fairness

The **Economic Fairness dimension** is built from six sub-indicators, all based on 2023 EU-SILC cross-sectional data:

a. **Risk of poverty** – which indicates the individual economic context

b. **Unemployment** – whether the individual is unemployed or not

c. **Permanent contracts** – which measures the quality of the job relation

d. **Wages** – which informs the extent to which wages differ by age cohorts, all else equal

e. **Residential overcrowding** – that indicates wealth or net worth constraints

f. **Ability to face unexpected financial expenses** – which measures financial stability

Poverty: Relative poverty is measured by comparing individuals aged 25–34 with those aged 65 and over. This reflects whether young adults are more likely to fall below the at-risk-of-poverty threshold than older adults, a key sign of age-related disadvantage. Sensitivity checks are carried out using alternative age brackets to ensure robustness.

$$(1)\ Poverty = \frac{AtRiskOfPoverty_{25-34} - AtRiskOfPoverty_{65+}}{AtRiskOfPoverty^{EU-19}{}_{25+}}$$

Labor market outcomes: for labor market indicators, we compare young adults (25–34) to older working-age adults (55–64). This choice avoids distortions, since many people retire at 65 or earlier, and many remain in education until 25.

Unemployment is computed as:

$$(2)\ Unemployment = \frac{UnemploymentRate_{25-34} - UnemploymentRate_{55-64}}{UnemploymentRate^{EU-19}{}_{25+}}$$

Permanent contracts capture job stability, with the share of permanent contracts compared between younger and older working-age adults:

$$(3)\ PerContracts = \frac{\%PerContracts_{55-64} - \%PerContracts_{25-34}}{\%PerContracts^{EU-19}{}_{25+}}$$

Wages: To estimate **wage disparities between younger and older adults**, we adopt a **Mincerian regression approach**, a widely used method in labor economics for analyzing wage determinants. The advantage of this approach is that it allows us to **isolate the effect of age on wages**, while controlling for other observable characteristics that also influence earnings. In other words, it ensures that the wage differences we attribute to age are not simply the result of differences in education, experience, or other relevant factors. We restrict the analysis to individuals aged **25–64** who have held a **full-time contract in the past 12 months**, thereby focusing on those fully engaged in the labor market. This exclusion avoids distortions from people still in education (younger than 25), in partial retirement schemes, or out of the labor force for other reasons. The model is estimated separately for each country, which allows us to capture cross-national variation in wage structures and age-related inequalities.

Formally, we regress net yearly wages on two sets of explanatory variables:

1. **Age cohort indicators**. We include two dummy variables identifying individuals aged 25–34 and 55–64, with the 35–54 age group as the reference category. This structure allows us to directly estimate how wages differ between younger and older adults relative to mid-career workers, who typically represent the earnings peak.

2. **Standard wage determinants**. To avoid confounding the effect of age with other wage-relevant factors, we control for gender, years of education, labor market experience, occupation, economic sector, contract type (permanent vs. temporary), immigration status.

By including these controls, we ensure that wage differences attributed to age are not simply capturing, for example, the fact that younger workers tend to have less experience, or that older workers are more likely to hold permanent contracts.

The **coefficients on the age dummies** reveal the estimated wage gaps for younger and older cohorts relative to the mid-career

group, once these other factors have been accounted for. We then compute the wage inequality component of the Index as the difference between the coefficients for older and younger workers (β55–64 – β25–34). This value indicates the **net wage advantage (if positive) or disadvantage (if negative)** of older adults compared to younger adults in each country.

Put simply, if the coefficient for the older group is higher than for the younger group, this means that—after controlling for education, occupation, and other factors—older adults still earn more than their younger counterparts. Conversely, if the coefficient is lower, younger adults enjoy a wage advantage. This method thus provides a **robust, country-specific measure of age-based wage inequality**, one that highlights whether observed wage gaps can be explained by structural characteristics or reflect genuine disparities between generations in the labor market.

Housing and financial stability: Residential overcrowding is measured using EU-SILC's household-level indicator of whether living space is considered overcrowded given the number of rooms and household members. This measure matters because housing conditions affect not only physical comfort but also **privacy, mental health, family dynamics, and even children's educational performance**. Overcrowding can limit young adults' ability to form independent households, delay family formation, and reduce well-being. Older adults, by contrast, often live in households where children have left home and where housing is relatively stable, sometimes supported by mortgage-free ownership. The indicator compares the share of young adults (25–34) and older adults (65+) living in overcrowded households, normalized by the EU-19 average among the population aged 25 and over. This yields a measure of whether young adults are disproportionately disadvantaged in terms of housing adequacy:

$$(4)\ Overcrowding = \frac{OvercrowdedDwelling_{25-34} - OvercrowdedDwelling_{65+}}{OvercrowdedDwelling^{EU-19}_{25+}}$$

A **positive value** means that overcrowding is more prevalent among the young than among the old, while a **negative value** would indicate the opposite. This helps capture one of the most visible material inequalities between generations in Europe today: the difficulty younger cohorts face in securing adequate and affordable housing.

Financial stability is assessed using a yes/no EU-SILC question on whether households would be able to cover an **unexpected expense** (for example, a sudden medical bill or urgent home repair). This is a crucial proxy for **economic resilience**, as it measures whether families can withstand shocks without falling into hardship or debt. Younger adults often face greater financial precarity, with lower savings, less access to credit, and lower family wealth compared to older cohorts, who may benefit from accumulated wealth and public pensions. The indicator compares the share of respondents aged 25–34 and 65+ who declare themselves able to face such unexpected expenses, again normalized by the EU-19 average:

$$(5)\ FinancialStability = \frac{FinancialStability_{65+} - FinancialStability_{25-34}}{FinancialStability^{EU-19}_{25+}}$$

A **positive value** indicates that older adults enjoy greater financial security than the young, while a **negative value** would suggest the reverse.

Together, these two indicators capture whether young people are disproportionately constrained in two essential dimensions of material life: **housing adequacy and financial resilience**. Overcrowding reflects long-term structural barriers to independence and family formation, while financial instability highlights short-term vulnerability to shocks. Both are central to assessing whether younger generations can pursue dignified and autonomous life plans comparable to those of older adults.

The overall **Economic Fairness dimension** is obtained by combining the six sub-indicators—poverty, unemployment, permanent contracts, wages, overcrowding, and financial stability—into a single composite measure. This aggregation does not rely on one unique method but instead follows the **three complementary approaches** described above: equal weighting, empirical weighting, and normative weighting. Each of these strategies offers a different lens for interpreting the relative importance of the sub-dimensions, balancing transparency, data-driven evidence, and normative reasoning. Presenting them side by side ensures that the Economic Fairness dimension is not only statistically robust but also sensitive to the underlying principles of intergenerational justice. In this way, the dimension provides a comprehensive picture of economic disparities between younger and older adults, while also remaining flexible to alternative perspectives on how fairness should be assessed.

5.1.2 Access to Essential services and Public Goods.

Access to essential services is a **cornerstone of intergenerational justice**, as it determines whether individuals at different stages of life can count on the public goods and infrastructures that sustain well-being, security, and equal opportunity. Unlike income or employment—which are largely determined through market participation—essential services reflect the **collective capacity of societies** to provide health care, social protection, safe environments, and the infrastructure necessary for full participation in daily life. Unequal access to these services can create profound disadvantages: younger adults may struggle to access health care or adequate welfare support during vulnerable transitions, while older adults may face risks from inadequate care, unsafe environments, or digital exclusion.

In designing this dimension, we try to focus on concrete and measurable conditions of access. However, we need to rely on individual perceptions about those barriers, such as unmet health needs or perceived crime in one's neighborhood, which may reflect lived realities shaping individual behavior and well-being.

The dimension is comprised of five sub-indicators:

a. **Unmet health needs –** whether people can obtain the medical care they require.

b. **Exposure to pollution, grime, and noise** – environmental conditions that directly affect health and quality of life.

c. **Exposure to crime, violence, and vandalism –** perceptions of safety and security in one's local area.

d. **Internet access –** a critical enabler of participation in modern societies.

e. **Income transfers as a share of total household resources –** the extent to which public policies cushion risks and support autonomy at different life stages.

Together, these measures provide a multifaceted view of whether essential services are equitably distributed across age groups. They allow us to see whether younger adults and older adults alike have sufficient access to health, protection, security, and digital infrastructure to live autonomous and dignified lives.

Health care access: access to health care is a cornerstone of sufficiency at all ages. Using ESS data, we identify individuals who report having needed a medical examination or treatment in the previous year and then classify whether their needs were **satisfied** or **unsatisfied**. Crucially, not all unmet needs can be considered unjust. For instance, someone who "wanted to wait and see if the problem improved" does not necessarily face an injustice. By contrast, cases where people could not afford treatment, faced excessively long waiting lists, were unable to take time off due to work or family responsibilities, lacked transportation, or did not know a doctor or specialist reflect structural or financial barriers that violate the principle of fair access.

The health access sub-indicator is then computed as:

$$(6) AccessToHealth = \frac{SatisfiedHealthNeeds_{65+} - SatisfiedHealthNeeds_{25-34}}{SatisfiedHealthNeeds^{EU-19}{}_{25+}}$$

A positive value indicates that older adults have their health needs satisfied more frequently than the young, while a negative value points to the reverse.

Environmental risks and exposure to crime: the quality of the environment and the safety of one's neighborhood are crucial public goods. EU-SILC asks respondents whether the area where they live has problems with **pollution, crime, or noise** (often linked to traffic or industrial activity), and whether there are problems with **crime, violence, or vandalism**. Both are coded as yes/no indicators.
The sub-dimensions are computed as follows[1]:

$$(7) EnvironmentalRisk = \frac{EnvironmentalRisk_{25-34} - EnvironmentalRisk_{65+}}{EnvironmentalRisk^{EU-19}{}_{25+}}$$

$$(8) Crime = \frac{Crime_{25-34} - Crime_{65+}}{Crime^{EU-19}{}_{25+}}$$

Positive values indicate that younger adults are more exposed to pollution or crime than older adults. This reflects whether the environments in which different generations live are equally safe, healthy, and conducive to well-being.

[1] Note: Data is unavailable for Ireland.

Internet access: digital connectivity has become indispensable for participation in modern societies, affecting access to services, communication, and opportunities. EU-SILC asks whether households have internet access at home, and if not, the reason. We treat lack of access as an **unjust disadvantage** only when it stems from an **inability to afford it**. By contrast, individuals who answer "No, other reason" are assumed to have made a personal choice (e.g. lack of interest) rather than being structurally excluded.

The internet access sub-indicator is computed as:

$$(8)\ InternetAccess = \frac{InternetAccess_{65+} - InternetAccess_{25-34}}{InternetAccess^{EU-19}{}_{25+}}$$

A positive value indicates that older adults are more likely to enjoy affordable access than the young, while a negative value indicates the opposite.

Social transfers: finally, we measure the extent to which households rely on **social transfers** (excluding pensions) as a share of total disposable income. This includes benefits such as unemployment assistance, child allowances, and housing subsidies. To account for differences in household size and structure, transfers are equivalized and expressed as a ratio of **equivalized** household income.

The indicator is calculated separately for those aged 25–34 and 65+, and then normalized by the EU-19 average:

$$(9) Share\ Social\ Transfers = \frac{Share\ Social\ Transfers_{65+} - Share\ Social\ Transfers_{25-34}}{Share\ Social\ Transfers^{EU-19}{}_{25+}}$$

This measure reflects whether younger adults can count on social transfers during vulnerable phases of life—such as the transition to independent adulthood or child-rearing—or whether benefits disproportionately favor older groups.

Taken together, these five sub-indicators provide a **comprehensive picture of access to essential services across age groups**. They cover critical areas of well-being—from basic health care and safety to digital access and welfare support—and reveal whether younger and older adults enjoy comparable opportunities to meet their needs and pursue autonomous lives.

As with other dimensions of the Index, the sub-indicators are combined using the **three aggregation** strategies (equal, empirical, normative) described later in this chapter, ensuring that the results are both transparent and normatively grounded.

5.1.3 Relational equality

The third dimension of the Index captures **Relational Equality**, which concerns the extent to which individuals of different ages enjoy equal standing in their social lives. Beyond material resources and access to services, justice requires that people are able to **form meaningful connections, participate in community life, and be free from discrimination and stigma**. This dimension therefore examines whether younger and older adults are equally integrated into the social fabric and equally protected from marginalization.

We rely on **2023 EU-SILC and ESS data** to measure both the **quantity** and the **quality** of social relations, as well as the incidence of **age-based discrimination**. For quantity, we track how often people meet socially and whether they participate in leisure activities. For quality, we assess whether individuals can rely on close personal networks, their mental wellbeing, and whether they are exposed to discrimination. Following our general methodology, we compare individuals aged **25–34 (younger adults)** with those aged **65 and over (older adults)**, with sensitivity checks carried out using alternative brackets.

Social interactions and leisure: social connectedness is a basic condition for dignity and well-being. Using ESS data, we measure the frequency of **social meetings** with friends, relatives, or colleagues.

A dummy variable is coded as 1 if the respondent meets socially **at least once a week**, and 0 otherwise.

The sub-dimension is then constructed as:

$$(10)\ SocialMeet = \frac{SocialMeet_{65+} - SocialMeet_{25-34}}{SocialMeet^{EU-19}{}_{25+}}$$

In addition, EU-SILC asks whether respondents can afford in engaging into **regular leisure activities**, which often serve as proxies for social participation (sports, cultural activities, volunteering). The indicator is computed as:

$$(11)\ LeisureActivityRatio = \frac{LeisureAct_{65+} - LeisureAct_{25-34}}{LeisureAct^{EU-19}{}_{25+}}$$

Together, these measures capture whether younger and older adults differ in their opportunities to maintain **active and fulfilling social lives**.

Close personal networks: beyond social participation, relational equality also depends on the availability of **trusted networks** for support. Using ESS data, we identify respondents who report being able to discuss **intimate or personal matters with at least three people**. This threshold provides a measure of the robustness of close social ties. The sub-dimension is defined as:

$$(12)\ SocialNetwork\ = \frac{SN3\ +_{65+} - SN3\ +_{25-34}}{SN3\ +^{EU-19}{}_{25+}}$$

Strong networks protect against loneliness and vulnerability, while their absence often signals **social isolation**, which is linked to poorer health outcomes and reduced life satisfaction.

Mental well-being: relational equality is not only about the **quantity and quality of social connections** but also about their impact on people's **psychological health**. To capture this dimension, we use the **CES-D8 scale** (Radloff, 1977), a widely employed tool in epidemiological and social research for assessing depressive symptoms. The CES-D8 is based on eight questions included in the **European Social Survey (ESS)** that ask respondents how often they experienced feelings such as sadness, loneliness, low energy, or difficulty concentrating in the past week. Following established practice (Greenfield et al., 2016), we classify individuals as being at **risk of depression** if they score **8 or higher** on the scale. This threshold provides a consistent and validated way of distinguishing those experiencing a significant burden of depressive symptoms. Since such outcomes represent **negative states of well-being**, we invert the construction of the indicator in line with our general "more is better" approach: higher values of the sub-indicator represent a disadvantage for one group relative to the other. The indicator is therefore computed as:

$$(13)\ MentalWellbeing\ = \frac{AtRiskOfDepression_{25-34} - AtRiskOfDepression_{65+}}{AtRiskOfDepression^{EU-19}{}_{25+}}$$

A **positive value of this indicator** indicates that older adults (65+) are at less risk of suffering depression than the younger adult population (25-34).

This measure is particularly important because it links **social and psychological vulnerabilities**. Depressive symptoms often arise from weak or unstable social networks, discrimination, and limited institutional support. For young adults, risks may be connected to insecurity in work, housing, and life transitions, while for older adults, they may be tied to loneliness, loss of close relations, or health decline. By systematically comparing the relative prevalence of depressive symptoms across age groups, the Index highlights whether the burdens of **mental distress** are unequally distributed between generations.

Crucially, mental well-being is not just a private matter but a **public concern**, as it affects productivity, social participation, and the overall resilience of communities. Including it as a sub-indicator ensures that the dimension of relational equality reflects not only **external opportunities for connection and recognition** but also the **internal capacity to enjoy them without the weight of psychological distress**.

Discrimination: while social participation and networks capture the **positive side of relational equality**, it is equally important to account for barriers created by prejudice and exclusion. Age-based discrimination, or ageism, undermines equal standing by denying people opportunities, respect, or fair treatment simply because of their age. This can take the form of stereotypes about competence, access barriers in the labor market, or being dismissed in public services. Crucially, ageism can affect both ends of the life course: older people may be seen as less productive or dependent, while younger people may be dismissed as inexperienced, reckless, or unreliable.

To capture this phenomenon, we draw on the **European Social Survey (ESS)**, which asks respondents whether they consider themselves part of a **discriminated group** in their country. The ESS also collects detailed socio-demographic information on potential grounds for discrimination—such as **gender, age, ancestry, citizenship, country of birth, religion, and disability**.

Our approach is to estimate **linear probability models** separately for each country, where:

- The dependent variable is whether the respondent reports belonging to a discriminated group.
- The key explanatory variable of interest is the **age group** (25–34 vs. 65+).
- Controls include education level, regional location (NUTS1), and the other socio-demographic characteristics mentioned above.

This method ensures that we are isolating the effect of age itself, rather than conflating it with other potential sources of discrimination such as gender, ethnicity, or disability status. By focusing on the marginal effect of age, we obtain an estimate of whether younger or older adults are more likely to report belonging to a discriminated group once other disadvantages are held constant.

The sub-dimension is computed as:

(14) $Discrimination = \Pr(Discriminated\ Group)_{25-34} - \Pr(Discriminated\ Group)_{65+}$

A positive value indicates that older adults are less likely to perceive themselves as discriminated against, while a negative value suggests that they are more likely to feel excluded compared to younger adults.

This measure is significant because it captures **subjective but socially meaningful experiences** of injustice. Unlike poverty or unemployment, which are external outcomes, discrimination reflects how people themselves experience being treated unfairly in their society. It highlights whether stereotypes and prejudice disproportionately fall on younger or older adults, shaping their opportunities for full participation. By including discrimination in the Relational Equality dimension, the Index recognizes that **justice requires not only material sufficiency but also equal respect and freedom from stigma** at every age.

Together, these five sub-indicators provide a **comprehensive measure of relational equality**. They capture whether younger and older adults differ in:

- **The quantity of their social interactions** (meetings, leisure).
- **The quality of their close networks** (availability of trusted personal contacts).
- **Their mental health outcomes** (risk of depression).
- **Their exposure to discrimination** (self-reported group disadvantage).

The overall relational equality dimension is then constructed using the **three aggregation strategies** discussed in Section 3.5, ensuring that the final measure balances transparency, empirical evidence, and normative principles. By doing so, the Index highlights whether younger and older adults enjoy equal recognition, respect, and standing in the social sphere—a key pillar of intergenerational justice.

5.1.4. Political Equality

The fourth and final dimension of the Index addresses **Political Equality**—the degree to which citizens of different ages enjoy **equal standing and influence in democratic life**. Political equality is essential to intergenerational justice: even if economic and social resources are fairly distributed, democracy would remain incomplete if the voices of some generations systematically outweighed those of others. This dimension therefore captures whether younger and older adults have **comparable opportunities to participate in politics, to be represented by parties and institutions, and to see their concerns reflected in policy debates**.

To measure this, we combine **individual-level indicators** of engagement, drawn primarily from the **European Social Survey (ESS)**, with **institutional indicators** from two external datasets: the **Manifesto Project**, which codes how political parties address age-related issues in their programs, and the **WARP project**, which measures how representative national parliaments are in terms of age composition. By pairing the **demand side of politics** (citizens' participation and attitudes) with the **supply side** (party responsiveness and institutional representation), we obtain a more complete and balanced picture of political equality.

Because this dimension focuses on political participation and representation, we **exclude non-citizens** from the analysis, since they are not eligible to vote or stand for election in their country of residence. We also set aside individuals aged 18–24. The main reason is consistency: in all other dimensions, we compare groups starting from age 25. In addition, political preferences in the 18–24 group are often not yet consolidated and may depend heavily on whether they have already experienced their first election. In any case, excluding this group does not substantially change the results.

Self-perceived voice and efficacy: the first two indicators measure whether citizens feel they have a voice in politics:

"Having a say in politics." Respondents who report having *some, a lot, or a great deal* of influence are coded as 1; all others as 0. The indicator compares older adults (65+) and younger adults (25–34):

$$(13)\ A\ Say = \frac{ASay_{65+} - ASay_{25-34}}{ASay^{EU-19}{}_{25+}}$$

"Own ability to influence politics." This question goes further, asking how confident individuals are in their own ability to participate effectively. Respondents declaring themselves *quite, very, or completely confident* are coded as 1. The comparison is again between 65+ and 25–34:

$$(14)\ Own\ Ability = \frac{Own\ Ability_{65+} - Own\ Ability_{25-34}}{Own\ Ability^{EU-19}{}_{25+}}$$

These indicators capture perceptions of **political efficacy**—whether people feel empowered to influence political outcomes

Political engagement: beyond perceptions of voice and influence, political equality also depends on whether individuals **actively engage** with the democratic process. Engagement is multidimensional: it includes not only formal participation such as voting, but also broader forms of involvement, such as **interest in politics** and **attachment to political parties.**

These behaviors shape how well different generations are represented in practice, since those who are more engaged tend to have their preferences heard more strongly.

We construct three sub-indicators of political engagement, based on **ESS 2023 data**.
For each, responses are coded in binary form and we compare outcomes between **younger adults (25–34)** and **older adults (65+)**, normalizing results by the EU-19 average.

- **Interest in politics**. Respondents who report being quite or very interested in politics are coded as 1.Political interest is a crucial precondition for engagement, since people who lack interest are far less likely to participate in other ways.

$$(15)\ Interested = \frac{Interested_{65+} - Interested_{25-34}}{Interested^{EU-19}{}_{25+}}$$

- **Voting**. Based on self-reported participation in the most recent national election, with 1 indicating that the individual voted and 0 otherwise. Voting is the **most direct and universal form of democratic participation**, and turnout differences by age are among the clearest signs of unequal influence.

$$(16)\ Voted = \frac{Voted_{65+} - Voted_{25-34}}{Voted^{EU-19}{}_{25+}}$$

- **Closeness to a political party**. Respondents who feel close to at least one party are coded as 1. Party closeness is important because it reflects **long-term attachments to the political system**, which tend to stabilize participation and representation. A lack of attachment, by contrast, may indicate disengagement or dissatisfaction with available political options.

$$(16)\ Close\ Party = \frac{Close\ Party_{65+} - Close\ Party_{25-34}}{Close\ Party^{EU-19}{}_{25+}}$$

Taken together, these three indicators capture whether younger and older adults differ in their **interest, attachment, and willingness to participate in politics**. If older adults systematically report higher levels of political interest, higher turnout, and stronger party ties, this suggests that their preferences are more consistently translated into electoral outcomes. Conversely, if younger adults show lower engagement, they may be underrepresented in the democratic process—even before considering how parties or institutions respond.

By combining these measures, the Index highlights the **behavioral foundations of political equality**: who is paying attention, who is turning out to vote, and who feels represented by parties. These factors are critical for understanding whether democracy offers equal voice to citizens across generations.

Institutional responsiveness: political equality cannot be assessed by looking only at **citizens' engagement and perceptions**. Even if individuals are equally interested in politics or turn out to vote at similar rates, equality will be lacking if political institutions fail to **respond fairly to the concerns of different generations**. For this reason, we complement ESS survey data with two institutional indicators: one capturing how political parties frame generational issues in their **programmatic agendas**, and another measuring how well parliaments **mirror the demographic structure of society**.

Saliency of age-related issues (Manifesto Project): the first institutional indicator examines the extent to which political parties prioritize policies relevant to younger or older generations in their electoral manifestos. Drawing on the **Manifesto Project**, which systematically codes the content of party programs across Europe, we focus on **quasi-sentences explici**tly referring to age-specific expenditure—for example, pledges to increase support for youth employment, expand education, or adjust retirement benefits. Saliency is computed as the **difference between positive and negative references** for a given age group, normalized by the total number of expenditure-related quasi-sentences that are not attributed to any specific group. This ensures that our measure accounts for the baseline level of budgetary discussion in each manifesto. Country-level saliency scores are then calculated as a weighted average of party-level scores, using each party's vote share in the most recent election as weights:

$$(16)\ Saliency\ Indicator = \frac{Expenditure\ Ref^{Older\ Adults} - Expenditure\ Ref^{Younger\ Adults}}{Expenditure\ Ref^{None\ Category}_{EU-19}}$$

A **positive value** indicates that older adults receive greater attention in sentences that refer to expenditures expansions in party programs, while a **negative value** suggests a stronger emphasis on youth-related policies. This indicator reveals whether **parties systematically privilege one generation over another** in their programmatic supply.

Age representation in parliaments (WARP): the second institutional indicator addresses whether legislatures reflect the **age composition of the citizenry**.

Using data from the **WARP project**, we rely on the **Age Representation Index (ARI)**, defined as the share of representatives in a given age group divided by the share of citizens in that same group. An ARI of 1 denotes perfect descriptive representation, while values greater or smaller than 1 indicate over- or under-representation.

In our framework, we compare the ARI of older adults (65+) with that of younger adults (under 40), normalized by the ARI of the middle-aged group (40–64):

$$(17)\ Representation = \frac{ARI_{\ Older\ Adults} - ARI_{Younger\ Adults}}{ARI^{EU-19}{}_{40-64}}$$

This measure captures whether **older generations are disproportionately present in parliaments compared to younger ones**, relative to their share of the population. Persistent under-representation of younger cohorts would suggest that their voices are structurally weaker in formal political institutions, even if they are active participants as voters or party members.

By combining **citizens' self-perceptions, actual political engagement, party program saliency**, and **parliamentary representation**, the Political Equality dimension provides a comprehensive assessment of democratic fairness across generations. It reveals not only whether younger and older adults are equally active in politics, but also whether **parties and legislatures treat their concerns with equal seriousness**. Together, these indicators help identify whether the democratic process risks structurally privileging one generation over another, or whether it offers **equal voice and equal influence** to citizens across the life course.

5.2 Weighting

Defining how to weight the indicators within each dimension is a **crucial step** in constructing the Intergenerational Justice Index. Weighting determines how much influence each indicator has on the overall score, and therefore reflects an implicit judgment about the relative importance of different aspects of intergenerational fairness. Unlike some established indices, such as GDP per capita or unemployment rates, there is no single, universally accepted principle that tells us how to combine these diverse components into one measure.

For this reason, we adopt a **pluralistic approach**, presenting three complementary weighting strategies:

1. A **simple average**, where each indicator contributes equally.

2. An **empirical weighting scheme,** which relies on observed associations with life satisfaction.

3. A **normative weighting scheme**, which draws on ethical principles of justice.

Each approach has its own **strengths and limitations**, but together they offer a more comprehensive and robust picture of intergenerational disparities.

It is important to stress that these weighting mechanisms apply first to the **aggregation of indicators within each dimension** (for example, the six components of economic fairness), and then, in a second step, to the **aggregation across dimensions**. In this way, weighting allows us to condense multiple measures into dimension-level scores, which can then be compared and combined to construct the overall Index.

In practice, weighting must also address two methodological challenges. First, because the Index combines data from different sources (EU-SILC, ESS, Manifesto Project, WARP), weighting needs to integrate them in a way that preserves **coherence and comparability**. Second, aggregation should be **robust to noise, measurement error, and composition effects**, so that results are not driven by artifacts of survey design or data availability. By presenting three different approaches side by side, we increase **transparency** and provide a **robustness check**: if disparities persist across methods, we can be more confident they reflect real intergenerational inequalities rather than methodological choices.

5.2.1 Simple Average

The first method is the **simplest and most transparent**. Each indicator within a dimension is given the same weight, and the dimension score is calculated as the arithmetic mean of its indicators. The same principle is then applied when aggregating across dimensions to build the overall Intergenerational Justice Index.

The main advantage of this method is its **clarity**: every indicator is treated equally, and results can be directly traced back to the underlying data without introducing assumptions about relative importance. Policymakers and non-specialists can easily interpret results, which makes this approach a useful **baseline or benchmark**.

However, the simplicity of equal weighting is also its weakness. It implicitly assumes that all indicators are equally important—for example, that overcrowded housing matters as much as unemployment, or that political party attachment matters as much as unmet health needs. This is a **strong normative claim** in itself, and one that is open to debate. In addition, simple averages are particularly vulnerable to **outliers**: a single extreme value can disproportionately shape the score for a dimension, even when the other indicators point in a different direction.

5.2.2 Weighted average using empirical weights

The second method grounds the weighting in **empirical evidence** about what people themselves value. The logic is that if an indicator contributes more strongly to individuals' overall sense of well-being, it should carry more weight in assessing intergenerational fairness.

To operationalize this, we use **self-reported life satisfaction** as a common benchmark. This measure is available in both EU-SILC and ESS, with consistent wording and coding, and has long been used in social science research as a proxy for well-being. We estimate how strongly each indicator is associated with life satisfaction, controlling for basic socio-demographics (gender, age, region) to avoid spurious correlations.

Because many of our indicators are correlated (e.g. income, housing, and job stability), we employ **dominance analysis**, a statistical technique that partitions the explanatory power of a regression model across correlated predictors. This allows us to determine the **relative importance** of each indicator without double-counting overlapping effects. We then normalize the contributions by dividing each indicator's share of explained variance by the total explanatory power (R^2) across

the four dimensions. This produces a set of **empirical weights** that reflect how much each component contributes to life satisfaction.

The strength of this method is that it moves beyond arbitrariness, anchoring the Index in observed patterns of human well-being. It also handles **collinearity** transparently, which is crucial given the overlap among indicators. However, it has important limitations. First, it assumes that **life satisfaction is a valid and stable measure of justice outcomes** across countries, cultures, and age groups—an assumption that may not hold in all contexts. Second, life satisfaction is a **subjective measure**, potentially influenced by temporary moods, cultural response styles, or expectations. Third, statistical associations do not necessarily imply **causal importance**: an indicator may correlate with life satisfaction without being the most urgent or ethically significant driver of justice.

5.2.3 Weighted average using normative weights

The third method is explicitly **principle-based**. Rather than relying on statistical associations, it assigns weights according to ethical reasoning about what justice between generations requires. In line with the discussion in Chapter 2, we base our weighting scheme on three **normative commitments**:

1. **Sufficiency** – priority to meeting basic needs.
2. **Avoidance of scarring** – emphasis on preventing disadvantages that have long-lasting effects across the life course.
3. **Equal citizenship** – recognition of the constitutional importance of political equality.

Based on these principles, we assign:

- **30%** to Economic Fairness
- **25%** to Access to Essential Services and Public Goods
- **20%** to Relational Equality
- **25%** to Political Equality

This distribution reflects the belief that economic deprivation and lack of access to core services are the most immediate threats to human flourishing, while relational and political equality are equally crucial for ensuring dignity and equal standing in society.

Within each dimension, we also distribute weights according to normative importance. For example:

- In **Economic Fairness**, poverty and unemployment receive the largest weights, given their immediate and scarring consequences.

- In **Access to Services**, unmet health needs and social transfers are prioritized, as they safeguard sufficiency and security.

- In **Relational Equality**, discrimination carries more weight than leisure activities, because it directly undermines equal respect.

- In **Political Equality**, engagement (e.g. voting and participation) is prioritized, as it has a decisive impact on democratic inclusion.

The strength of the normative approach is that it makes **value commitments explicit**. Rather than pretending neutrality, it clarifies the ethical reasoning behind weighting, providing a principled rationale for why some indicators matter more than others. This is particularly important for policymakers and ethicists concerned with the fairness of trade-offs.

Its weakness is that it **relies on expert judgment**, which may reflect particular traditions or contexts and may not fully capture cultural or institutional variation across countries. Moreover, it risks being perceived as less "objective" than statistical methods, even though all weighting schemes ultimately involve normative choices.

By applying these three weighting approaches side by side, the Index balances **transparency, empirical grounding, and normative reasoning**. No single method can capture the full complexity of intergenerational justice. But by comparing results across approaches, we can assess the **robustness of findings** and provide a more nuanced understanding of where and how age groups are treated fairly or unfairly. In practice, this triangulation ensures that the Index is both **scientifically credible and normatively meaningful:** interpretable for policymakers, grounded in evidence, and aligned with principles of justice.

6. Results Across Countries and Age Groups

This chapter presents what the Intergenerational Justice Index reveals across 19 EU countries when we compare younger adults (25–34) with older adults (55–64 for labour-market items; 65+ for poverty, housing, financial resilience, services, and social/political items). Our goal is simple: show, in practical terms, **who is doing better, where, and on which dimension**—and why that matters for policy.

We organize the results along the four pillars of the Index: **Economic Fairness, Access to Essential Services and Public Goods, Relational Equality, and Political Equality**. Each pillar is built from concrete, harmonized indicators (EU-SILC, ESS, plus Manifesto and WARP for political institutions), normalized to a common EU-19 benchmark. Throughout, we apply the same sign convention, so the figures are easy to read:

- **Positive values** indicate that **older adults** are better off on that indicator.
- **Negative values** indicate that **younger adults** are better off.

Because fairness is multidimensional, we also report composite scores. For each pillar—and for the overall index—we present three aggregations: (i) **equal weights** (transparent benchmark), (ii) **empirical weights** (heavier weight for components more closely tied to life satisfaction), and (iii) **normative weights** (prioritizing sufficiency, avoidance of scarring disadvantages, and equal citizenship). Comparing the three helps you see **which findings are robust** and where value judgements or lived-experience measures shift the picture.

Here is how to navigate the chapter:

- **6.1 Economic Fairness** looks at poverty, unemployment, contract stability, wages, housing crowding, and financial resilience—i.e., whether people can attain economic independence and weather shocks.
- **6.2 Access to Essential Services and Public Goods** assesses unmet health needs, environmental and crime exposure, home internet access, and the role of non-pension social transfers in household income.
- **6.3 Relational Equality** captures social participation, close networks, perceived age-based discrimination, and mental well-being—asking whether people of different ages enjoy equal status and connection.
- **6.4 Political Equality** combines citizens' voice, interest, participation, party attachment, and institutional responsiveness (manifesto saliency, age representation in parliaments) to test whether democracy offers equal voice across ages.

- **6.5 Overall Index** brings the four pillars together to show the net tilt—pro-young, balanced, or pro-elderly—and highlights where offsetting strengths and weaknesses cancel out.

Two cautions before we dive in. First, a country can look "balanced" overall while hiding **large opposite-sign gaps** across dimensions (e.g., pro-elderly in jobs but pro-young in services). Second, when we discuss country patterns, remember we are comparing **age groups at one point in time**, not birth cohorts over their whole lives; the results tell us about **today's distribution of opportunities and voice**, which is exactly what policy can act on now.

With that in mind, we turn to the evidence—starting with how fairly Europe's economies treat younger and older adults.

6.1 Economic Fairness

Economic Fairness captures how well different generations fare in terms of their **basic material conditions of life**. It tells us whether younger and older adults can achieve economic security and independence, or whether one group systematically enjoys advantages over the other. To do this, we rely on six indicators that together paint a broad picture of economic well-being:

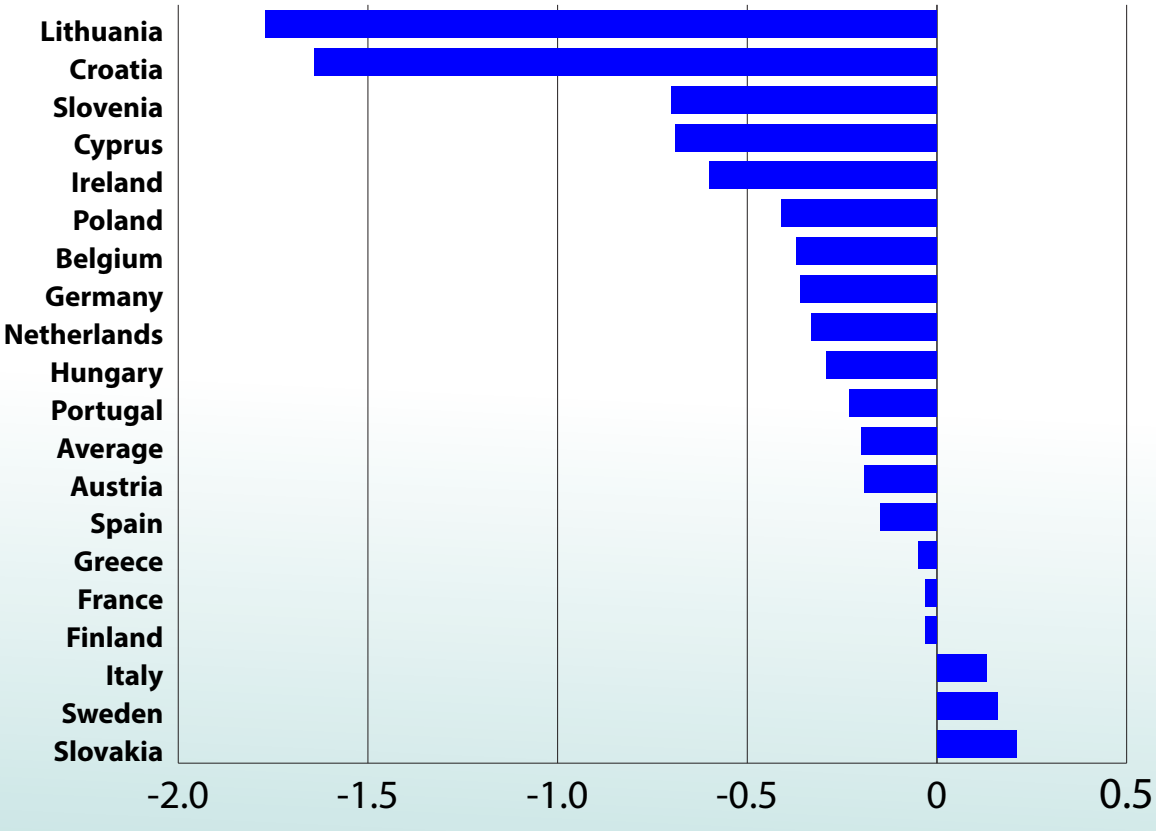
1. **Risk of poverty** – whether people fall below the poverty line.
2. **Unemployment** – whether people can find work.
3. **Permanent contracts** – whether jobs are secure or precarious.
4. **Wages** – whether people are rewarded fairly for their work.
5. **Residential overcrowding** – whether housing is adequate.
6. **Financial stability** – whether households can face unexpected expenses.

These measures are drawn from the **2023 EU-SILC** survey and allow us to compare the situation of younger adults (25–34) with older adults (55–64 for labor market outcomes; 65+ for poverty, housing, and financial resilience). A positive score means that older adults are better off; a negative score means younger adults hold the advantage.

The **risk of poverty indicator** shows that in most of Europe, older people are more exposed to poverty (*Figure 1*). In 13 of the 19 countries, and in the EU-19 average, seniors are more likely to live below the

poverty threshold. This reflects the fact that many older adults no longer work and must rely on pensions, savings, or family support. At the same time, there are notable exceptions. In **Slovakia, Sweden, and Italy,** poverty is higher among the young. In these countries, relatively generous pension systems cushion older adults, but this highlights a worrying reality for younger people, who struggle to establish economic independence and secure stable incomes.

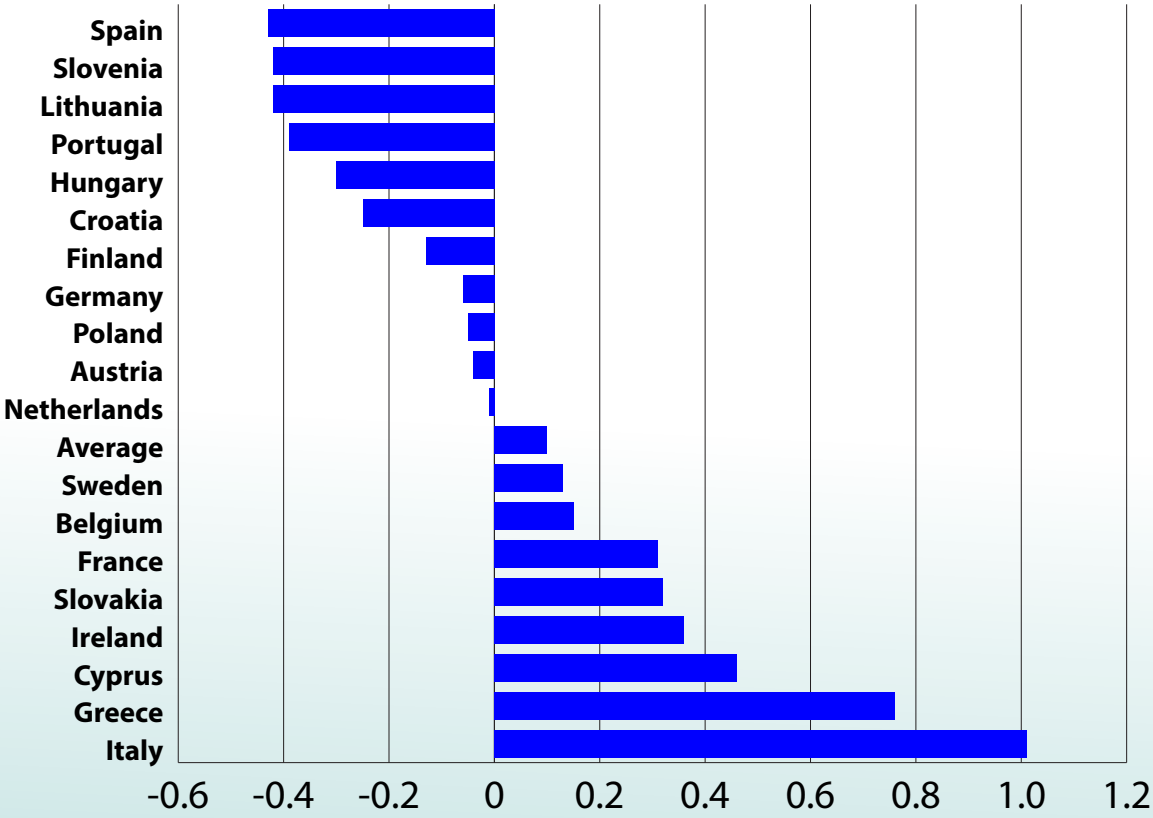
Figure 1: Risk of Poverty Indicator



Looking at the **labor market**, the picture is even starker. Unemployment rates are consistently higher among young people than older working-age adults in eight countries and in the EU average (*Figure 2*). The problem is particularly acute in **Italy and Greece**, where youth unemployment remains persistently high, limiting prospects for career development, independence, and family formation.

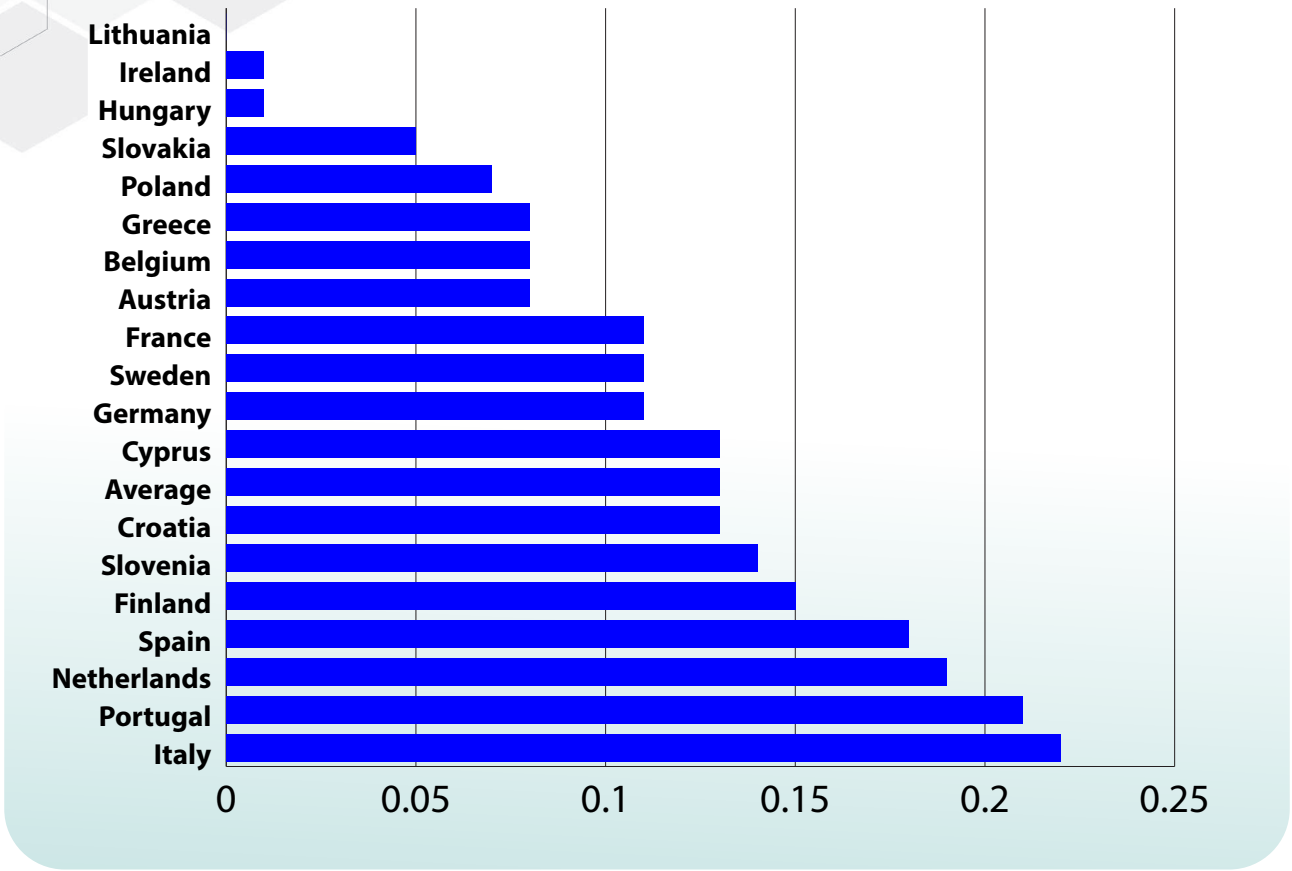
Even for those who do find jobs, **contract stability differs sharply by age**. In every country we studied, older workers are far more likely to hold permanent contracts (*Figure 3).* The divide is especially striking in **Italy, Portugal, the Netherlands**, and Spain, where dual labor markets—permanent contracts for insiders, temporary contracts for outsiders—create persistent disadvantages for younger generations. This instability has broader consequences: it delays major life decisions such as buying a home, having children, or investing in education and training.

Figure 2: Unemployment Indicator



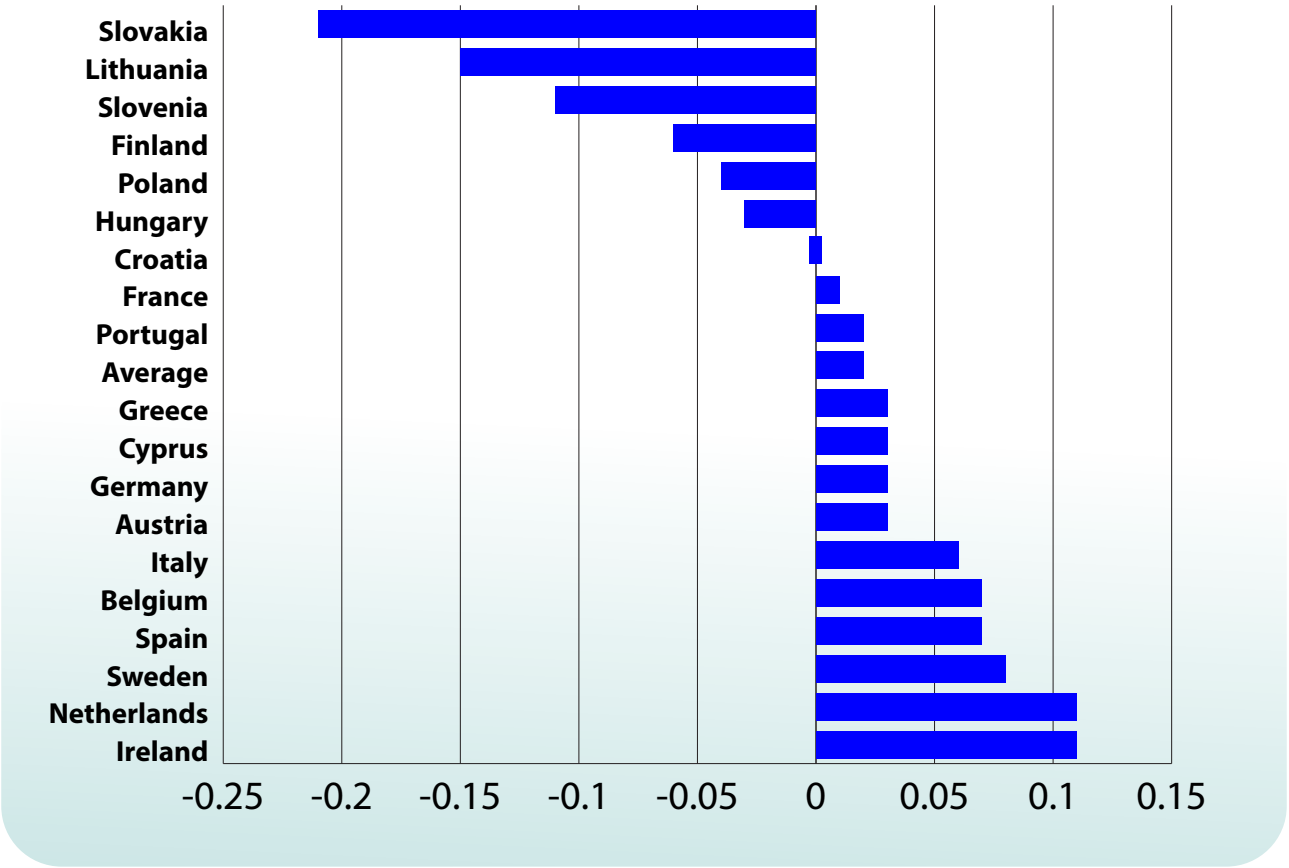
The sample includes only the working-age population, excluding individual above retirement age (i.e. comparing ages)

Figure 3: Permanent Contract Indicator



The sample includes only the working-age population, excluding individual above retirement age (i.e. comparing ages)

Figure 4: Age-estimated Wage Premium indicator



Estimation is based on a Mincerian approach, restricting the sample to full-time employees

Wages also show age-based differences (*Figure 4*). After controlling for factors like gender, education, occupation, and experience, older workers tend to earn more than younger ones in several countries. This is particularly evident in **Ireland and the Netherlands**, where seniority and job stability translate into significantly higher pay. Although some wage progression with age is expected, the persistence of large gaps after accounting for qualifications and work experience suggests that younger workers face structural disadvantages in the labor market.

When we turn to **housing**, the disparities are even more one-sided (*Figure 5*). Across all 19 countries, younger adults are more likely to live in **overcrowded housing** than older people. The problem is particularly acute in **Italy and Greece**, but also visible in **Croatia, Sweden, and Slovakia**. Overcrowding often reflects financial constraints, delayed entry into homeownership, and dependence on family housing, all of which hinder the ability of younger generations to establish autonomy.

Finally, the **financial stability indicator** confirms that younger people are less able to absorb economic shocks (*Figure 6*). In countries such as **Spain, France, and Sweden**, young adults are significantly less likely than older adults to say they could afford an unexpected major expense. This points to weaker savings, less accumulated wealth, and fewer safety nets for the young—factors that make them more vulnerable in times of crisis.

Figure 5: Household Crowding indicator

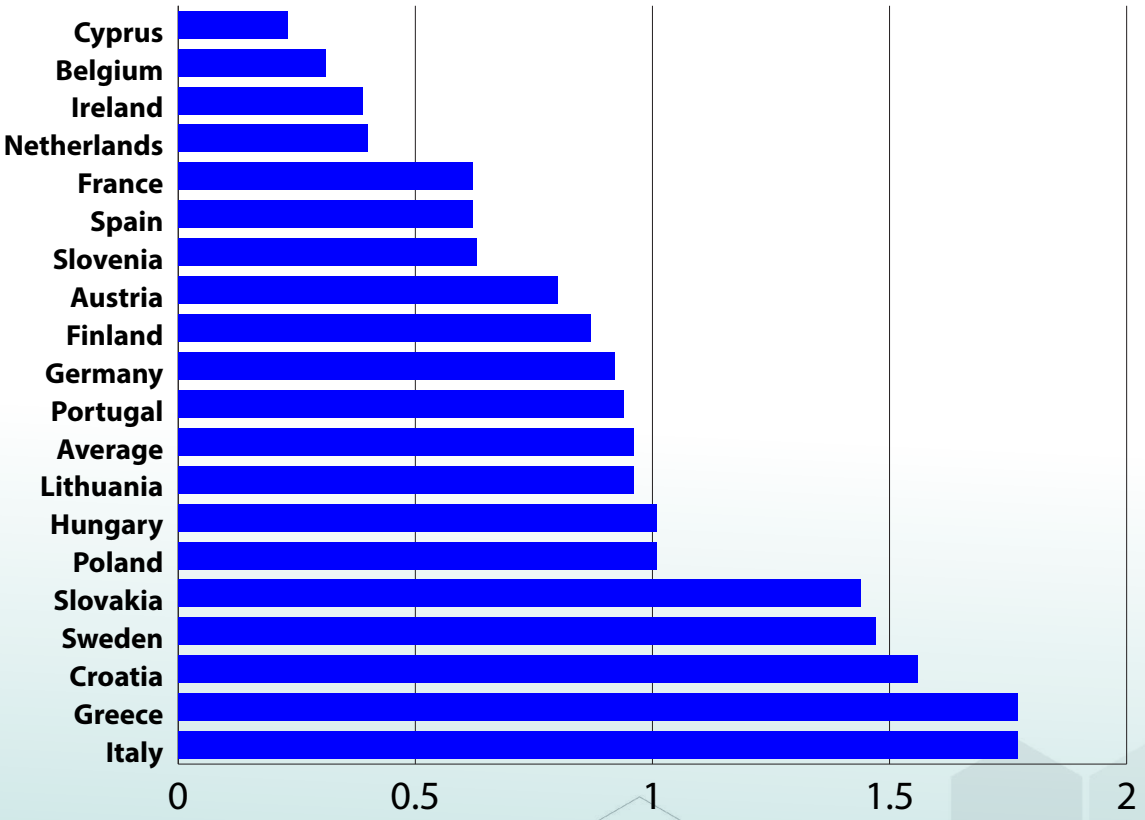
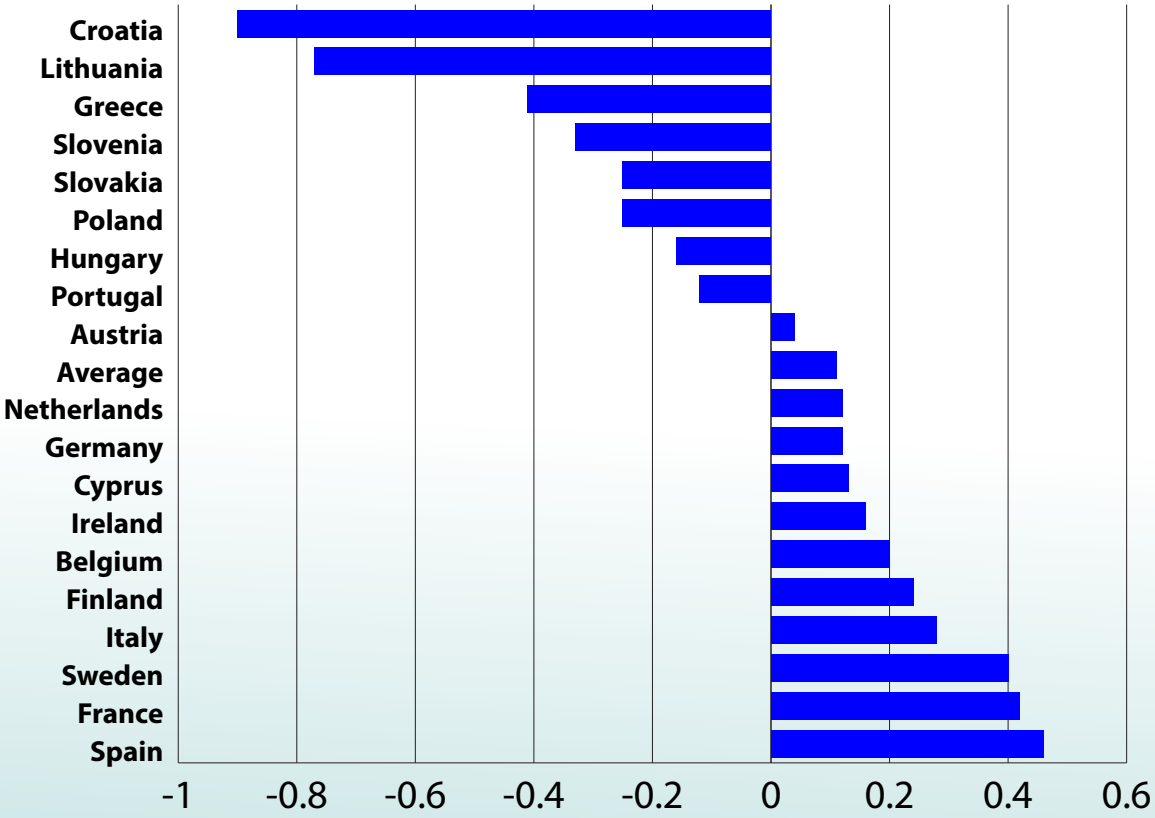


Figure 6: Financial Resiliency Indicator



When we combine these six elements into the **Economic Fairness Index**, the overall picture is clear: in most countries, economic resources and advantages tilt toward the elderly. Using equal weights, **16 of the 19 EU countries show an imbalance in favor of older adults** (*Figure 7*). The skew is strongest in **Italy, Sweden, and Greece**, where younger generations face consistent disadvantages across labor markets, housing, and financial security. By contrast, in countries such as **Lithuania, Croatia, and Slovenia**, younger adults fare relatively better, partly reflecting different welfare designs and labor market dynamics in newer EU Member States.

When we apply **empirical weights**—which give more importance to indicators most strongly associated with life satisfaction—

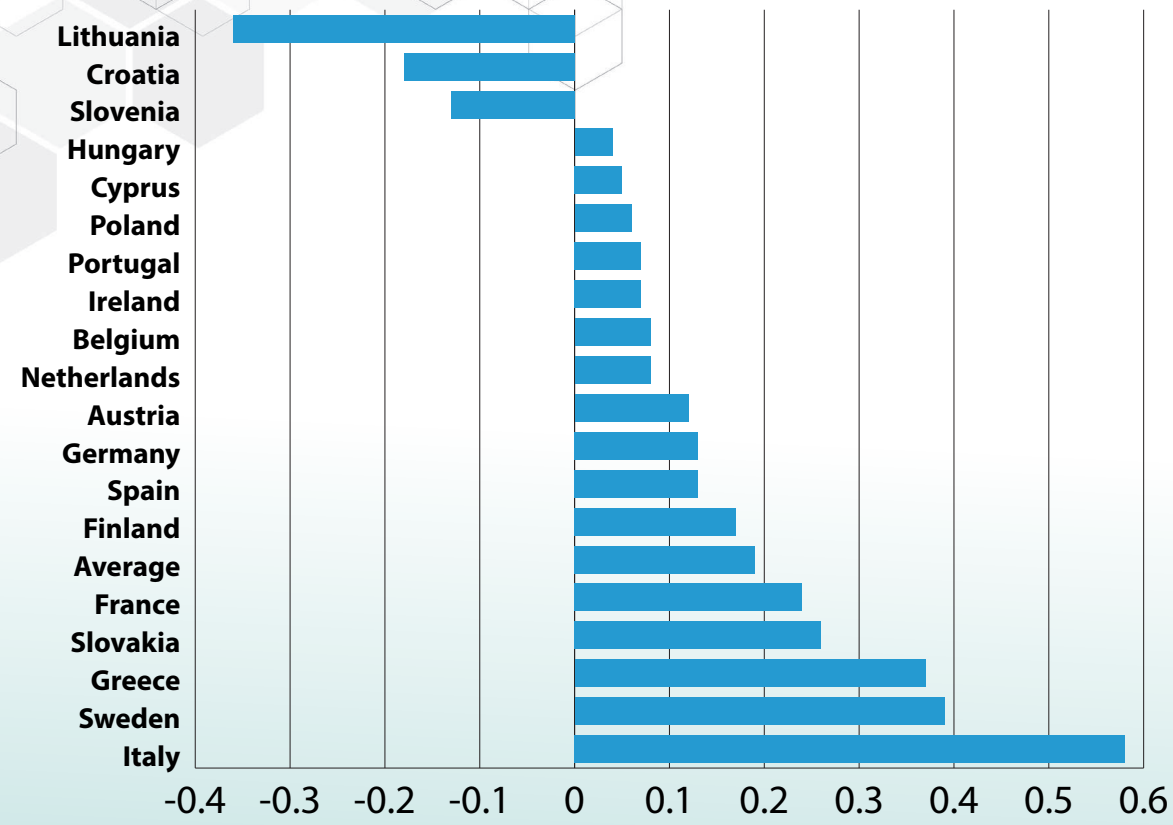
the picture softens somewhat (*Figure 8*). Only eleven countries are now clearly tilted toward the elderly. Interestingly, **Greece shifts category**: while simple weighting suggested a strong bias in favor of older adults, the empirically weighted index shows an advantage for the young. This reflects the fact that in Greece, despite high youth unemployment, older adults still face significant challenges in poverty and financial resilience—challenges that weigh heavily on subjective well-being.

Finally, using **normative weights**, which prioritize sufficiency, protection against scarring disadvantages, and equal citizenship, the results strike a more balanced note (*Figure 9*). Some countries remain strongly tilted toward older adults (Italy, Greece, Sweden), while others (Lithuania, Croatia, Slovenia) lean toward the young. This weighting strategy highlights how value choices matter: if we consider poverty and unemployment as more urgent than other indicators, some countries' profiles change significantly.

To summarize, the results show that **economic fairness across generations is far from balanced in Europe**. In most countries, older adults enjoy greater income security, more stable jobs, better housing, and stronger financial buffers, while younger adults face higher risks of poverty, unemployment, precarious work, and overcrowded living conditions. At the same time, the extent of the imbalance varies depending on how we weight the components, reminding us that judgments about fairness are partly empirical, but also partly normative.

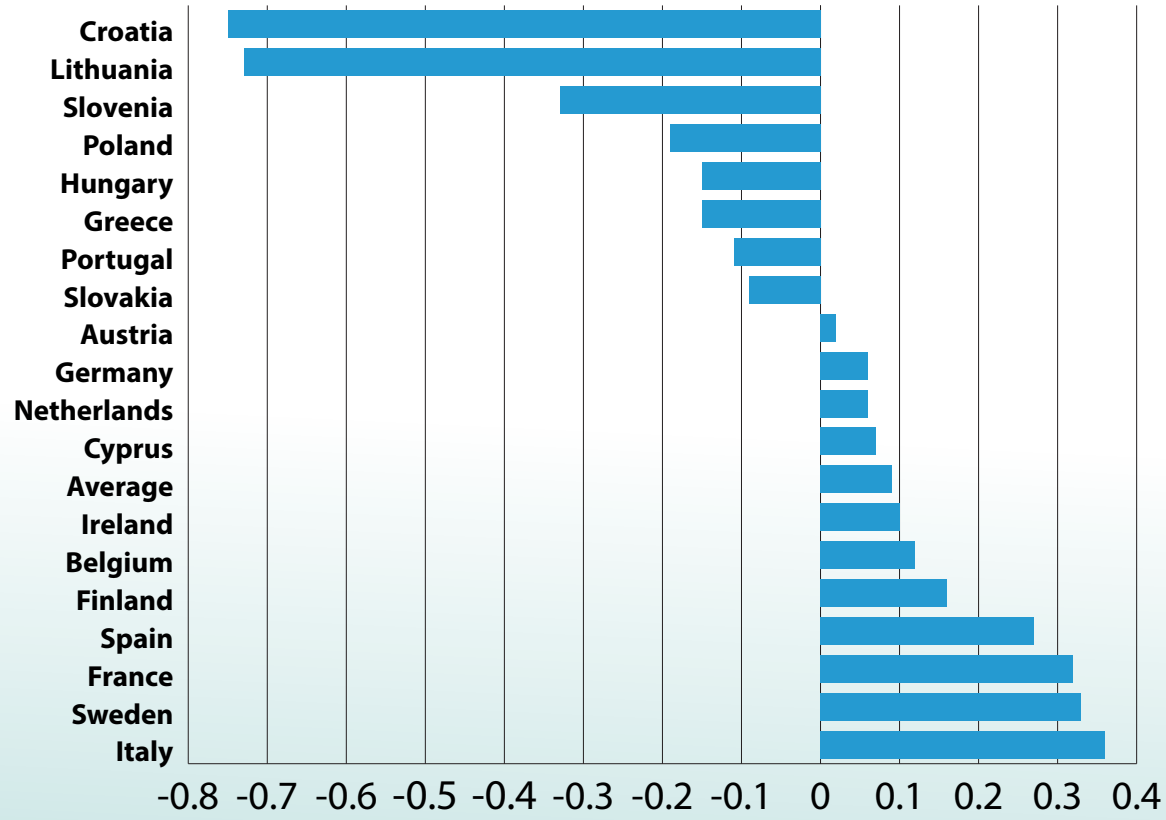
For policymakers, the evidence underscores two urgent needs: to **protect younger generations from structural disadvantages in jobs, housing, and financial security, and to support older generations where poverty risks remain high**. Addressing these imbalances is not just about distributive justice—it is about maintaining the solidarity between generations on which European welfare states and democracies ultimately depend.

Figure 7: Simple Average Economic Fairness Dimension



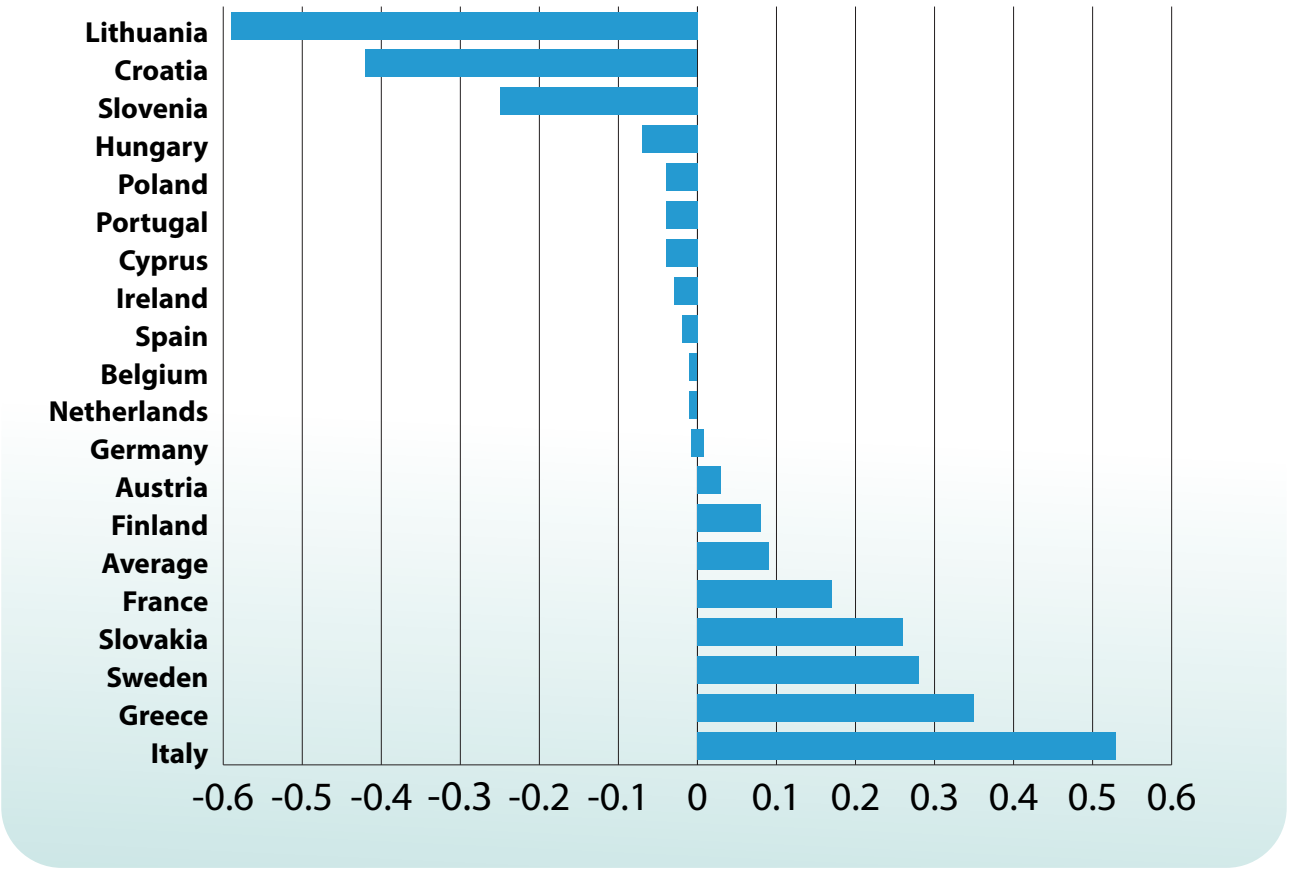
Index composed of: 1) Poverty, 2) Unemployment, 3) Permanent contracts, 4) Wage gap, 5) residential crowding and 6) Financial distress

Figure 8: Weighted Average Economic Fairness Dimension



Index composed of: 1) Poverty, 2) Unemployment, 3) Permanent contracts, 4) Wage gap, 5) residential crowding and 6) Financial distress

Figure 9: Normative Average Economic Fairness Dimension



Index composed of: 1) Poverty, 2) Unemployment, 3) Permanent contracts, 4) Wage gap, 5) residential crowding and 6) Financial distress

6.2 Access to Essential Services and Public Goods

Beyond income and jobs, justice between generations also depends on whether people can rely on the **basic services and infrastructures that sustain everyday life**. Access to healthcare, safe environments, digital connectivity and welfare protections shapes not only immediate well-being but also people's ability to plan for the future and participate fully in society. Unequal access across age groups can reinforce vulnerabilities—making it harder for younger adults to establish independence, or for older adults to live with dignity.

To capture this dimension, we look at **five indicators**, all drawn from the 2023 EU-SILC and ESS surveys:

1. **Unmet health needs** – whether individuals required medical care but could not access it for reasons such as cost, waiting times, or lack of transport.

2. **Exposure to pollution**, grime, and noise – environmental risks that affect health and quality of life.

3. **Perceived problems of crime, violence, or vandalism** – feelings of insecurity that can limit mobility and social participation.

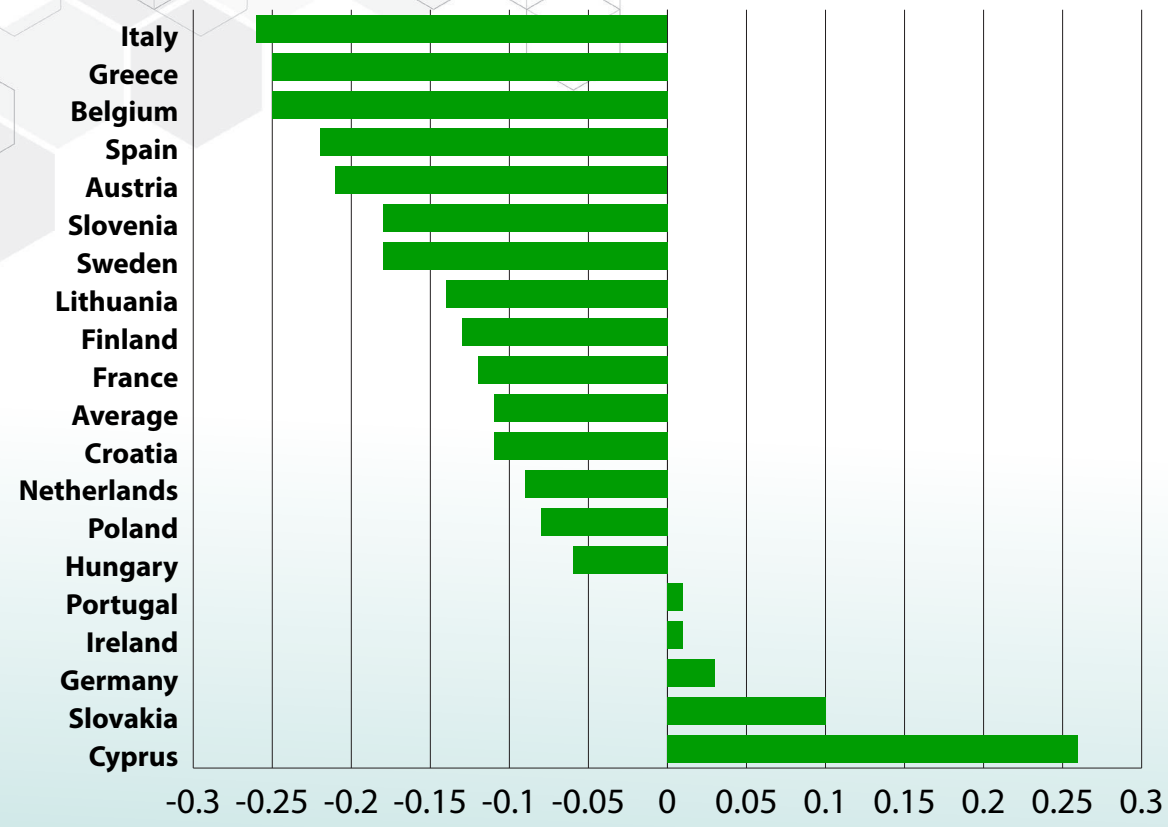
4. **Internet access at home** – whether households can afford a connection, now essential for accessing services, work, and communication.

5. **Social transfers as a share of income** – the extent to which welfare benefits like unemployment assistance or family allowances supplement household resources.

Together, these measures provide a **multifaceted picture** of how equally younger and older adults are supported by public goods and services. They show whether societies succeed in giving all generations the means to live secure, autonomous, and connected lives.

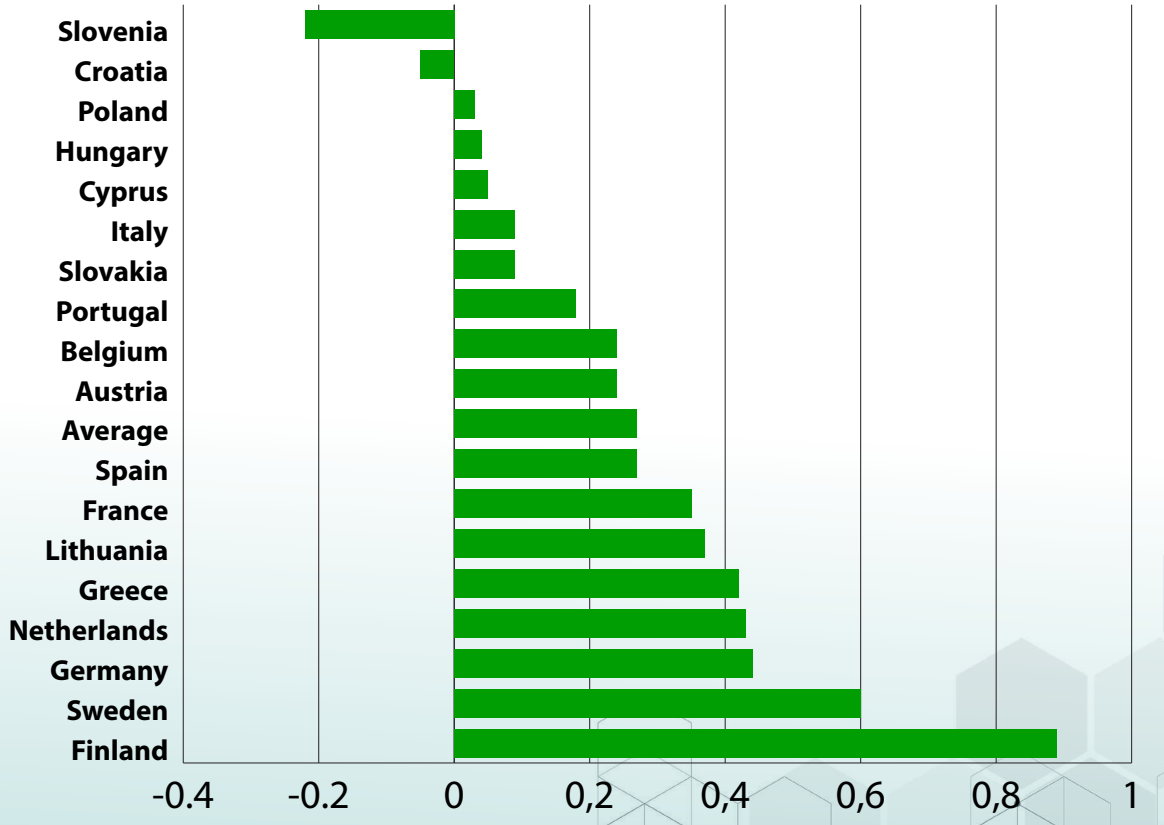
The first indicator looks at **unmet health needs**—cases where individuals required medical treatment but did not receive it for reasons such as cost, long waiting times, or lack of transport. Here, the pattern runs counter to what one might expect. In almost every country in the sample, **older adults report higher levels of unmet health needs** than younger adults (*Figure 10*). Only **Cyprus, Slovakia, and Germany** stand out as exceptions, where younger people report more difficulties accessing care. The gaps are particularly wide in **Italy, Greece, and Belgium**, where seniors are far more likely than the younger adults to say that their healthcare needs went unmet. Because this measure is self-reported, differences may also reflect **varying expectations:** older adults, who interact with the health system more frequently, may be more sensitive to its shortcomings, while younger adults may have lower expectations or fewer encounters with healthcare.

Figure 10: Access to Health Indicator



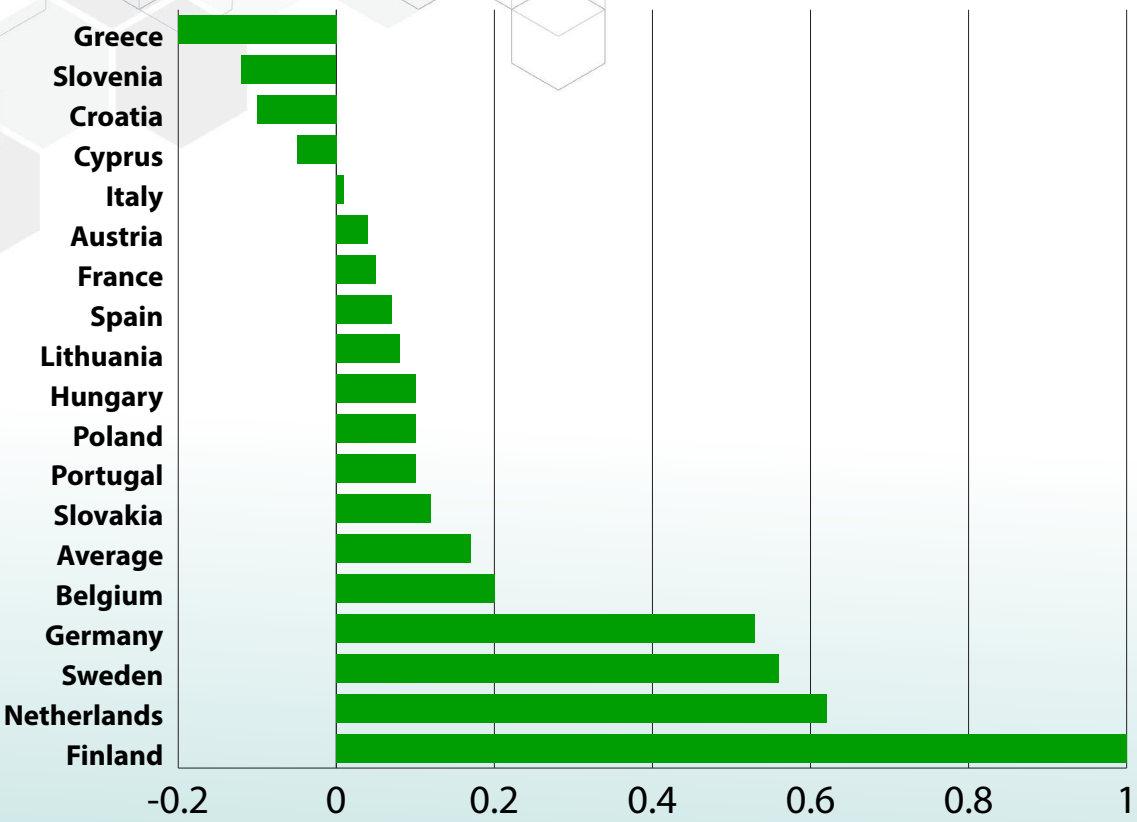
Index composed of: 1) Poverty, 2) Unemployment, 3) Permanent contracts, 4) Wage gap, 5) residential crowding and 6) Financial distress

Figure 11: Exposure to Environmental Problems Indicator



Information not available for Ireland

Figure 12: Exposure to Crime Indicator



Information not available for Ireland

Figure 13: Can afford Access to Internet connection Indicator

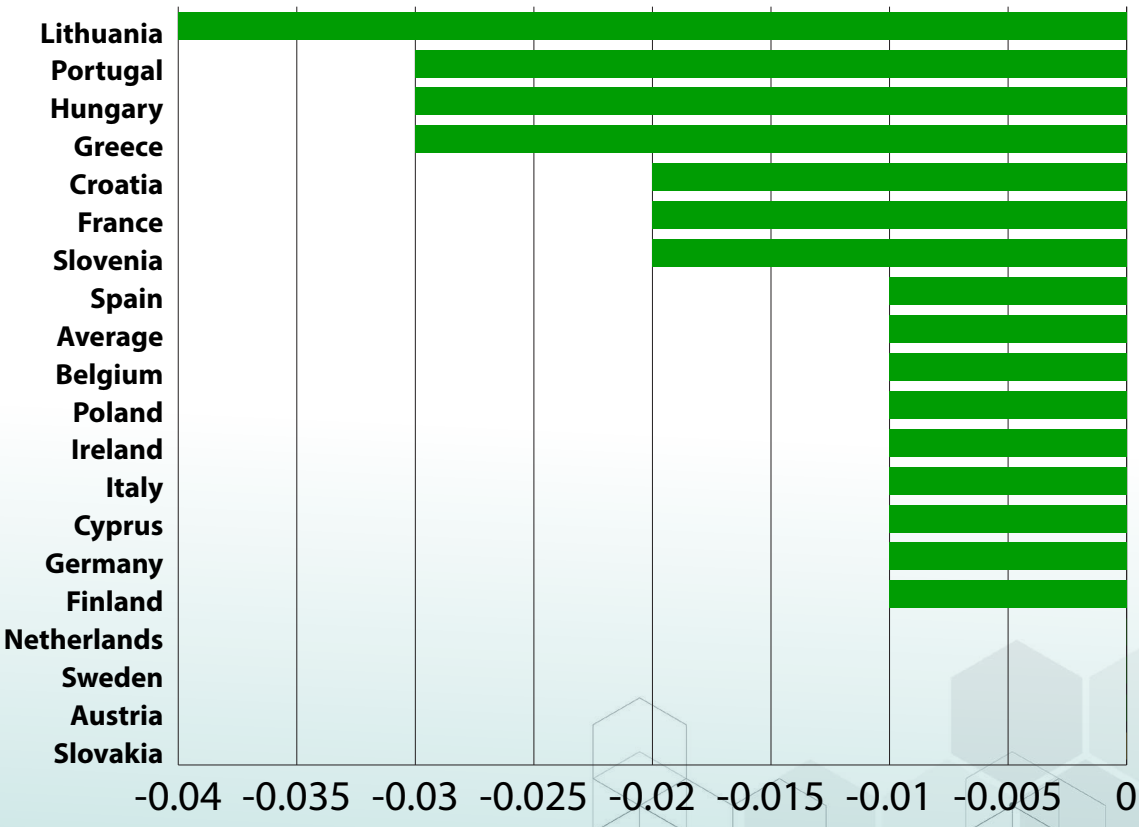
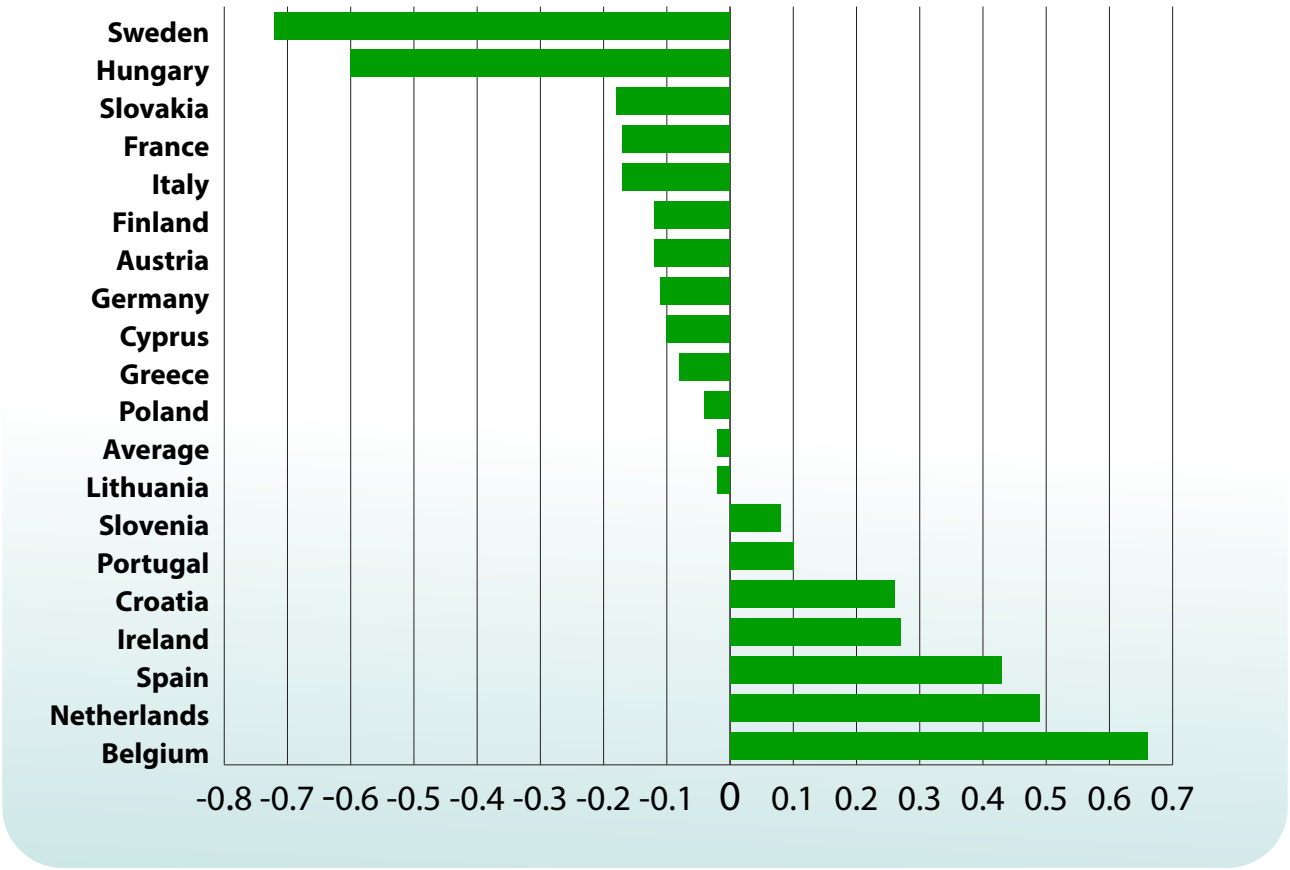


Figure 14: Social Transfer Dependence Indicator



Individuals aged 65+ are excluded to avoid bias from cross-country differences in pension generosity.

A very different picture emerges when looking at **environmental risks** (*Figure 11*). Across most countries, **younger adults are more likely than the elderly to report that their neighborhood suffers from pollution, crime, or noise**. These concerns are most pronounced in urbanized or industrialized areas, where younger people are more likely to live, while older adults may be concentrated in less exposed residential zones. The largest perceived advantages for seniors appear in **Finland and Sweden**, where older adults report markedly better environmental conditions than the younger adults. Here too, perceptions matter: younger people may be more aware of or more concerned about environmental issues, making them more likely to notice and report them.

A similar story holds for crime risks (*Figure 12*). Younger adults report more problems with crime, violence, or vandalism than older adults in nearly all countries. Seniors in **Finland, the Netherlands, Sweden, and Germany** feel especially safe compared to their younger counterparts. Again, exposure plays a role: younger people are more likely to spend time in public spaces, travel at night, or live in dense urban neighborhoods, all of which increase contact with potential risks. Older adults, by contrast, may feel shielded simply because they are less often in contexts where crime occurs.

When it comes to **internet access**, the generational playing field appears level (Figure 13). In all countries, very few people report being unable to afford a home internet connection, and there are **no systematic differences** between younger and older adults. Digital exclusion remains a concern in Europe, but affordability no longer seems to be a generational dividing line. This indicator suggests that, at least in terms of cost, internet access has become close to universal.

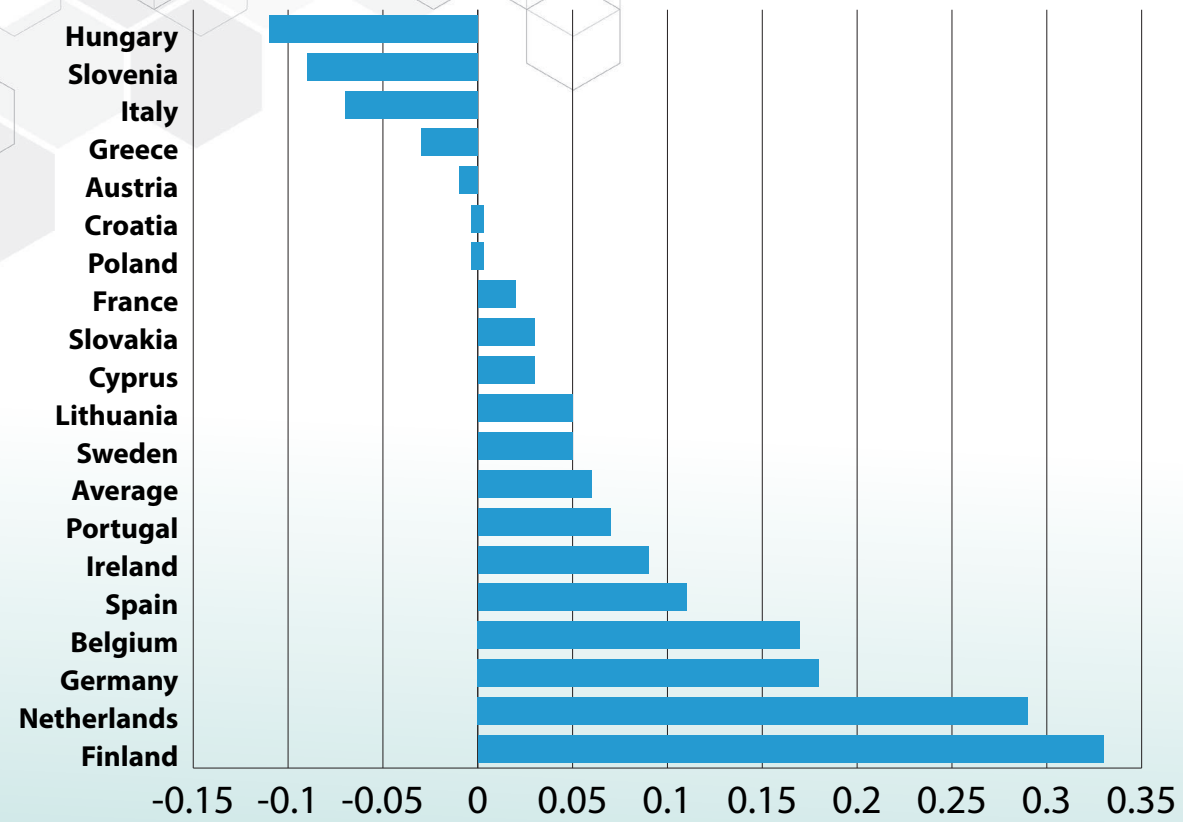
Another key indicators in this dimension concerns **social transfers**—the benefits that households receive from the welfare state, **excluding pensions**. These include unemployment benefits, child allowances, housing subsidies, and other forms of support, adjusted for household size and structure. Pensions, despite being the largest public transfer in most EU countries, are not included because they function primarily as **deferred earnings tied to past contributions** and thus largely reflect a system of mandatory savings, even if some redistributive elements across age groups remain. Here, the results are more varied (*Figure 14*). In countries such as **Belgium, the Netherlands, and Spain**, transfers represent a larger share of income for older adults, suggesting that welfare provisions disproportionately support them. By contrast, in **Sweden and Hungary**, younger households rely more heavily on transfers, reflecting systems more oriented toward family and labor market support. These differences highlight how **policy design strongly shapes which age groups benefit most** from redistributive measures.

When the five components are combined into the **Access to Essential Services and Public Goods** Index, the overall picture is skewed in favor of older adults (*Figure 15*). Using equal weights, **12 of the 19 countries show an advantage for the elderly**. The imbalance is most striking in **Finland and the Netherlands**,

followed by **Germany and Belgium**, where younger generations face consistent disadvantages across multiple aspects of access. In contrast, **Hungary, Slovenia, and Italy** emerge as countries where younger adults fare better. The Italian case is particularly noteworthy: while Italy was among the most pro-elderly countries in terms of economic fairness, here it shows a tilt toward the young. This reflects the fact that pensions—excluded from our transfers measure—dominate elderly income security, while younger households benefit more from non-pension welfare programs.

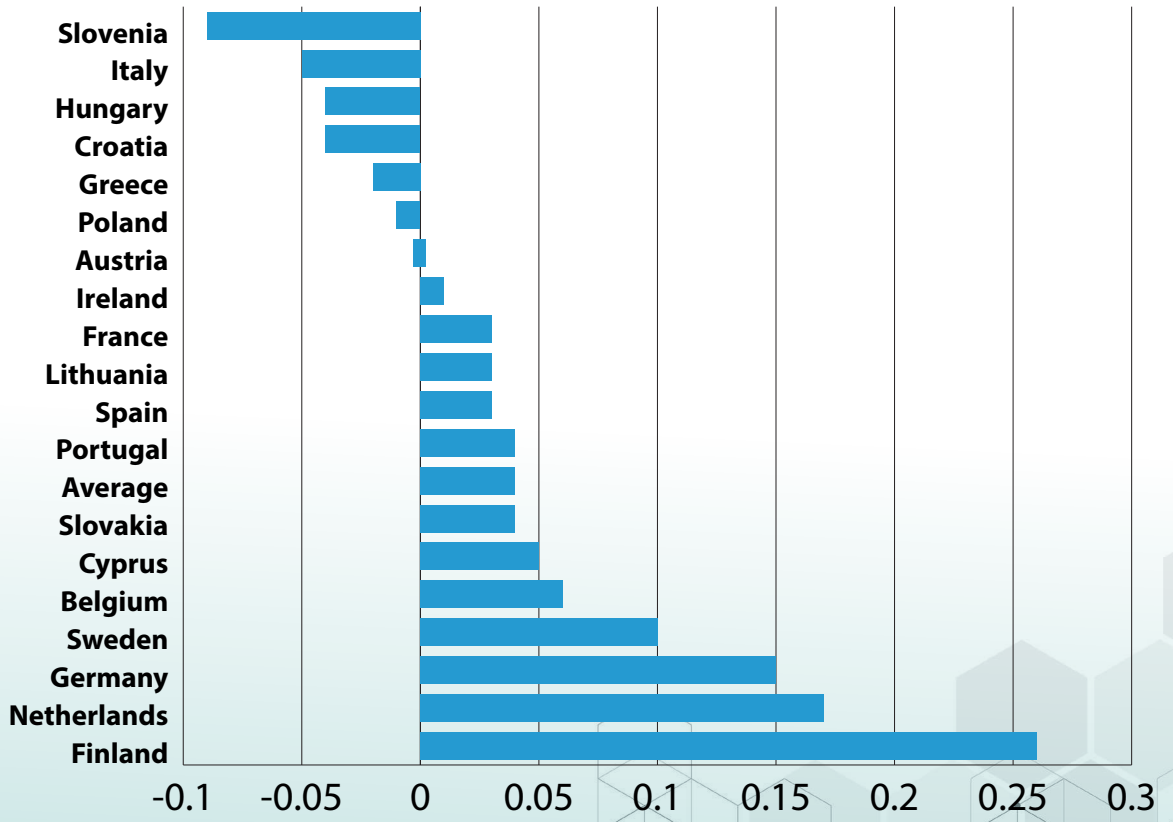
When we apply **empirical weights**, which prioritize indicators most strongly linked to individual's reports of life satisfaction, the overall picture does not change much (*Figure 16*). The same groups of countries favor the elderly or the young, and only minor shifts occur in relative positions. Similarly, using **normative weights**, which give greater priority to health and social transfers as foundational conditions for well-being, the results remain broadly stable (*Figure 17*). In other words, across different weighting schemes, the evidence is consistent: **older adults enjoy safer environments and feel more secure, but younger adults tend to benefit more from healthcare access and, in some contexts, from social transfers**.

Figure 15: Simple Average Access to Essential Services Dimension



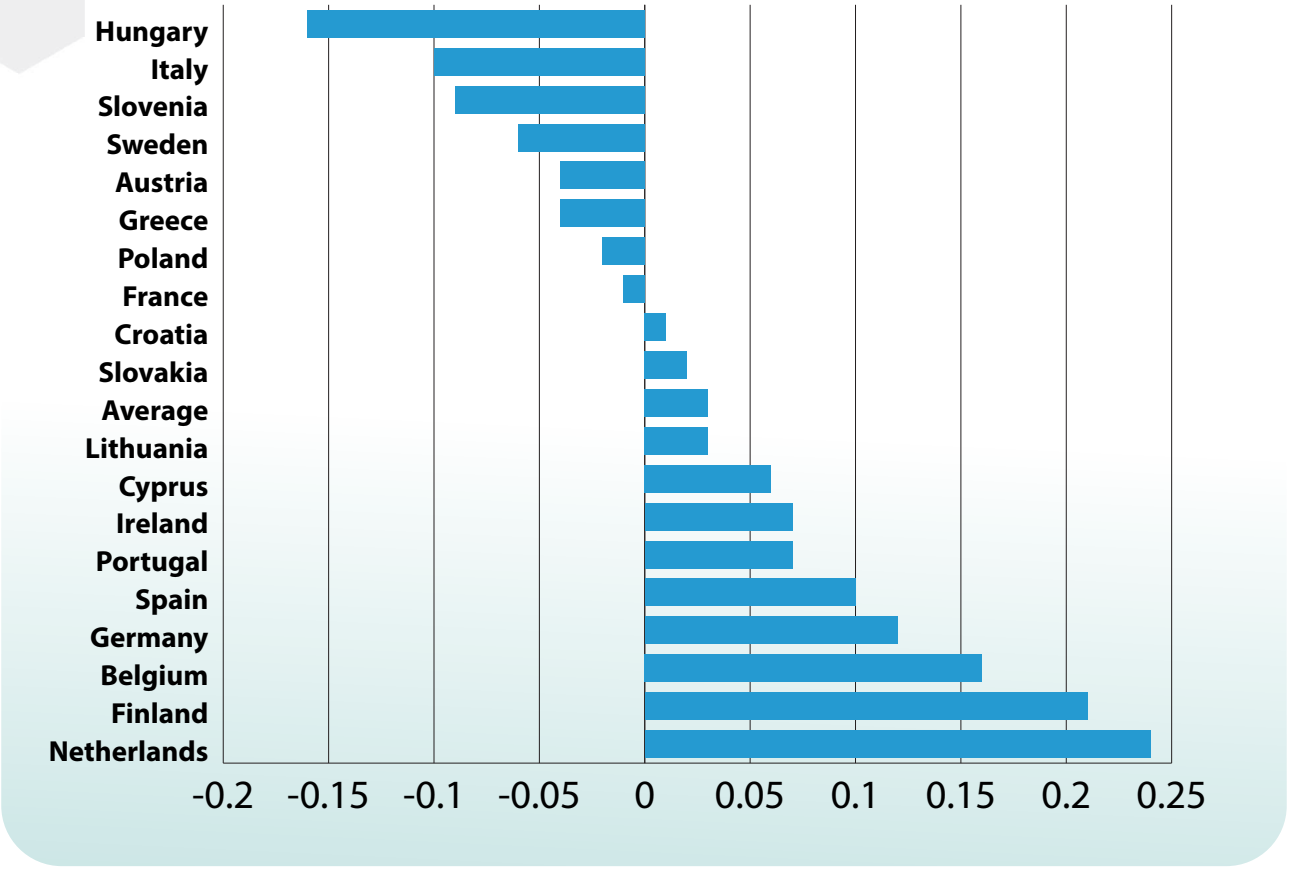
Index composed of 1) Unmethealth needs, 2) Social transfers, 3) Exposition to pollution, 4) Exposition to crime, 5) Internet

Figure 16: Weighted Average Access to Essential Services Dimension



Index composed of 1) Unmethealth needs, 2) Social transfers, 3) Exposition to pollution, 4) Exposition to crime, 5) Internet

Figure 17: Normative Average Access to Essential Services Dimension



Index composed of 1) Unmethealth needs, 2) Social transfers, 3) Exposition to pollution, 4) Exposition to crime, 5) Internet

What stands out is that the balance between age groups in this dimension often runs in the **opposite direction** from that observed for economic fairness. Italy is a clear example: strongly pro-elderly in terms of income and jobs, but more favorable to the young in terms of access to services. This suggests that intergenerational justice cannot be reduced to a single measure of resources: **fairness must be assessed across multiple domains**, each revealing different aspects of advantage and disadvantage.

For policymakers, the findings highlight the need for **balanced strategies**. On one hand, older adults require stronger guarantees of **accessible healthcare**, to reduce unmet medical needs that persist even in well-funded systems. On the other, younger adults need policies that tackle their **greater exposure to environmental risks and crime**, and that ensure transfers and benefits provide meaningful support during vulnerable life phases such as entering the labor market or forming families. Addressing these complementary challenges is essential to prevent resentment between generations and to strengthen **solidarity across the life course**.

6.3 Relational Equality

Economic resources and access to services are not the whole story of justice between generations. Equally important is whether people of different ages are treated with **equal respect and social standing**. The dimension of **Relational Equality** asks whether younger and older adults can participate fully in social life, maintain meaningful relationships, and live free from discrimination and stigma.

To measure this, we use data from EU-SILC and ESS, focusing on five indicators:

1. **Leisure activity** – whether people engage regularly in cultural, recreational, or social activities.

2. **Social relations** – how often people meet socially with friends, relatives, or colleagues.

3. **Close relations** – whether individuals have a trusted network of at least three people to confide in.

4. **Discrimination** – whether respondents report belonging to a group that suffers age-based unfair treatment.

5. **Mental well-being** – the presence of depressive symptoms, which often reflect the costs of isolation or discrimination.

Together, these measures capture whether age groups are equally supported by the **fabric of social life**. They highlight not only opportunities for connection and participation but also the risks of exclusion, prejudice, and psychological distress. By comparing younger and older adults across these dimensions, the Index shows where societies succeed in fostering **intergenerational solidarity**—and where gaps in respect, support, and recognition remain.

Social connectedness and leisure are basic conditions for dignity and well-being, and here the advantage lies with younger generations. In every country of our sample, young adults are significantly more likely than older adults to engage in regular leisure activities such as sports, cultural events, or volunteering (*Figure 18*). A similar pattern emerges when we look at the frequency of social meetings: younger adults meet friends, relatives, or colleagues at least once a week far more often than those aged 65 and above (*Figure 19*). These differences are not surprising—life after retirement often comes with fewer institutional and community ties, and older age can bring health or mobility limitations. Yet the results underscore a structural divide: while younger adults are generally embedded in dense networks of social life, older adults are more vulnerable to **isolation and withdrawal**.

Figure 18: Affordable Leisure Indicator

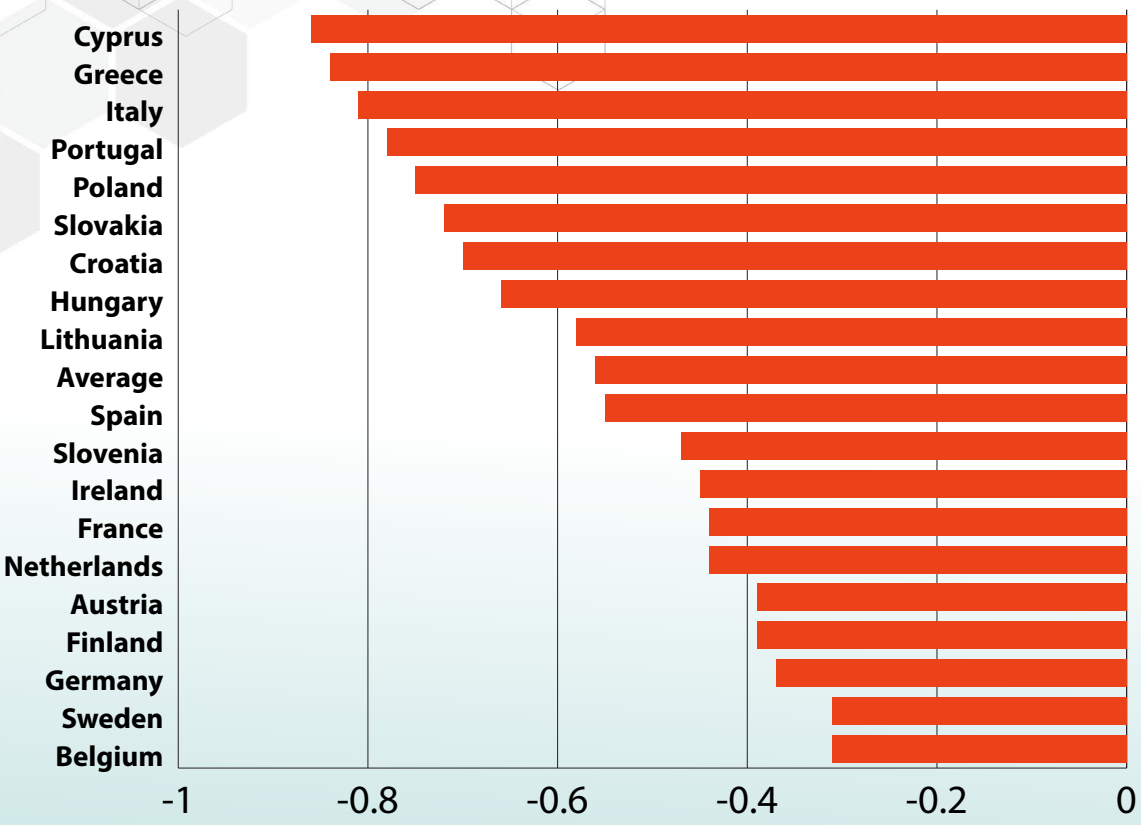


Figure 19: Frequent Social Interactions Indicator

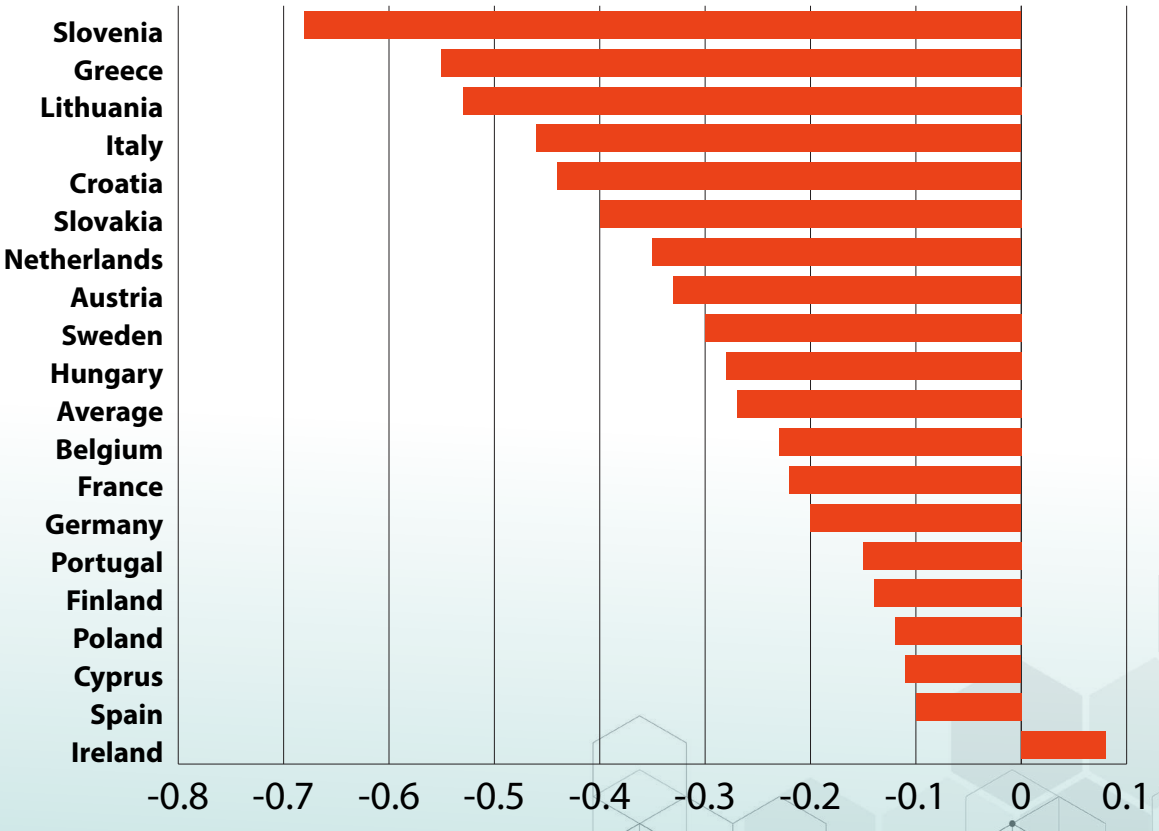
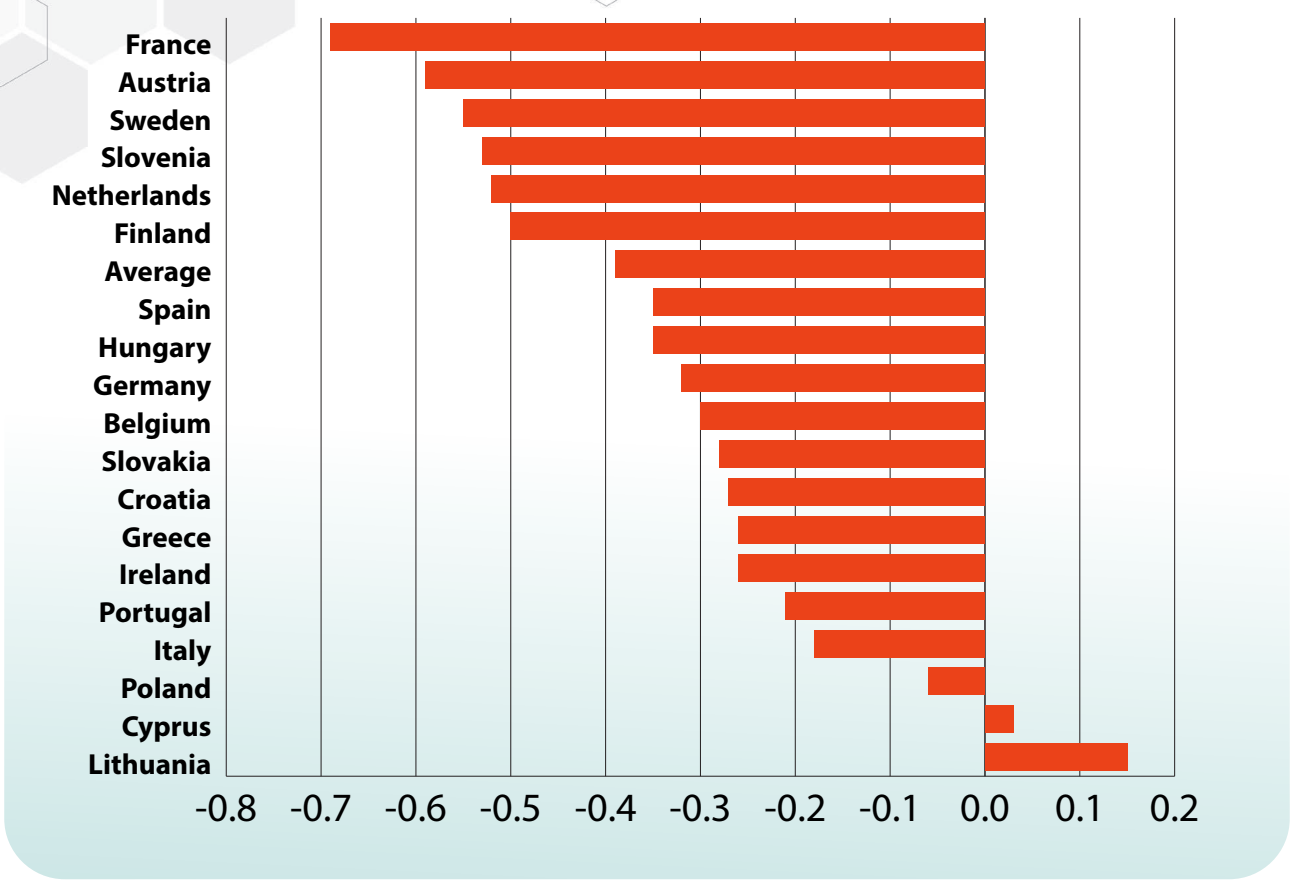


Figure 20: Social Support Network Indicator

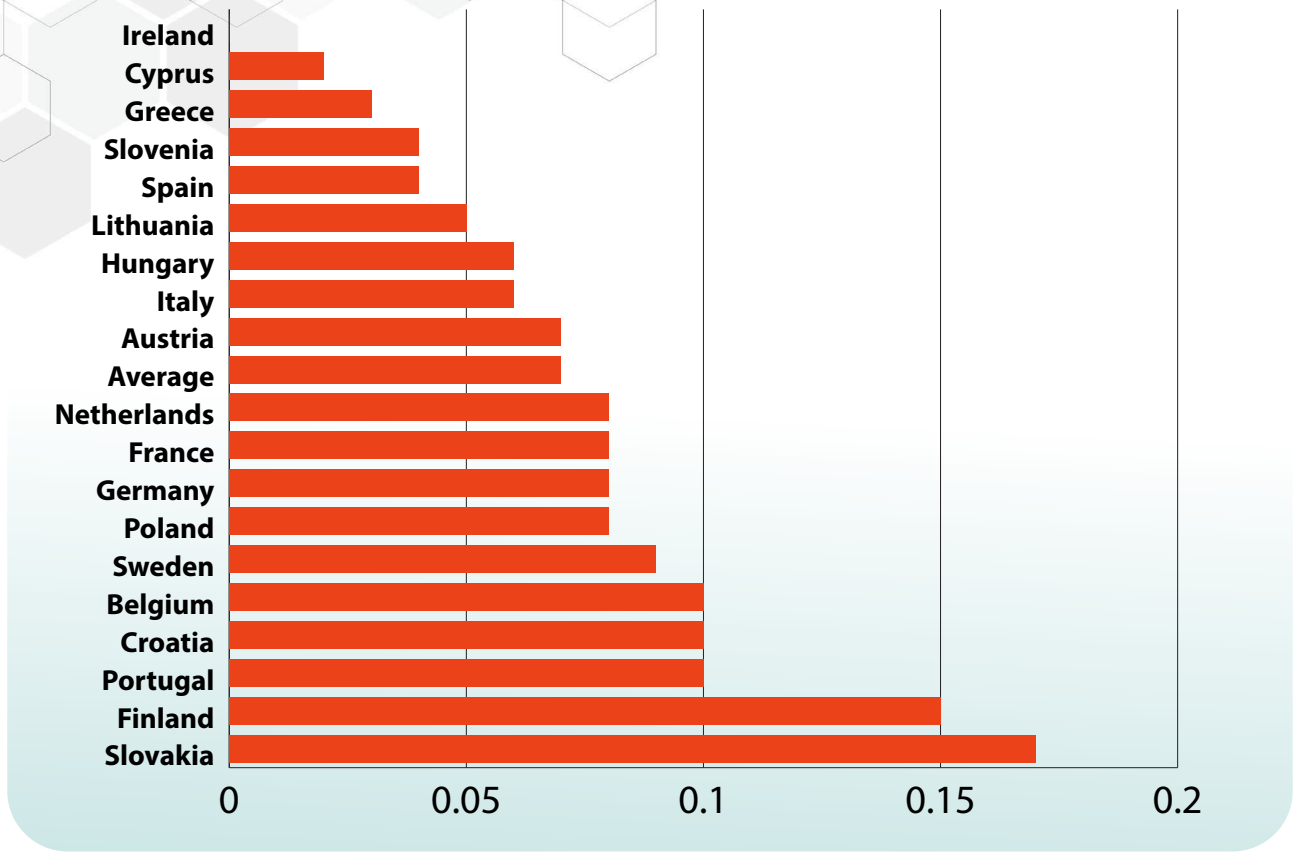


Measured as having +3 clode people

Turning to the availability of **close personal networks**, the picture remains similar. Having at least three people with whom to discuss intimate or personal matters is a strong safeguard against loneliness and vulnerability, and the absence of such networks is a well-documented risk factor for poorer health outcomes and reduced life satisfaction. In almost all EU countries, young adults report stronger networks than older adults (*Figure 20*). Only in **Lithuania**, and to a lesser extent **Cyprus**, do older adults report levels of close personal support comparable to the young. These findings highlight that while younger people's networks may often be more fragile and transitory, they are also broader, while older adults face shrinking networks due to retirement, widowhood, or declining health.

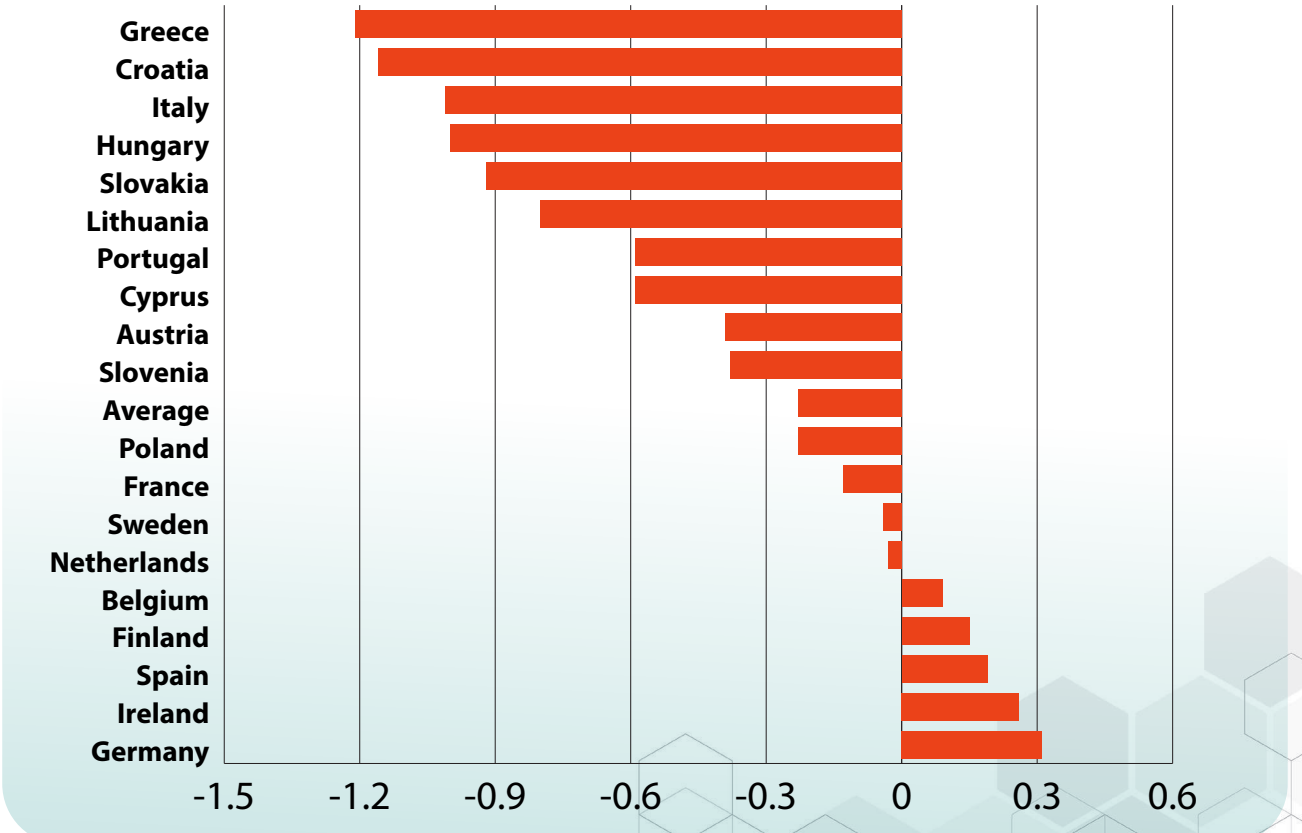
While these first three indicators highlight the **positive side of social life**, relational equality also requires accounting for **barriers created by prejudice and exclusion**. Here, the focus is on **age-based discrimination**, or ageism. When asked whether they consider themselves part of a discriminated group, and after controlling for other characteristics such as gender, ancestry, religion, or disability, **younger individuals are more likely than older adults to report discrimination** (*Figure 21*). This is especially pronounced in **Slovakia and Finland**. The result challenges the widespread assumption that ageism primarily affects older people: it shows that younger adults, too, can feel dismissed as immature, unreliable, or excluded from opportunities because of their age.

Figure 21: Discrimination Indicator



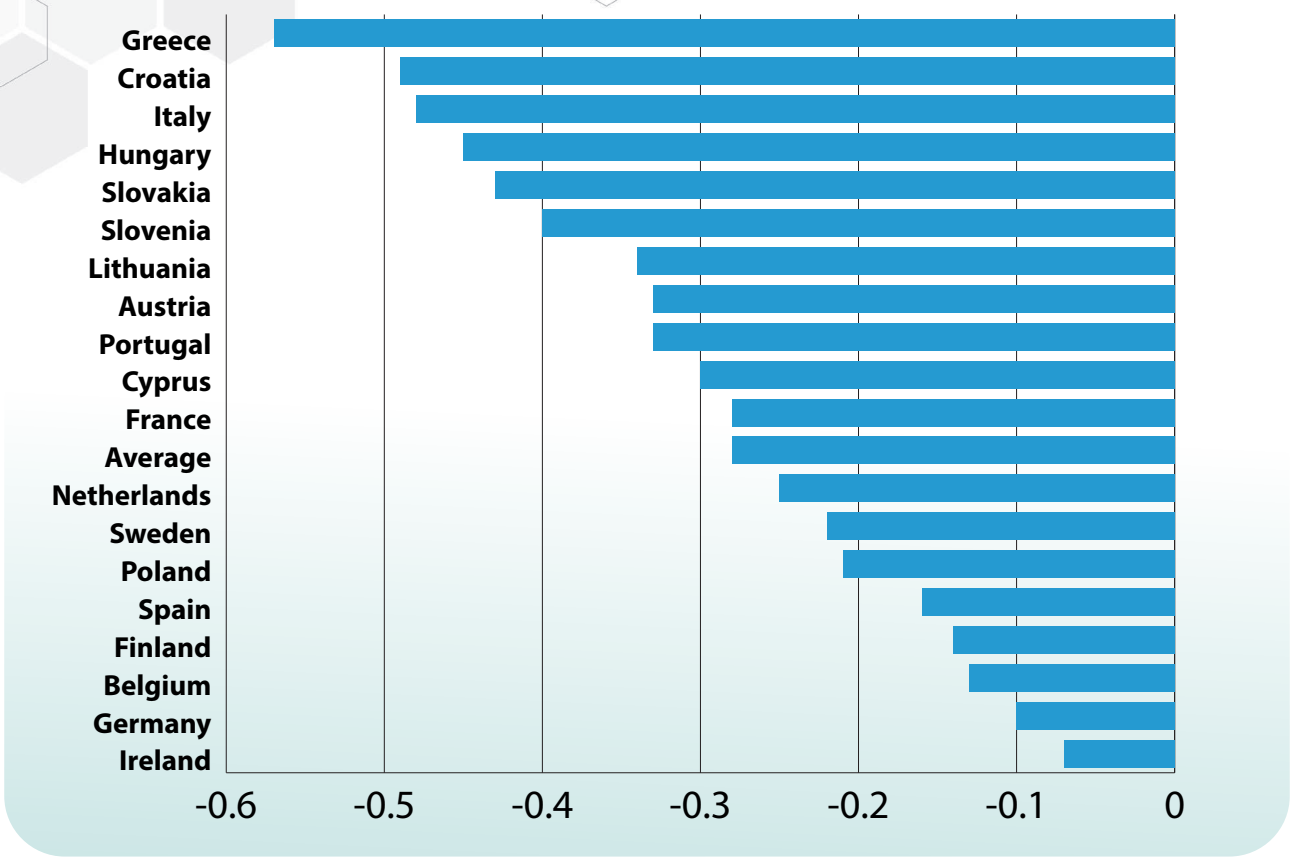
The Mincer-like approach assesses the share of people reporting discrimination that can be attributed to age.

Figure 22: Mental Wellbeing Indicator



Wellbeing is measured as having a CES-D8 score below 8

Figure 23: Simple Average Relational Equality Dimension



Index composed of 1) Unmethealth needs, 2) Social transfers, 3) Exposition to pollution, 4) Exposition to crime, 5) Internet

Finally, we turn to **mental well-being**, measured using the CES-D8 scale based on eight questions about feelings such as sadness, loneliness, or low energy in the past week. Individuals scoring 8 or higher are classified as being at risk of depression. The results are mixed. In countries such as **Greece, Croatia, Italy, and Hungary**, young adults report lower levels of mental distress than older adults. By contrast, in Germany and Ireland, older adults report **better mental health outcomes** than the young (*Figure 22*). This variation highlights how psychological well-being is shaped by a combination of social, cultural, and institutional factors: in some contexts, the pressures of job insecurity, housing precarity, or family transitions weigh heavily on the young; in others, isolation and health decline take a larger toll on the elderly.

When we combine these five sub-indicators into the **Relational Equality Index**, the overall picture strongly favors younger adults. Using equal weights, all nineteen countries show an advantage for the young, with the gaps especially large in **Greece, Croatia, and Italy** (*Figure 23*). The results reflect the fact that younger people enjoy richer social lives, broader networks, and, in many cases, better mental health than their older counterparts.

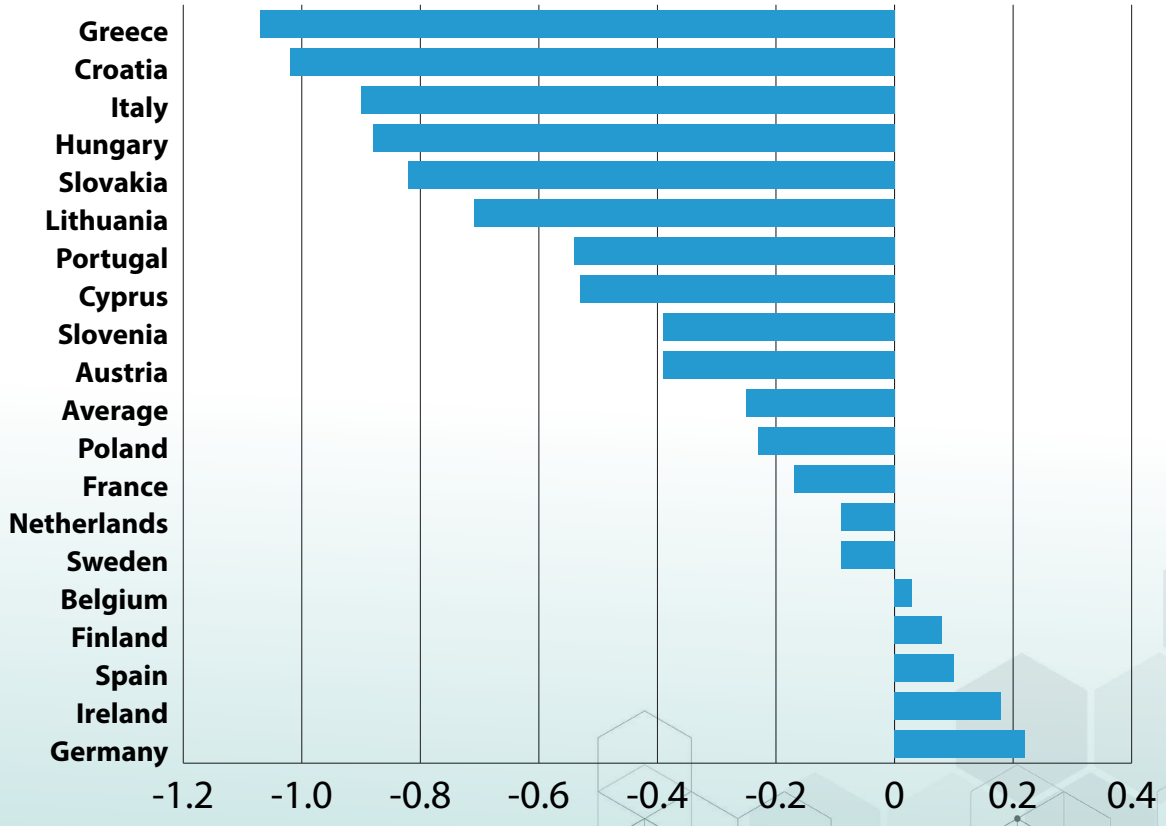
Applying **empirical weights**, which give greater priority to indicators most closely linked to life satisfaction, shifts the picture slightly. In **Germany, Ireland, Spain, Finland, and Belgium**, relational equality now tilts toward older adults. This change is driven by the heavier weight placed on the mental health indicator, where in these countries

the elderly report better outcomes than the young (*Figure 24*). Yet even under this weighting scheme, countries like Greece, Croatia, and Italy remain strongly pro-young.

When we turn to **normative weights**—which give greater emphasis to foundational aspects of relational equality such as freedom from discrimination and protection from isolation—the results return to a clear pro-young bias across all countries (*Figure 25*). In other words, across weighting strategies, the evidence remains consistent: **younger adults enjoy more leisure, more social interactions, stronger networks, and often fewer mental health challenges, although they also report higher exposure to age discrimination**.

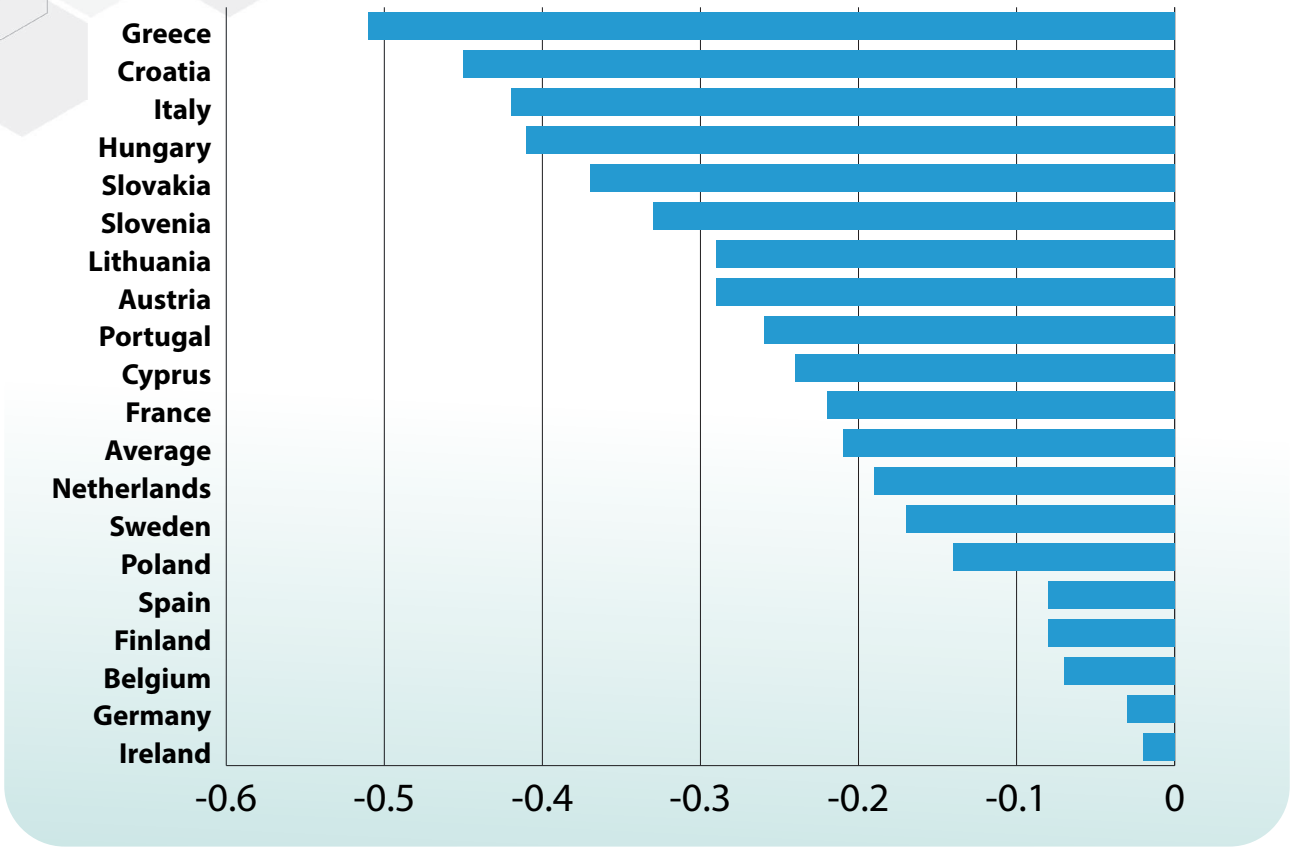
The findings reveal that **relational equality in Europe systematically favors younger adults**, who are more socially active, more connected, and often psychologically better off than the elderly. However, this comes with an important caveat: younger adults are also more likely to perceive themselves as victims of discrimination. Older adults, meanwhile, face persistent risks of isolation, weaker networks, and, in many countries, higher levels of mental distress.

Figure 24: Empirically Weighted Relational Equality Dimension



Index composed of 1) Leisure, 2) Social relations, 3) Close relations, 4) Discrimination, 5) Mental wellbeing

Figure 25: Normative Weighted Relational Equality Dimension



Index composed of 1) Leisure, 2) Social relations, 3) Close relations, 4) Discrimination, 5) Mental wellbeing

Taken together, these results show that relational equality is not just about access to social activities, but also about whether societies provide adequate **support systems for aging populations** and whether they address the **stereotypes that affect the young**. Policies that expand community participation opportunities for older adults, strengthen mental health support across ages, and actively combat ageism in all its forms are key to ensuring that dignity, respect, and inclusion are equally shared across the life course.

The results point to a dual challenge for policymakers. On the one hand, older adults need stronger **institutional support to combat isolation**, with investments in community spaces, lifelong learning, and accessible leisure opportunities that can help sustain social connections in later life. On the other hand, younger adults—while socially more active—require protection from **age-based discrimination** that undermines their credibility in workplaces, politics, and public life. Expanding mental health services across age groups is equally critical, given its close link to social ties and dignity. In short, fostering **intergenerational solidarity** means reducing the risks of isolation for the elderly while dismantling the stereotypes that continue to marginalize the young.

6.4 Political Equality

Democracy depends on the principle that all citizens should have an **equal voice** in shaping collective decisions. Political equality, in this sense, asks whether younger and older generations are considered equally in the democratic process: are their voices heard, are they able to participate, and are they fairly represented in political institutions? Without such equality, there is a risk that political outcomes systematically privilege one age group over another.

To capture this dimension, the Index combines measures of **individual engagement** with indicators of how institutions respond to generational concerns. Data come from the European **Social Survey (ESS)** as well as two comparative political science datasets, the **Manifesto Project** and **WARP**.

The seven indicators are:

- **Having a say in politics** – whether citizens feel they have influence in political decision-making.
- **Perceived ability to influence politics** – self-confidence in one's own capacity to shape outcomes.
- **Voting in the latest election** – self-reported participation in national elections.
- **Interest in politics** – whether individuals express interest in public affairs.
- **Feeling close to a political party** – long-term attachment and identification with a party.
- **Manifesto group topic saliency** – the degree to which parties emphasize youth- or elderly-related issues in their electoral programs.
- National chamber's **Age Representation Index (ARI)** – how closely the age profile of parliaments reflects that of the population.

The first five indicators capture **perceptions, interest, and participation at the individual level**. The last two focus on institutional **responsiveness and representation**, showing whether parties and legislatures take generational concerns seriously.

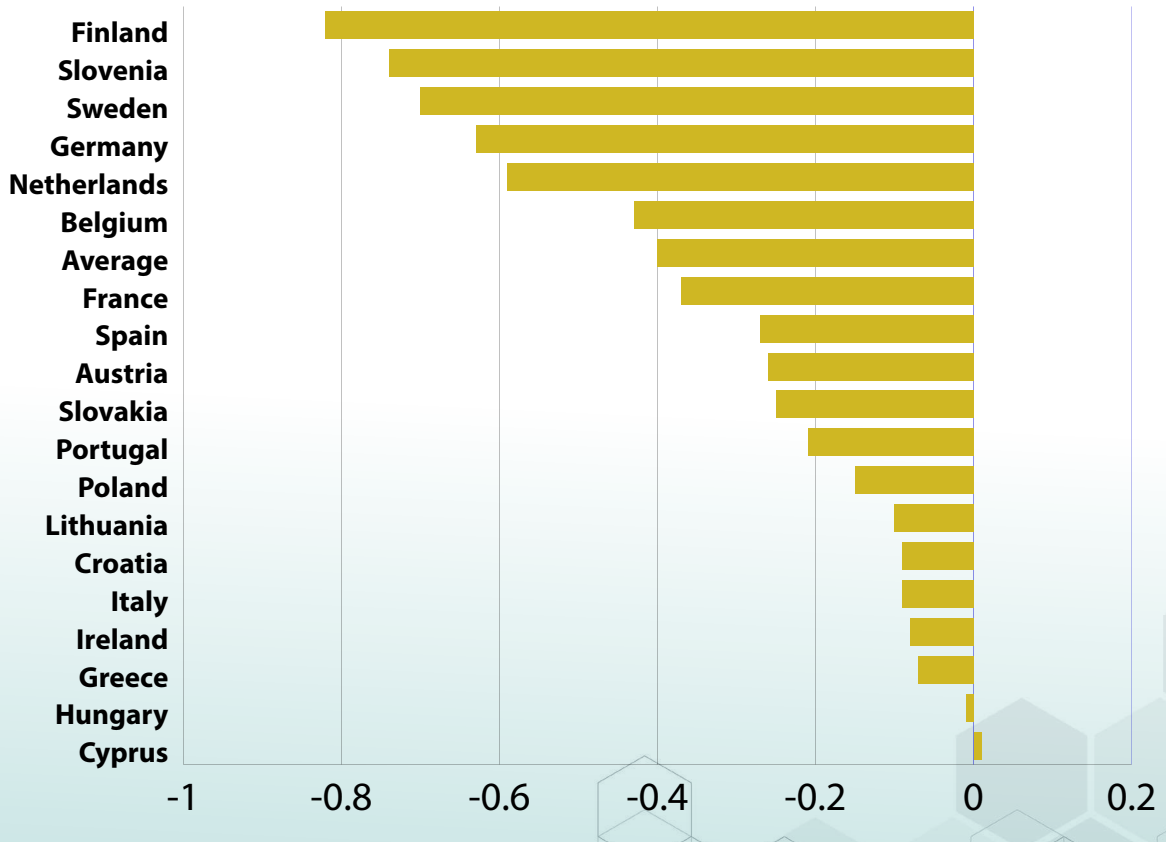
Together, these measures allow us to assess whether the **current demographic imbalance**—where older cohorts are numerically larger—translates into unequal political agency, and whether democracies across Europe provide equal voice to **citizens of all ages**.

Self-perceived voice and efficacy are basic building blocks of political equality. They reflect whether citizens believe their opinions count in public life and whether

they feel capable of influencing collective decisions. On these measures, young adults consistently report greater confidence than older adults. In every country of our sample, young people are more likely than seniors to say they have a say in politics (*Figure 26*). **The gap is particularly striking in Finland, Slovenia, and Sweden**, where optimism about political voice among the young is much stronger. Similarly, when asked about their **ability to influence politics**, younger adults again show higher levels of confidence in almost all countries, with only **Cyprus and Ireland** as exceptions (*Figure 27*). The difference is especially pronounced in **Finland and the Netherlands**. Taken together, these findings suggest that younger generations often feel empowered and optimistic about their potential impact in politics, even when objective engagement tells a different story.

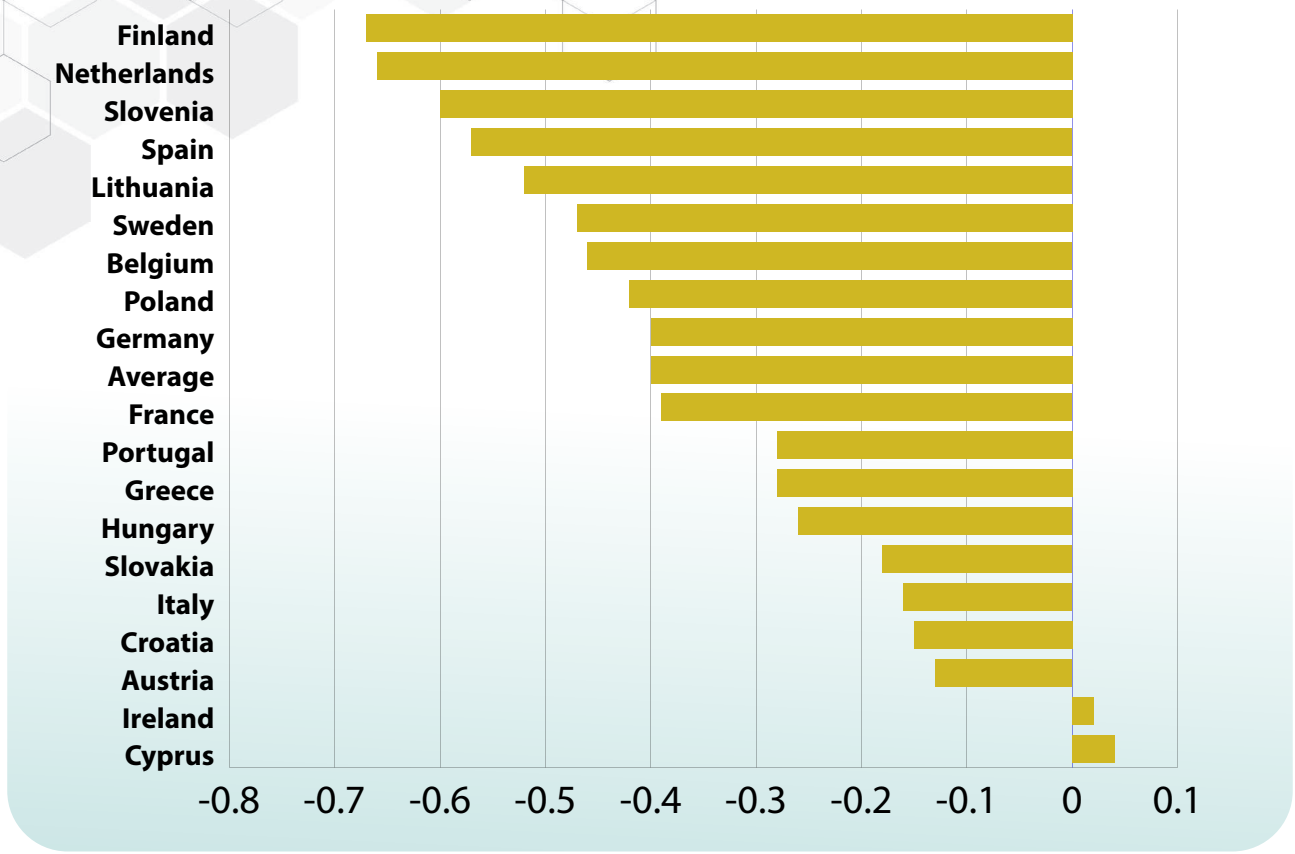
Turning to **actual political engagement**, the pattern is reversed. In terms of **voting turnout**, the elderly remain more active almost everywhere (*Figure 28*). Only in **Italy** do young adults report higher electoral participation than their older counterparts. In **Ireland and France**, the gap is especially large, with seniors significantly more likely to cast a ballot. The same holds for interest in politics: in nearly all countries—except Portugal and Spain—older citizens are more likely than the young to report being quite or very interested in political affairs (*Figure 29*). The differences are most striking in Lithuania, Ireland, and Austria. Similarly, party attachment is stronger among the elderly. Across all countries, older adults are more likely than younger ones to feel close to a political party, with especially wide gaps in **Croatia, Poland, and Ireland** (*Figure 30*).

Figure 26: Perceived Political Say Indicator



Measured as stating some, a lot or a great deal

Figure 27: Self-Confidence Political Influence Indicator



Measured as stating quite, very or a completely confident

Figure 28: Voter Turnout Indicator

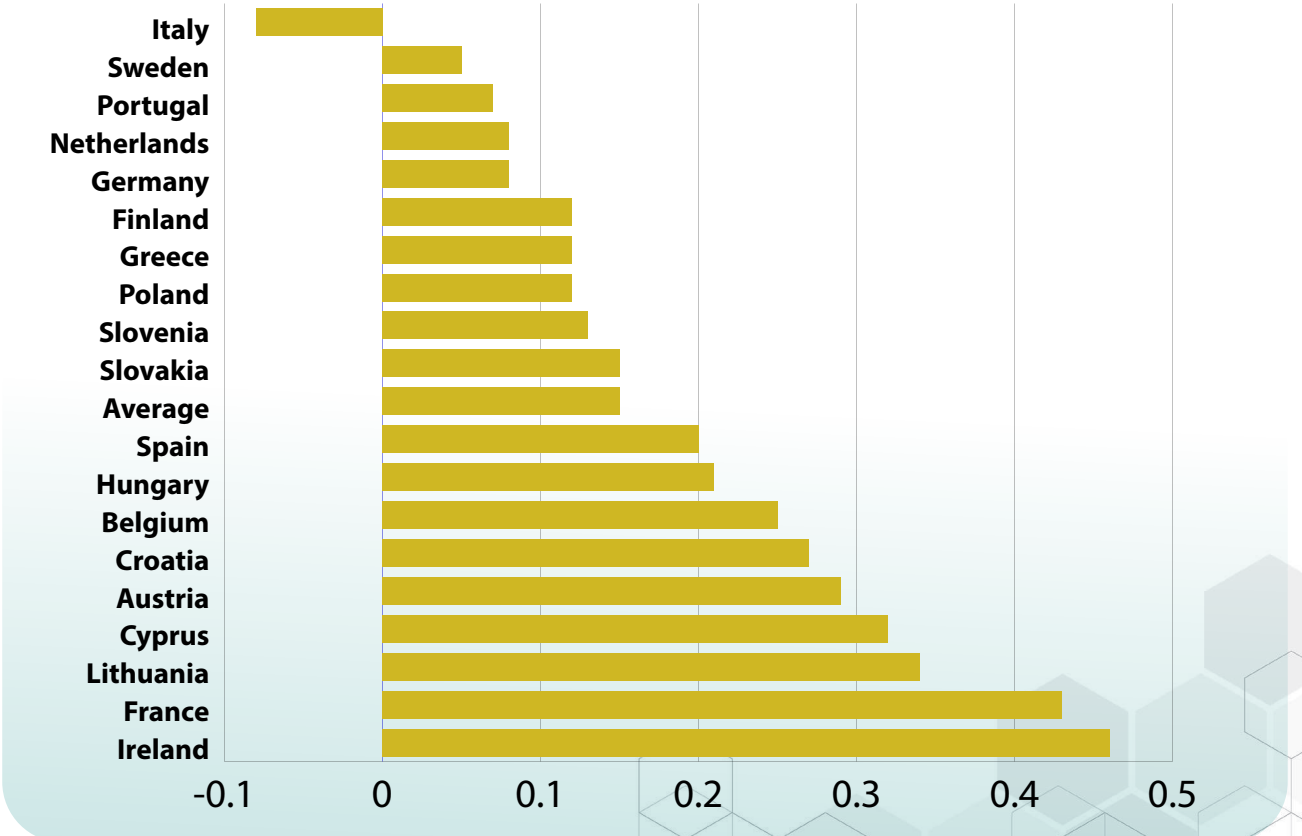


Figure 29: Political Interest Indicator

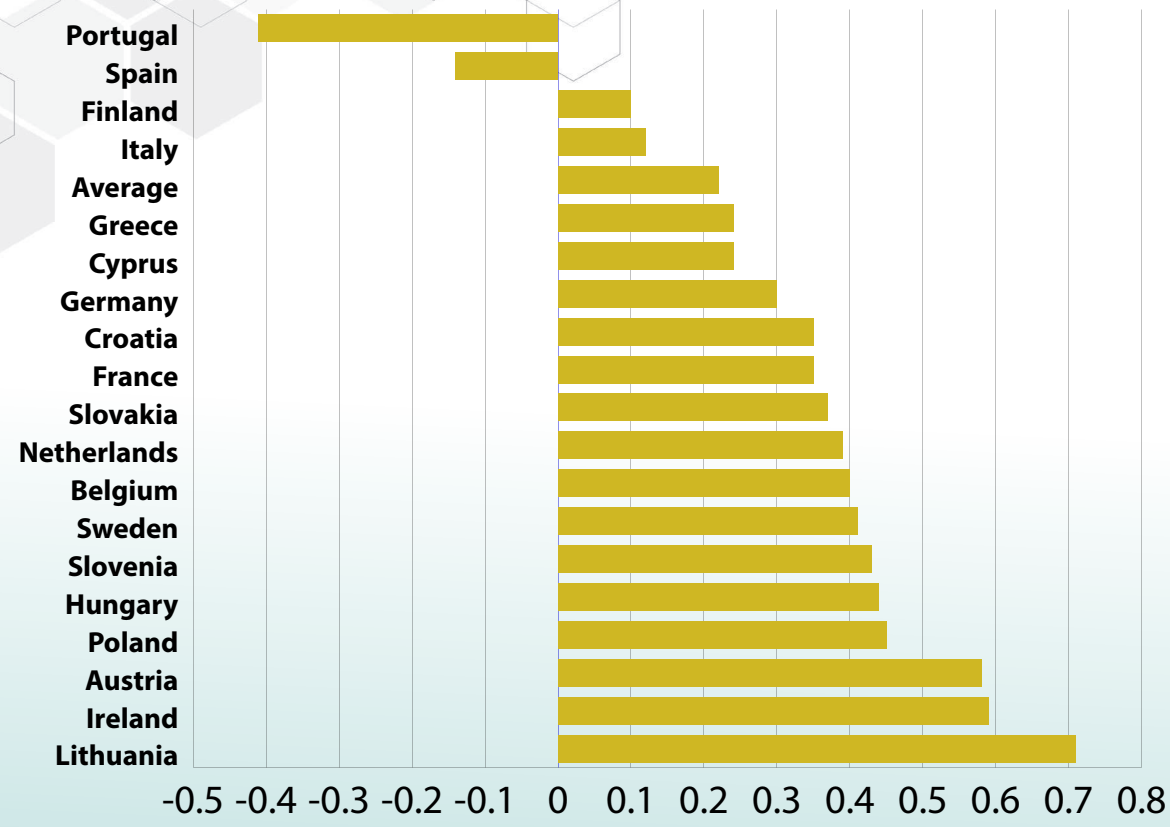
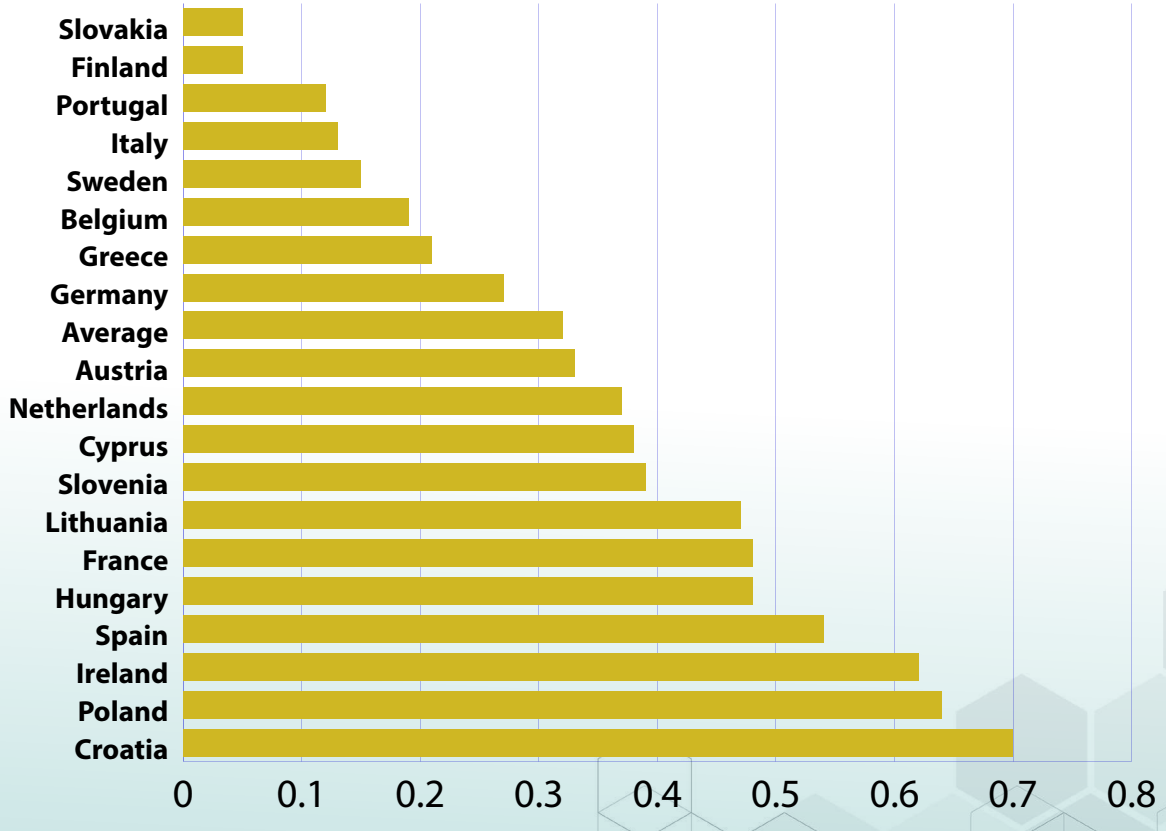


Figure 30: Partisan Closeness Indicator



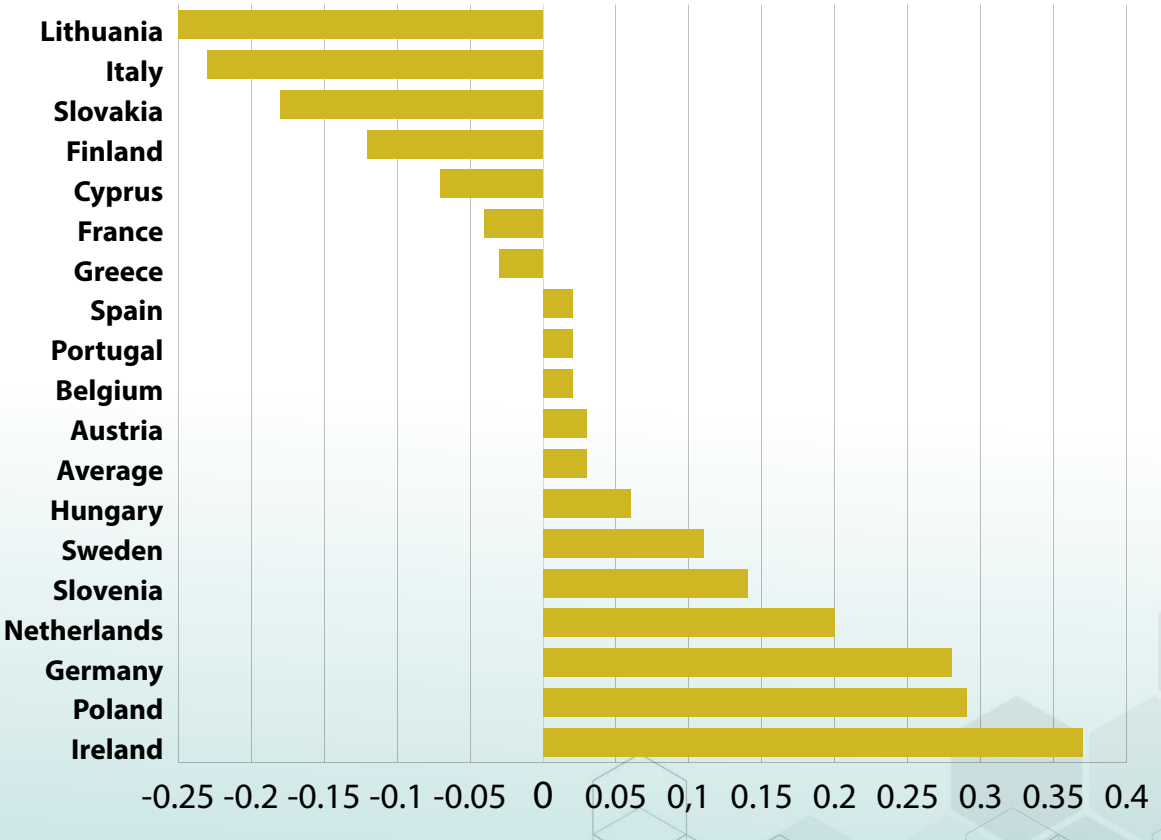
Together, these indicators paint a nuanced picture. Younger adults tend to feel more optimistic about their ability to influence politics, but this sense of empowerment is not matched by actual participation. They are less likely to vote, less likely to follow politics closely, and less likely to feel represented by political parties. By contrast, older adults appear more cautious about their political influence, but they express greater interest, stronger attachments, and much higher rates of participation. This divergence suggests a **mismatch between perceived and actual political power** across generations.

Political equality is not only about what citizens feel or do—it also depends on whether **institutions listen and respond** to generational concerns.

To capture this, we look at **party programs** and **parliamentary representation**.

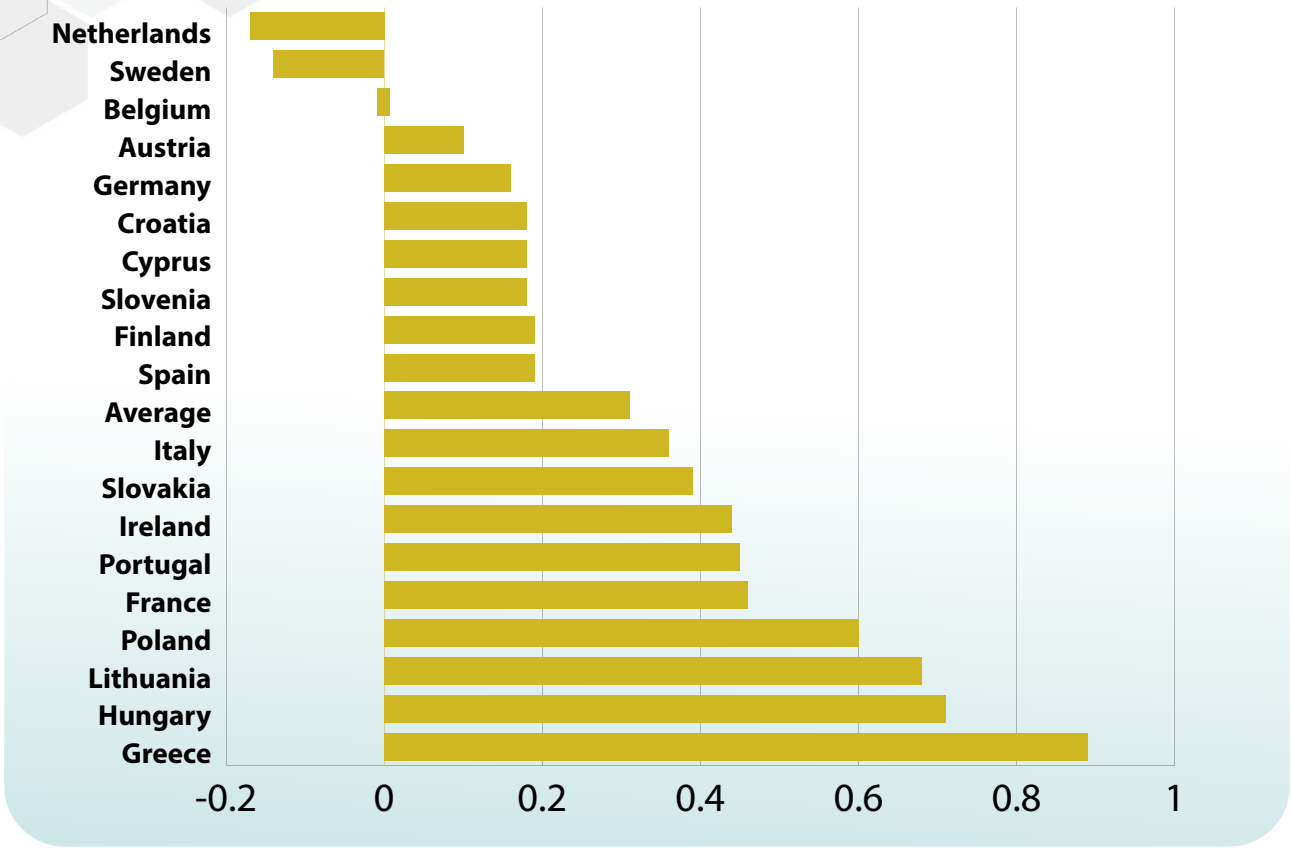
Using data from the **Manifesto Project**, we analyzed how often parties explicitly mention policies targeting young or elderly people in their electoral programs. The picture is mixed (*Figure 31*). In countries such as **Lithuania and Italy**, parties focus more heavily on youth-oriented issues such as education, training, or employment. In others, like **Ireland, Poland, and Germany**, party programs pay greater attention to elderly concerns, such as pensions and healthcare. While this measure does not tell us what governments eventually implement, it does reflect **who parties are talking** to during campaigns, and which groups they see as politically salient.

Figure 31: Age-related Party Manifesto's saliency indicator



Translated Political Manifestos are not available for Croatia

Figure 32: Age Representation Gap in National Chambers Indicator



Parliamentary representation tells a starker story. Using the **Age Representation Index (ARI**) from the WARP project, we compared the share of MPs under 40 and over 65 to their share in the general population. In almost all countries, legislatures are disproportionately weighted toward older age groups (*Figure 32*). Only in the **Netherlands, Sweden and Belgium** do parliaments come close to balancing age representation. In **Greece**, the skew is especially sharp: younger adults are heavily underrepresented, while older generations dominate the national chamber. These results point to a clear imbalance in **descriptive representation**, which matters because parliaments that do not reflect the population's age profile may be less attuned to younger generations' concerns.

The **Political Equality Index** combines perceptions of voice, actual engagement, party saliency, and parliamentary representation to provide a comprehensive assessment of democratic fairness across generations. When we give **equal weights** to all seven indicators, the overall picture tilts in favor of older adults in most countries (*Figure 33*). The political advantage of seniors is strongest in **Ireland**, where older adults not only vote more and show greater interest but also receive more attention from political parties. By contrast, **Finland** stands out as the country where younger adults hold an advantage: here, their optimism about political voice is matched by engagement levels comparable to those of the elderly.

Applying **empirical weights**, which give more importance to indicators linked most closely to life satisfaction, produces only minor shifts (*Figure 34*). In some countries, the elderly advantage narrows, but the broad pattern remains. Finally, under **normative weights**, which give priority to foundational elements of political equality—such as effective participation (voting, party closeness) and fair representation in institutions—the results return to a clear **pro-elderly** bias across almost all countries, with only **Finland, Sweden, and the Netherlands** showing an advantage for the young (*Figure 35*).

The results show that **political equality in Europe generally favors older adults**. Seniors are more active voters, more interested in politics, more attached to parties, and more present in parliaments. They also receive more programmatic attention in many countries' party manifestos. Younger adults, by contrast, feel more optimistic about their political voice but do not translate this optimism into participation. The risk is that democracies become structurally skewed toward older cohorts, whose voices are both louder at the ballot box and more strongly represented in institutions.

For policymakers, these findings point to the need for action on two fronts. First, democracies must **encourage and enable youth participation**. This can include lowering barriers to voting, strengthening civic education, experimenting with institutional innovations (such as youth councils), and ensuring that political parties address young people's concerns substantively, not just symbolically. Second, legislatures and parties must strive for **better age representation**. This could mean supporting younger candidates, adopting measures to diversify party lists, or reforming internal party structures that privilege long-serving incumbents.

More broadly, addressing the imbalance in political equality is essential to maintain **intergenerational solidarity and democratic legitimacy**. If younger citizens consistently feel underrepresented and disengaged, trust in institutions will erode, and the legitimacy of democratic decisions will be questioned. Ensuring that political systems respond fairly to all age groups is thus not only a matter of justice but also of sustaining the vitality of democracy itself.

Figure 33: Simple weighted Political Equality Dimension

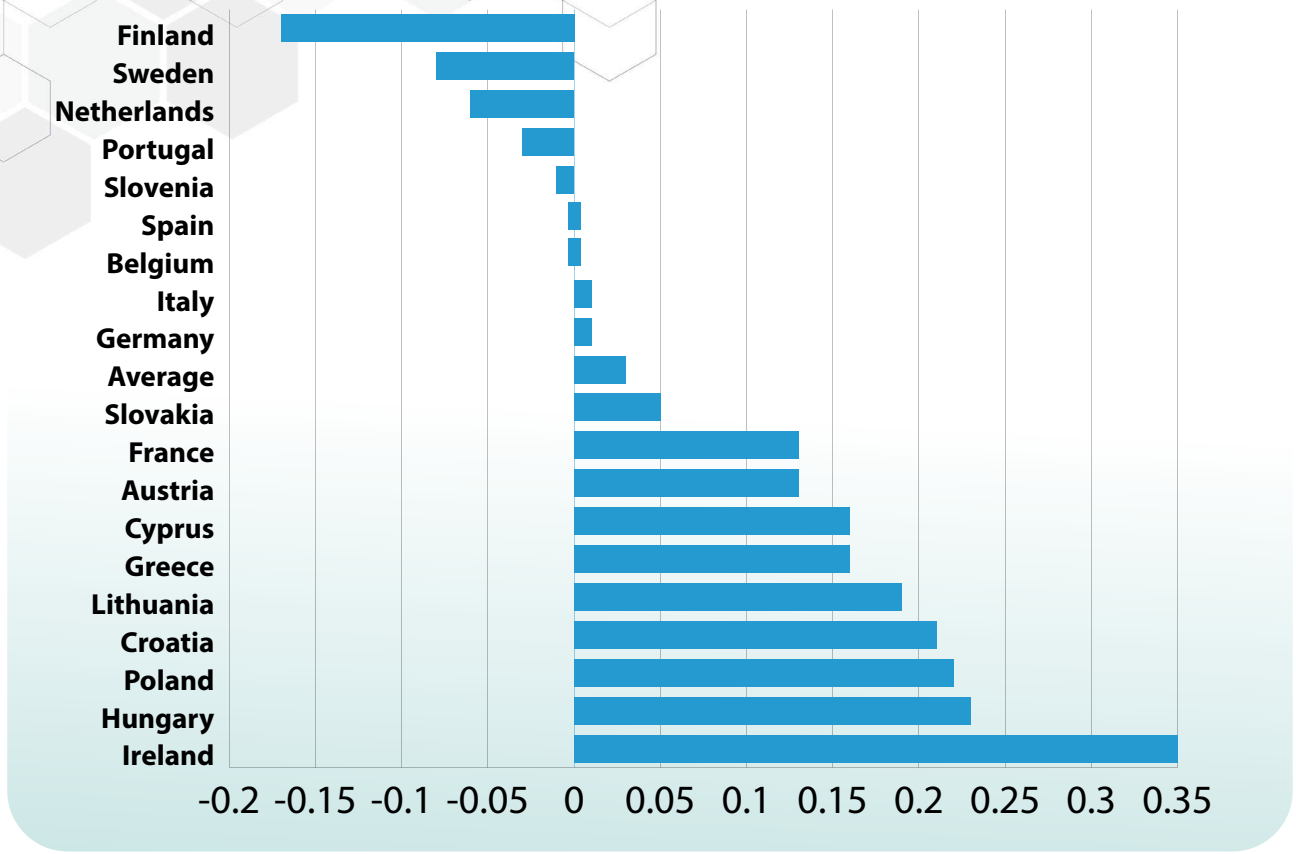
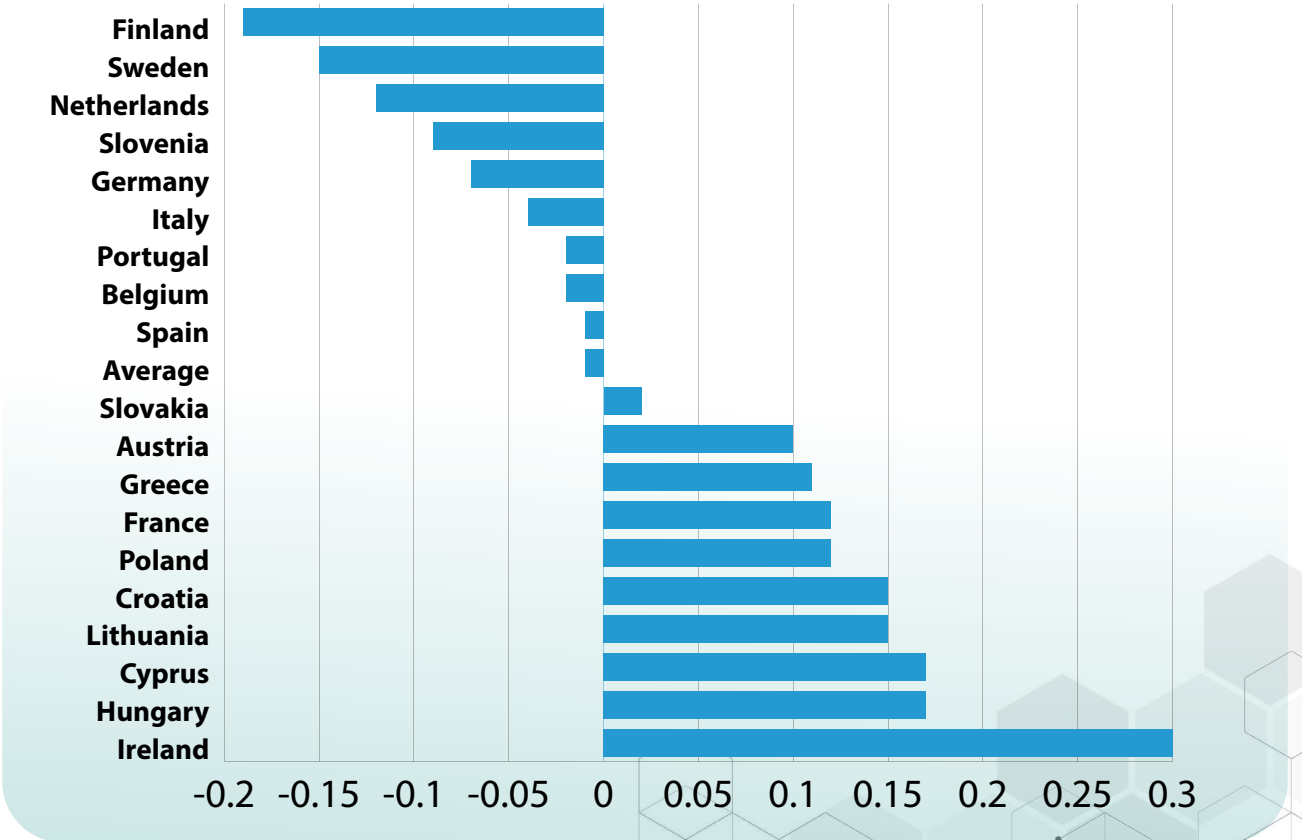
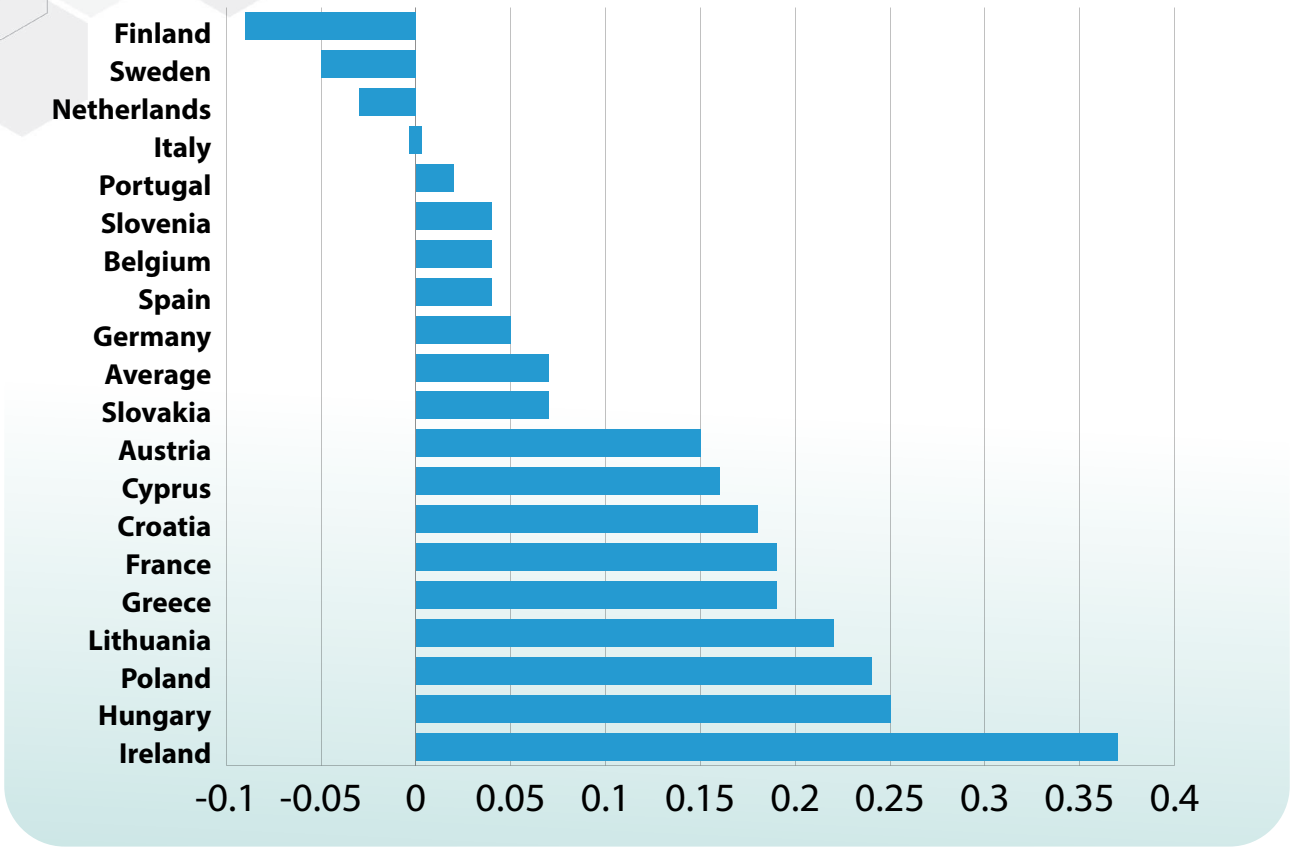


Figure 34: Empirical Weighted Political Equality Dimension



Index composed of 1) Say, 2) Influence, 3) Turnout, 4) Party closeness, 5) Political Interest, 6) Manifesto salience, 7) Age representation

Figure 35: Normative Weighted Political Equality Dimension



Index composed of 1) Say, 2) Influence, 3) Turnout, 4) Party closeness, 5) Political interest, 6) Manifesto salience, 7) Age representation

6.5 Overall Index

Bringing together the four dimensions of intergenerational justice—**economic fairness, access to essential services, relational equality, and political equality**—is not straightforward. Each of these captures a different aspect of how societies treat younger and older adults, from material resources and service provision to social connectedness and political voice. Yet combining them into a single index allows us to see the **bigger picture**: whether countries overall tilt toward favoring the elderly or the young, and how the different facets of fairness balance out.

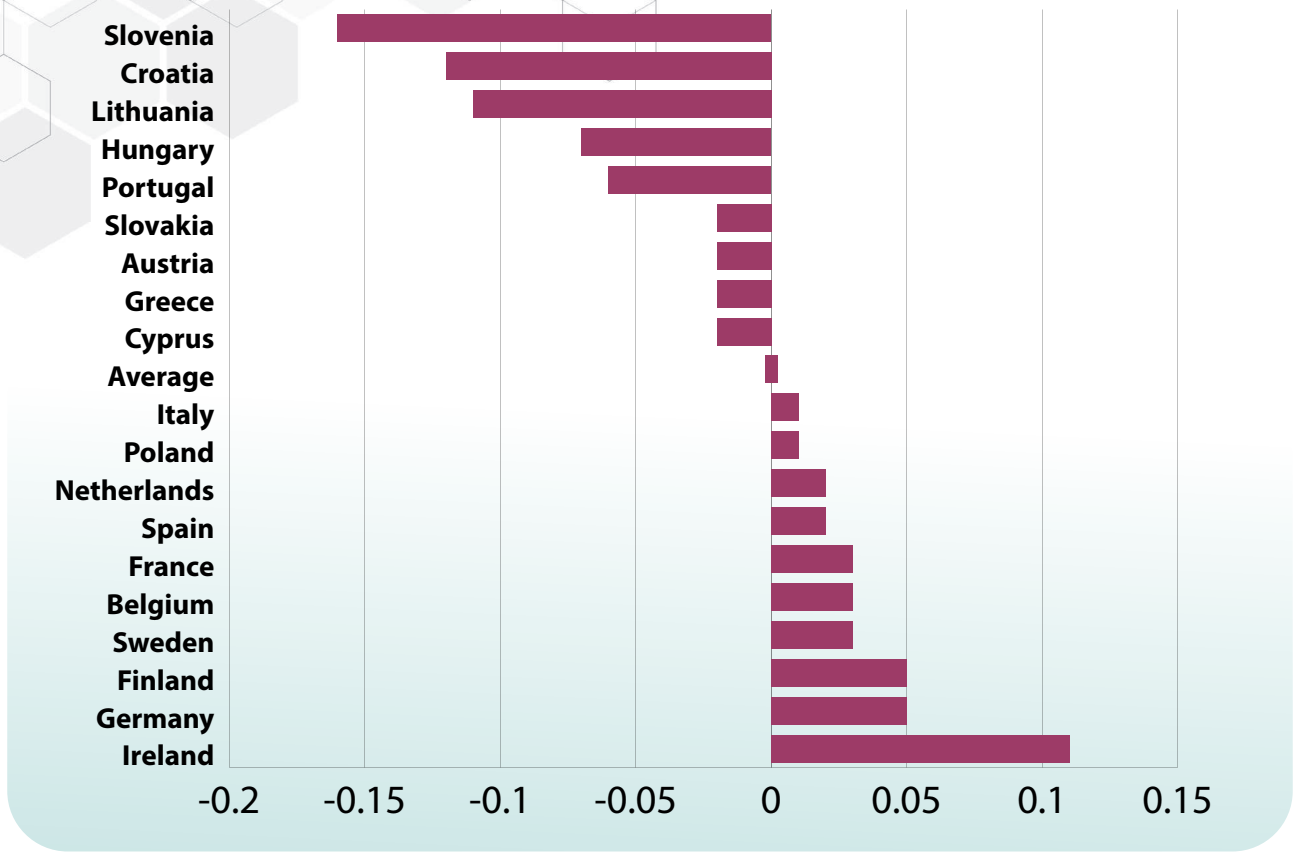
When assigning **equal weights** to the four dimensions, the aggregate Index portrays a relatively balanced situation across Europe (*Figure 36*). Only one country, Ireland, emerges clearly as pro-elderly, while three countries—**Slovenia, Croatia, and Lithuania**—show a strong advantage for younger adults. Ireland's position reflects a combination of mild pro-elderly results in the economic and services dimensions, the weakest pro-young result in the relational dimension (where every country favors the young), and a clear tilt toward the elderly in the political domain. By contrast, Slovenia, Croatia, and Lithuania benefit from strongly pro-young scores in economic fairness, balanced or neutral results in access to services, strongly pro-young results in the relational dimension, and only limited disadvantages in political equality.

For most other countries, the balanced picture hides **offsetting inequalities** across dimensions. A good example is **Italy**. It stands out as the most pro-elderly country in economic fairness, yet at the same time strongly pro-young in access to services and especially in relational equality, while landing in the middle ground in political equality. These opposing pulls average out, leaving Italy relatively balanced in the aggregate index.

When we apply **empirical weights**, which give greater importance to indicators most closely linked to life satisfaction, the differences between countries become sharper and the ranking shifts (*Figure 37*). Now, countries such as **Spain, Sweden, France, and Finland** stand out as the most pro-older adults. This result reflects the heavy weight given to economic outcomes, where these countries already leaned toward older adults. On the other hand, **Croatia and Lithuania** become the most strongly pro-young, confirming the strong tilt in their economic fairness scores.

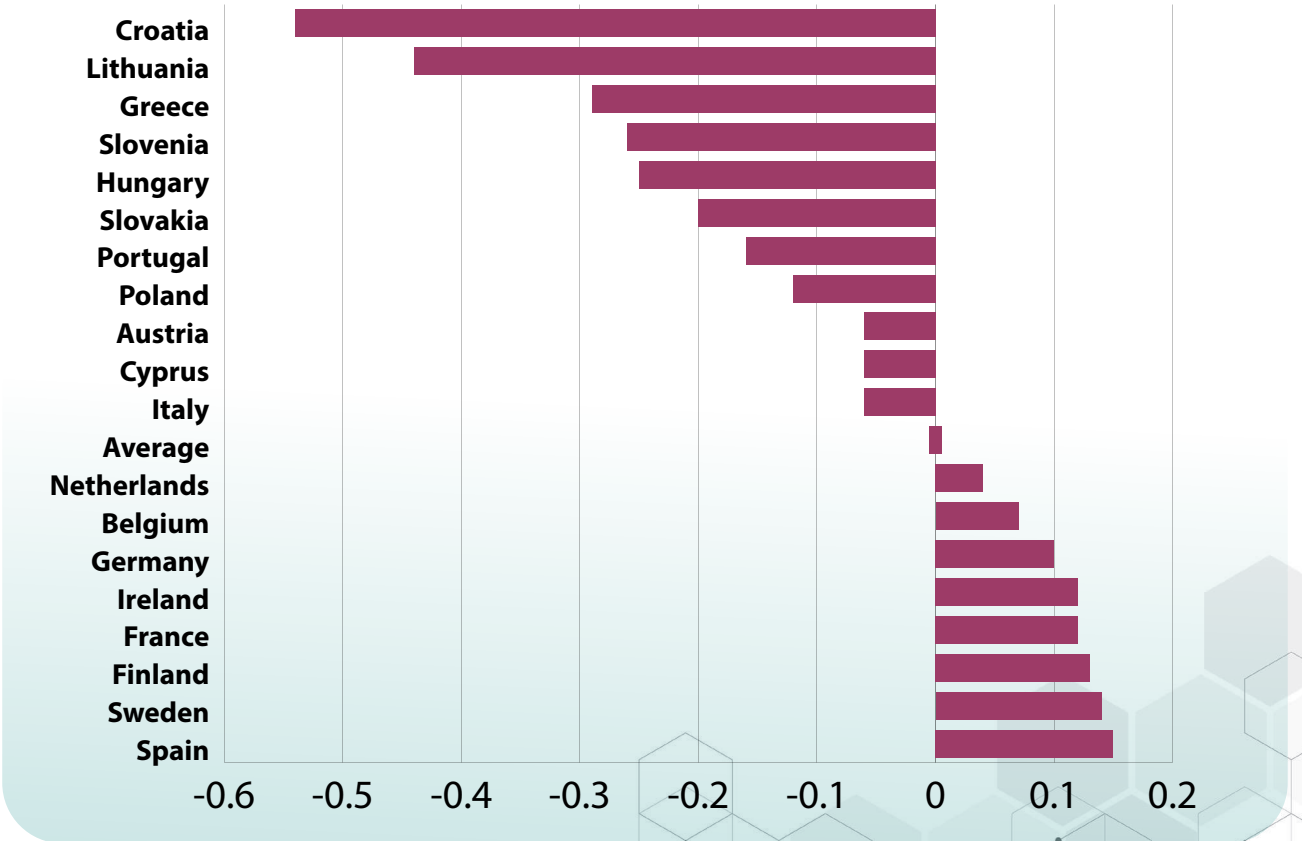
Finally, using **normative weights**, which prioritize indicators tied to sufficiency, protection from life-course "scarring," and equal citizenship, the results converge again toward a more balanced picture (Figure 38). Differences remain, but they are less pronounced than under empirical weighting. A notable shift is Italy, which under this scheme rises to become the **third most pro-elderly country**, after Ireland and France.

Figure 36: Simple weighted Intergenerational Equity Index



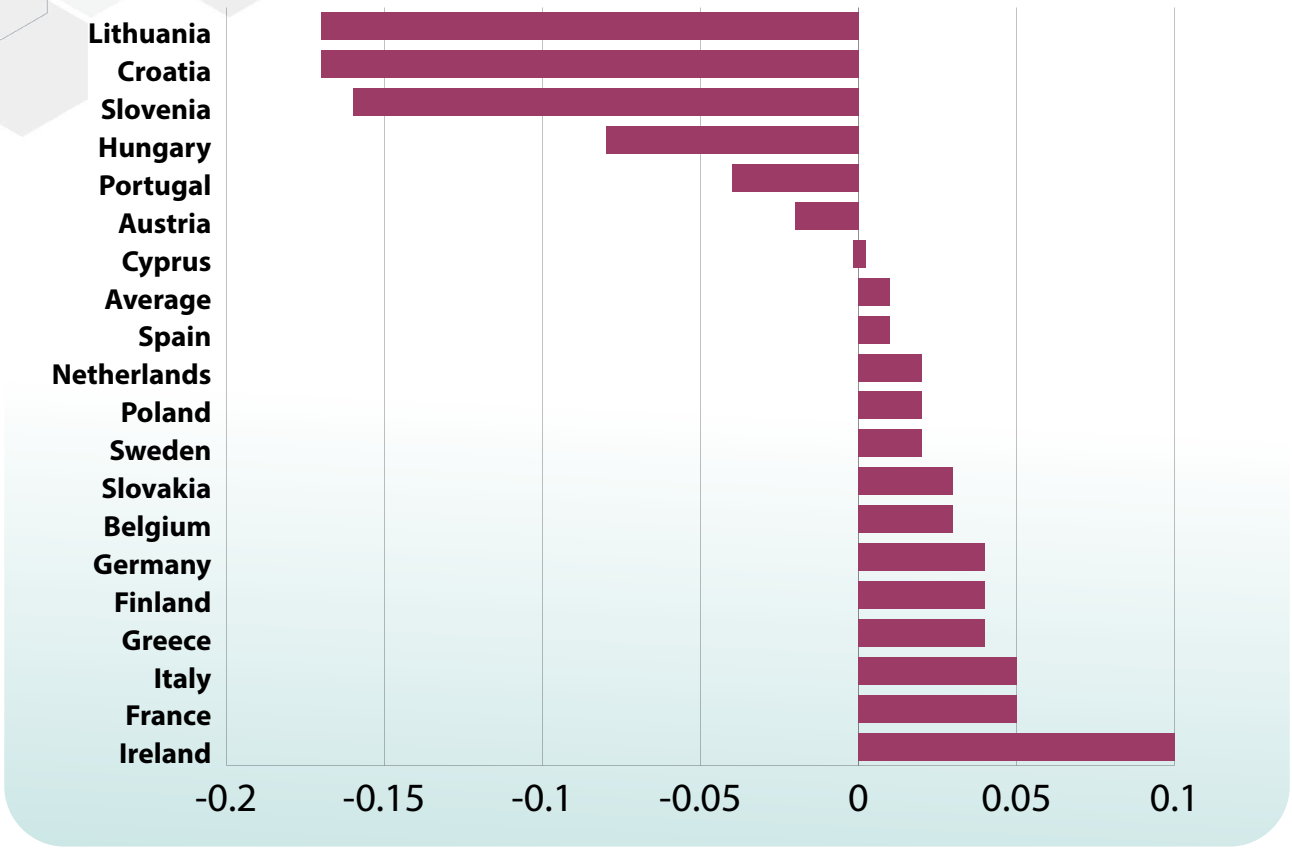
Index composed of 1) Economic Fairness 2) Access to Essential Services, 3) Relational Equality and, 4) Political Equality

Figure 37: Empirically weighted Intergenerational Equity Index



Index composed of 1) Economic Fairness 2) Access to Essential Services, 3) Relational Equality and, 4) Political Equality

Figure 38: Normative weighted Intergenerational Equity Index

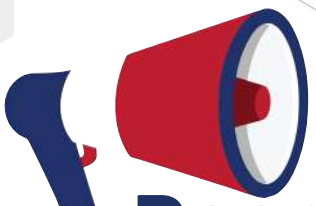


Index composed of 1) Economic Fairness 2) Access to Essential Services, 3) Relational Equality and, 4) Political Equality

Taken together, the overall Intergenerational Justice Index shows that **no country is uniformly pro-young or pro-elderly across all dimensions**. Most achieve balance only because strong inequalities in one area are offset by opposite inequalities in another. Ireland and Italy lean most clearly toward the elderly, while Croatia, Lithuania, and Slovenia favor the young. The precise rankings depend on how the components are weighted, but the broad picture is consistent: intergenerational justice is **multidimensional**, and trade-offs between domains are the rule rather than the exception.

For policymakers, the message is twofold. First, countries must avoid complacency: an overall "balanced" score may hide deep inequalities between age groups in specific domains, such as jobs, services, or political representation. Second, policy strategies need to be **targeted to the dimensions where disadvantages are most acute**. For example, Ireland's challenge lies in political equality, while Italy must address pro-elderly biases in economic fairness without eroding the pro-young advantages it shows in services and social inclusion.

At the European level, the findings suggest the need for **integrated intergenerational policies**. Isolated reforms in one area may shift inequalities elsewhere, but a coordinated approach—linking labor market reforms, welfare design, community-building, and political participation—can strengthen solidarity across the life course. Ensuring that no age group is systematically disadvantaged is not only a matter of fairness but also a **precondition for social cohesion and democratic legitimacy** in aging societies.



Reader's Takeaway

Results Across Countries and Age Groups

- The Index shows that **intergenerational justice is multidimensional**: no country is uniformly pro-young or pro-elderly across all domains.
- **Economic Fairness** generally favors older adults, who enjoy greater job stability, higher wages, and stronger financial buffers, while young adults face higher risks of unemployment, poverty, and housing precarity.
- **Access to Essential Services** is more mixed: older adults more often report unmet health needs, but they live in safer and cleaner environments; younger adults benefit more from some transfers and more often succeed in accessing healthcare.
- **Relational Equality** clearly favors the young: they have denser social lives, stronger networks, and often better mental health, though they also report more age discrimination.
- **Political Equality** generally tilts toward the elderly, who are more likely to vote, feel close to parties, and dominate parliaments, while younger adults feel optimistic about their voice but engage less.
- The **Overall Index** smooths these contrasts: Ireland and Italy lean pro-elderly, while Croatia, Lithuania, and Slovenia lean pro-young. Most other countries look balanced only because strong gaps in one area cancel out gaps in another.

In short: Across Europe, younger adults struggle most in the economy and politics, while older adults face more risks in health access and social connection. Policymakers must act on both sides of the age divide to sustain **fairness, solidarity, and trust between generations**.

7. Conclusion and Policy Implications

The Intergenerational Justice Index provides the first multidimensional assessment of how different age groups fare across European societies. By bringing together economic fairness, access to essential services, relational equality, and political equality, the Index offers a comprehensive perspective on the distribution of opportunities, resources, respect, and political voice across generations.

The findings show that intergenerational justice is complex and multidimensional. No country is uniformly favorable to the young or to the elderly. Instead, what we observe is a pattern of compensating imbalances, where disadvantages in one domain are often offset by advantages in another. The result is that many countries appear balanced overall, but only because inequalities of opposite signs cancel each other out.

Across the four dimensions, certain regularities emerge. Economic fairness is tilted strongly in favor of older adults. They are more likely to enjoy secure jobs, higher wages, adequate housing, and stronger financial resilience. Younger adults, by contrast, face persistently higher unemployment, a greater prevalence of temporary and precarious contracts, overcrowded housing conditions, and weaker savings. These disadvantages delay autonomy, restrict life choices, and increase vulnerability to economic shocks.

The picture looks different when we turn to access to essential services and public goods. Here, the balance between age groups is more mixed. Older adults are more likely to report unmet health needs, which points to persistent barriers in accessibility even within universal healthcare systems. Yet older citizens also live in safer and cleaner environments, while younger adults report greater exposure to pollution, grime, and crime, partly reflecting residential patterns and partly differences in perception and concern. When we look at welfare transfers other than pensions, younger households are more likely to benefit in some countries, reflecting family- and labor-oriented policies, while in others older adults remain the main beneficiaries.

Relational equality reveals a much clearer pattern. Across Europe, younger adults enjoy richer social lives, engage more in leisure activities, meet friends more often, and maintain broader networks of trusted contacts. In many countries, they also show lower risks of depression. This advantage, however, is tempered by a greater likelihood of reporting age-based discrimination,

which highlights that ageism is not confined to old age. Older adults, by contrast, are more vulnerable to isolation, have fewer supportive networks, and in several countries face higher risks of mental distress, underscoring the importance of social connectedness for dignity and well-being.

Political equality tilts in the opposite direction. Older adults dominate in terms of political engagement and representation. They vote in greater numbers, show higher levels of interest in politics, and feel closer to political parties. They are also disproportionately represented in parliaments and receive greater attention in party manifestos. Younger adults, on the other hand, express greater optimism about their political influence but fail to translate this perception into consistent participation. The result is that their voices are comparatively weaker in actual decision-making processes, leaving democracies structurally skewed toward the concerns of older generations.

When the four dimensions are combined into the overall Intergenerational Justice Index, most countries appear balanced, but this balance is deceptive. Ireland emerges as clearly pro-elderly, while Croatia, Lithuania, and Slovenia strongly favor the young. In most other cases, strong disparities across domains cancel each other out. Italy is emblematic: the country is strongly pro-elderly in economic fairness, but pro-young in services and relational equality, with a balanced position in political equality.

These results highlight a dual imbalance. Younger adults are disadvantaged above all in the economic and political domains. They struggle with precarious employment, lower wages, housing constraints, weaker financial security, and underrepresentation in decision-making institutions. Older adults, by contrast, are disadvantaged in services and social life. They face higher risks of unmet health needs, weaker networks of support, and greater risks of loneliness and depression.

The findings underline the trade-offs inherent in intergenerational justice. Strong pension systems guarantee dignity in later life but may leave fewer resources available for policies that support younger families unless balanced by investments in education, training, and housing. Similarly, the greater political weight of older cohorts ensures that their concerns are consistently heard, but risks marginalizing the perspectives and interests of younger citizens. At the same time, there are important complementarities. Measures that support younger adults—such as

investments in education, labor-market integration, and affordable housing—contribute to future welfare sustainability, benefitting older cohorts as well. Likewise, strengthening healthcare and community services for the elderly reduces informal care burdens on families and enhances solidarity across the life course.

As a first attempt to measure intergenerational justice comprehensively, the Index has limitations. It compares age groups at one moment in time rather than tracking cohorts over their lifetimes, which means it cannot capture the cumulative fairness of life trajectories. Some indicators rely on self-reported data, which may reflect expectations as much as actual barriers. Coverage is limited to nineteen EU countries, leaving out other contexts where intergenerational dynamics may differ. Finally, the three weighting strategies—equal, empirical, and normative—help balance transparency, evidence, and principles, but they inevitably involve assumptions and value judgments. Future iterations could expand country coverage, integrate longitudinal elements, refine indicators with more objective measures, and explore the intersection of age with gender, education, and migration background.

The Index also highlights opportunities to integrate this approach with intergenerational accounting. While accounting methods track fiscal transfers between cohorts and assess the sustainability of welfare systems, the Index captures whether people of different ages are treated fairly in their current access to resources, services, status, and political influence. Combining the two would provide a more holistic framework, linking long-term fiscal sustainability with short-term distributive fairness. Policymakers could then evaluate, for example, pension reforms not only for their fiscal balance but also for their impact on young workers' economic security, or assess investments in healthcare and education both for their contribution to future productivity and for their immediate effects on fairness across generations.

7.1 Policy Implications

The Intergenerational Justice Index highlights a set of urgent policy challenges. It shows clearly that younger adults are most disadvantaged in the economy and politics, while older adults are more vulnerable in access to services and in relational well-being. These findings imply that no single reform can ensure fairness; instead, what is needed is a **comprehensive intergenerational strategy** that addresses the structural disadvantages of both groups, balances short-term needs with long-term sustainability, and strengthens solidarity across the life course.

First, policies must address the structural disadvantages faced by younger adults in the economy. High youth unemployment, the prevalence of temporary and precarious contracts, and barriers to housing independence remain persistent across much of Europe. Tackling these issues requires action on several fronts: reducing dualism in labor markets by making permanent contracts more accessible; investing in active labor-market policies, apprenticeships, and training to smooth the school-to-work transition; and expanding access to affordable housing through rental subsidies, social housing investment, or reforms in mortgage markets. Without such measures, younger cohorts will continue to face delayed autonomy, weaker financial security, and reduced capacity to build the foundations of family and professional life.

Second, political participation and representation of younger cohorts must be strengthened. The Index shows that although young adults often feel optimistic about their political influence, they are less likely to vote, less interested in politics, and significantly underrepresented in parliaments. Policy responses could include lowering the voting age where appropriate, expanding civic education, and experimenting with new forms of political participation such as youth councils, citizens' assemblies, or digital platforms that bring young voices into decision-making. Political parties also have a responsibility to recruit younger candidates, diversify party lists, and ensure that their programs speak to the concrete priorities of younger voters. Without such reforms, the structural dominance of older cohorts in electoral politics risks eroding democratic legitimacy and leaving younger people disengaged and disillusioned.

Third, healthcare access and social support for older adults must be reinforced. The Index reveals that seniors in many countries experience higher levels of unmet health needs, even where healthcare systems are universal.

Policymakers should focus on reducing waiting times, improving geographical accessibility, and lowering out-of-pocket costs, while also expanding preventive and community-based care. Beyond health, investments in social infrastructure—community centers, age-friendly public spaces, lifelong learning programs—can counteract loneliness and sustain participation in later life. Expanding mental health services for older adults is equally important, as risks of depression and distress rise when social networks shrink. These measures are essential not only for the dignity of the elderly but also for reducing pressure on families and health systems.

Fourth, welfare systems need to be recalibrated to balance generational priorities. Current arrangements in many countries ensure pension security but often provide less support to younger households in critical life stages. While pensions should remain a cornerstone of social protection, welfare design must also expand investments in child allowances, housing benefits, and family support. Excluding pensions from the Index highlighted this imbalance: they operate as deferred earnings but dominate elderly income, while non-pension transfers more often support younger people. A more balanced allocation of resources would help ensure that social policies do not reinforce structural disadvantages for one generation at the expense of another.

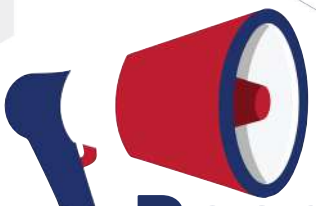
Fifth, policy design should explicitly recognize the complementarities between supporting the young and the old. The Index demonstrates that intergenerational fairness is not a zero-sum game. Supporting youth employment and family formation strengthens welfare contributions and ensures the sustainability of pension systems. At the same time, ensuring adequate healthcare and community support for the elderly reduces reliance on informal care from younger family members, freeing them to participate fully in work and society. Policies that exploit these complementarities—such as integrating employment and family policy with long-term care and health reform—are the most effective way to strengthen solidarity across generations.

Finally, an integrated intergenerational strategy is essential. Too often, policy debates focus on single issues in isolation—pensions, housing, youth employment, or healthcare—without recognizing their interdependence. The Index makes clear that imbalances in one domain spill over into others. A comprehensive approach would link reforms across employment, education, housing, health, social transfers,

and political participation to ensure they reinforce rather than offset one another. At the European level, this could mean embedding intergenerational fairness into the European Semester, the Social Pillar, and investment frameworks such as the Recovery and Resilience Facility. At the national level, governments could institutionalize intergenerational audits of new policies to assess their distributional impact by age.

The overarching implication of this report is that **fairness between generations requires deliberate policy choices**. Left to market dynamics and electoral pressures alone, the risks are clear: younger cohorts remain disadvantaged in jobs and politics, while older cohorts risk exclusion in health and social life. Only through integrated, forward-looking strategies can governments ensure that solidarity between generations is preserved, that no group is systematically left behind, and that democracies and welfare states retain their legitimacy in aging societies.

In conclusion, the results of the Index demonstrate that intergenerational justice is not a zero-sum game. Societies that equip young adults with the means to thrive, while enabling older adults to live with dignity and respect, are societies that foster trust, strengthen cohesion, and sustain the long-term legitimacy of welfare states and democracies.



Reader's Takeaway

The Intergenerational Justice Index shows that fairness between age groups in Europe **is far from balanced**. Younger adults struggle most in the **economy and politics**, facing higher unemployment, precarious work, housing pressures, financial fragility, and underrepresentation in decision-making. Older adults are more disadvantaged in **health and social life**, reporting more unmet medical needs, weaker networks, and greater risks of isolation or mental distress.

Overall, countries often appear balanced only because **opposite imbalances cancel each other out**: what is pro-young in one dimension is pro-elderly in another. Intergenerational fairness is therefore not a zero-sum game but a matter of **trade-offs and complementarities**. Supporting youth employment sustains pension systems, while investing in elderly healthcare and community services reduces burdens on younger families.

For policy, the message is clear: **integrated strategies** are needed. Governments must simultaneously tackle youth disadvantages in jobs and politics and strengthen services and inclusion for older adults. Only by doing so can Europe maintain **solidarity across generations**, sustain welfare states, and safeguard the legitimacy of democracy in aging societies.

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Appendices

A. **Index of Intergenerational Justice**:
List of Indicators

B. **Methodological Note**:
Political Dimension of the Intergenerational Justice Index

C. **Methodological Note**:
Weights

Appendix

A. Index of Intergenerational Justice: List of Indicators

1. **Economic fairness**, assessing poverty, employment, wages, housing, and financial resilience. The six indicators included in this dimension are:
   - **Risk of poverty**
   - **Unemployment**
   - **Incidence of permanent contracts**
   - **Labor income**
   - **Residential overcrowding**
   - **Financial distress**

2. **Access to essential services and public goods**, including healthcare, social transfers, environmental quality, safety, and digital infrastructure. The five indicators included in this dimension are:
   - **Unmet health needs**
   - **Social transfers received relative to total income**
   - **Exposure to pollution, grime, and noise**
   - **Perceived problems of crime, violence, or vandalism**
   - **Internet connection accessibility**

3. **Relational equality**, capturing social connections, networks of trust, freedom from discrimination, and mental well-being. The five indicators included in this dimension are:
   - **Regular leisure activity**
   - **Social relations**
   - **Close relations**
   - **Discrimination**
   - **Mental well-being**

4. **Political equality**, measuring participation, representation, and responsiveness of institutions to generational concerns. The seven indicators included in this dimension are:
   - **Having a say in politics**
   - **Perceived ability to influence politics**
   - **Voting in the latest election**
   - **Feeling close to a political party**
   - **Interest in politics**
   - **Manifesto group topic saliency**
   - **National chamber's Age Representation Index (ARI)**

B. Methodological Note: Political Dimension of the Intergenerational Justice Index

This note describes the two components of the political equality dimension that draw on external sources beyond the EU-SILC and ESS datasets. The first component examines how political parties address issues relevant to younger and older adults in their electoral manifestos, while the second quantifies the degree of age representation in national legislatures. Together, these measures provide a cross-national perspective on how political systems engage with intergenerational priorities, both in terms of political discourse and institutional representation.

B.1 Manifesto Saliency Component

The objective of this component is to measure the extent to which political parties devote attention to policy topics that imply social expenditures targeted at younger or older adults. This enables the construction of a systematic, cross-national indicator of how party competition incorporates age-related issues into electoral platforms.

Political manifestos combine rhetorical statements with concrete policy pledges. Because parties may include non-binding or symbolic claims, the analysis is restricted to manifesto categories linked to distributive commitments. Specifically, we draw on the Comparative Manifesto Project (CMP) codes that classify quasi-sentences into policy areas, focusing on those directly related to welfare, education, and demographic expenditures. Quasi-sentences without an explicit distributive implication are excluded from the analysis.

We extract quasi-sentences coded as welfare expansion or reduction (504–505), education expansion or reduction (506–507), and demographic policy (706). Within this subset, we identify whether each quasi-sentence refers to younger or older adults using a dictionary-based approach. Terms associated with younger adults include *youth, student, child, adolescent, scholarship, school, and university*, while those associated with older adults include pensioner, retiree, retirement, senior, ageing, care, and caregiver. Quasi-sentences without a clear age reference are coded as unclear.

Each quasi-sentence is then assigned a stance score according to its policy orientation: expansion-oriented codes (504, 506, 706) receive a value of +1, while reduction-oriented codes (505, 507) receive a value of −1. This scoring system

captures whether the attention devoted to a given age group reflects policy support or retrenchment.

By-Age-Area Index Construction

At the manifesto level, stance scores are aggregated separately for references to younger adults ($S_{p,young}$), older adults ($S_{p,old}$), and unclear references ($S_{p,unclear}$). These values are then combined into a by-age-area index for each party *p*:

$$I_p = \frac{S_{p,old} - S_{p,young}}{\max(10^{-6}, S_{p,unclear})}$$

The denominator uses the maximum of 10^{-6} and $S_{p,unclear}$ to avoid division by zero in cases where no unclear references are present. This technical adjustment ensures that the index remains finite and comparable across parties, even when all relevant pledges explicitly target a single age group.

Aggregation and Country-Level Indicator

Party-level indices are then aggregated to the country level using vote-share weights, in order to reflect the electoral relevance of each party:

$$I_{c,t} = \sum_{p} w_{p,ct} I_p$$

where $w_{p,ct}$ denotes the vote share of party *p* in country *c* and election *t*. This approach ensures that the final saliency measure captures both the distribution of party discourse and its relative political significance.

A positive value of $I_{c,t}$ indicates that manifesto commitments are more strongly oriented toward older adults relative to younger adults, whereas a negative value reflects a greater focus on younger adults. Values close to zero suggest a more balanced distribution of pledges across age groups.

Table B.1 summarizes how political parties allocate their expansionary social-expenditure pledges in electoral manifestos across the different reference groups. The first three columns report the share of quasi-sentences explicitly referring to younger adults, older adults, or neither (age-neutral). The final column presents the total number of expansionary quasi-sentences identified, representing the overall volume of pledges to expand resources in these policy areas. For ease of interpretation, countries are ordered by the share of expansionary commitments directed

toward older adults, providing a clearer view of cross-national differences in policy orientation.

The total number of expansionary quasi-sentences varies considerably across countries, reflecting differences in both the length and structure of party manifestos as well as the inclusion of statements aimed at reducing resources in these policy areas. Some countries—such as Belgium (644.8), Ireland (510.0), and Germany (291.6)—display a higher overall volume of expansionary commitments, whereas others, including France (44.6), Slovenia (85.6), and Greece (61.4), place much less emphasis on such pledges. Overall, expansionary discourse tends to focus on policies that are not explicitly linked to specific age groups.

Within this aggregate picture, substantial heterogeneity emerges in how political parties distribute their expansionary social-expenditure pledges across reference groups. In several countries—such as the Netherlands, Slovenia, Germany, Sweden, and Poland—more than 28% of these pledges are directed toward older adults. In contrast, the corresponding share remains below 15% in Cyprus, Italy, and Lithuania. References to younger adults are generally less frequent, though France (31.3%), Slovakia (35.5%), and Lithuania (27.3%) stand out for comparatively greater attention to this group.

In most countries, however, the age-neutral category—expansionary statements that do not target a specific age group—constitutes the majority of pledges, averaging 58.3% across the sample. This pattern indicates that, while distributive commitments are common, political discourse surrounding social policy expansion is often framed in universal rather than explicitly generational terms, with notable cross-national variation in the degree of emphasis placed on younger versus older adults.

B.2 Representation Component (WARP ARI)

The objective of this component is to capture demographic imbalances in political representation by employing a measure that adjusts for population structure and enables meaningful cross-country comparisons.

Raw counts of legislators by age group can be misleading, as countries differ substantially in their population age composition. The Age Representation Index (ARI) addresses this limitation by comparing the share of legislators belonging to a given age group with the share of that same group in the general population. Values equal to 1 indicate proportional representation; values below 1 denote under-representation, while values above 1 indicate over-representation.

We draw on the WARP dataset (www.warpdataset.com), which provides ARI estimates for national lower (or unicameral) chambers in nearly all countries. For each country, we use the most recent legislative composition available and record three ARI values: ARI<40 (representatives under age 40), ARI41–60 (representatives aged 41 to 60), and ARI60+ (representatives aged 60 and older). Using the ARI rather than raw seat shares allows the analysis to identify representation imbalances net of demographic differences across countries.

To align with the logic of the broader political equality dimension, we summarize each country's intergenerational representation imbalance using a measure that contrasts older and younger cohorts, normalized by the representation of the middle-aged group:

$$R_{c,t}^{\text{gap}} = \frac{ARI_{c,t}^{60+} - ARI_{c,t}^{<40}}{ARI_{c,t}^{41-60}}$$

This formulation yields a scale-free index centered around zero when older and younger adults are equally represented relative to their population shares. Positive values indicate a tilt toward older adults, while negative values indicate a tilt toward younger adults (in practice, $ARI_{c,t}^{4160} > 0$ so no denominator adjustment is required).

Higher values of gap $R_{c,t}^{\text{gap}}$ indicate that, relative to younger adults, older adults are more represented in parliament than their population share would suggest,

once normalized by the representation of the middle-aged group. Values close to zero denote parity between younger and older cohorts. For comparability with other components of the Index, this gap can be standardized (for example, using *z*-scores) before being incorporated into the composite measure.

Table B.2 reports the Age Representation Index (ARI) values for three age groups—legislators younger than 40, those aged 41–60, and those aged 60 and above—in the most recent lower-chamber election for each country. As a reminder, the ARI compares the share of legislators in a given age group with that group's share in the electorate. Values below 1 indicate under-representation, while values above 1 denote over-representation.

The data reveals two consistent patterns. First, representation among individuals under 40 falls well below proportionality in all countries, with ARI values rarely exceeding 0.6. This indicates that younger adults remain structurally under-represented in national legislatures, even after accounting for their demographic share. Second, representation among those aged 41–60 is consistently above parity, with ARI values typically around or above 1.7, reflecting the strong dominance of mid-life cohorts within political institutions.

In contrast, representation among individuals aged 60 and above is more heterogeneous. In some countries—such as Lithuania, Greece, and Poland—older adults are substantially over-represented, whereas in others, including Sweden and the Netherlands, their presence in parliament remains below proportionality.

Overall, these findings underscore persistent generational imbalances in political representation across European democracies, with middle-aged cohorts systematically over-represented and younger adults consistently under-represented.

Table B.1

Share of Expansionary Quasi-Sentences by Age Group and Neutral References

Country	Older adults (%)	Younger adults (%)	Age-neutral (%)	Total
Netherlands	30.73	21.36	47.91	281.6
Slovenia	30.32	9.09	60.59	85.6
Germany	30.01	17.49	52.50	291.6
Sweden	28.96	17.72	53.32	129.3
Poland	28.68	14.22	57.10	258.6
Austria	23.77	21.51	54.73	171.7
Spain	23.59	21.53	54.88	112.9
Ireland	23.25	13.89	62.86	510.0
Average	21.84	19.83	58.33	223.8
Belgium	20.72	20.24	59.04	644.8
Hungary	20.70	15.50	63.80	144.7
France	19.36	31.26	49.38	44.6
Portugal	18.72	17.72	63.56	293.1
Finland	17.96	24.09	57.95	264.7
Slovakia	17.35	35.51	47.14	127.3
Greece	14.84	21.43	63.73	61.4
Lithuania	14.39	27.29	58.32	248.0
Cyprus	10.71	19.21	70.08	105.7
Italy	10.59	23.17	66.24	241.1

Table B.2

Age Representation Index (ARI) by Age Group for the Latest National Election

Country	ARI < 40	ARI 41–60	ARI 60+
Netherlands	0.73	1.68	0.42
Belgium	0.61	1.80	0.61
Sweden	0.59	1.43	0.34
Finland	0.57	1.72	0.92
Germany	0.55	1.82	0.84
Lithuania	0.55	1.39	1.78
Slovakia	0.52	1.67	1.22
Austria	0.51	1.92	0.70
France	0.50	1.68	1.33
Cyprus	0.44	2.00	0.76
Poland	0.44	1.68	1.53
Croatia	0.43	2.02	0.75
Spain	0.43	2.02	0.78
Portugal	0.42	1.83	1.23
Slovenia	0.42	2.04	0.74
Ireland	0.35	1.97	1.15
Italy	0.35	2.05	1.01
Hungary	0.29	1.89	1.58
Greece	0.26	1.82	1.88

C. Methodological Note: Weights

This note outlines the procedure used to construct a data-driven weighting system for the four dimensions of the Intergenerational Justice Index: Distributive Fairness, Access to Essential Services, Relational Equality, and Political Equality. In line with the main estimation framework, component weights are derived from two complementary data sources: the EU-SILC and the European Social Survey (ESS).

The approach relies on a common measure available in both surveys—life satisfaction—as a numéraire for inferring the relative importance of each component within its respective dimension. Using dominance analysis, we estimate component-level weights based on their relative contribution to the explained variance (R^2) in life satisfaction. These contributions are then used to compute dimension-level weights.

A group-level, data-driven approach is adopted to ensure comparability across indicators originating from distinct domains. Estimating weights within each dimension—rather than jointly across all components—mitigates multicollinearity and conceptual overlap that may arise when indicators capture related aspects of well-being. This strategy preserves dimensional coherence and prevents distortions in cross-dimensional comparisons.

By assigning weights according to each component's contribution to the explained variance in a common well-being outcome (life satisfaction), the procedure avoids arbitrary choices and reflects the relative predictive power of each component in explaining subjective welfare.

C.1 Empirical Approach

To account for systematic heterogeneity, we first partial out variation associated with demographic and regional factors using the Frisch–Waugh–Lovell theorem. Specifically, residuals are obtained from regressions that include interactions between age and gender, and between region (at the NUTS1 level) and gender, as fixed effects. This structure allows the association between each component and life satisfaction to vary flexibly across age groups and geographic units in a gender-specific manner.

Dominance analysis is then performed on these residuals, ensuring that the resulting weights capture net relationships—independent of compositional differences in age, gender, or regional structure.

Steps

1. **Checking Comparability**:
   Before proceeding, we verified the comparability of the ESS and EU-SILC datasets at the aggregate level. Despite differences in design and scope, both surveys provide calibrated weights that yield representative population estimates. Age and gender distributions align closely across the two datasets, supporting their combined use in this analysis.

2. **Grouping Variables by Dimension. Economic Fairness**:
   All variables are sourced from the EU-SILC, making this dimension self-contained and directly comparable across countries. Access to Essential Services: All variables are likewise obtained from the EU-SILC, requiring no cross-survey harmonization. Relational Equality: Most components are drawn from the ESS, with the exception of one variable that is not directly observed in this dataset.
   To maintain consistency, this variable is imputed using harmonized EU-SILC information through a cross-survey mapping procedure. This step ensures comparability and preserves the internal coherence of the dimension. Political Equality: All components originate from the ESS, so no additional harmonization across surveys is required.

3. **Harmonization for the Relational Equality Dimension**
   Internet Access: In the ESS, internet access is identified through respondents who *report never using the internet*. This variable aligns closely with corresponding estimates from the EU-SILC and provides a consistent and cleaner measure of digital inclusion.
   Leisure Activities: This variable is not directly observed in the ESS. To construct a comparable measure, the following cross-survey imputation procedure is applied:

   a) Estimation in EU-SILC: A logit model is estimated in the EU-SILC sample to predict the probability of engaging in leisure activities:

   $$\Pr(\text{leisure}_i = 1) = \text{logit}^{-1}(\gamma_0 + \sum_k \gamma_k x_{ik})$$

   where x_{ik} includes age, gender,region, socioeconomic status, and their interactions.

b) Prediction in ESS: The estimated coefficients (γ_k) are applied to the ESS dataset, which contains the same set of covariates.

c) Threshold Assignment: Predicted probabilities are used to assign binary values, with individuals above the median predicted probability coded as 1 (participates in leisure activities). The share of predicted participants in ESS (55%) aligns closely with the observed share in EU-SILC (57.3%), confirming the consistency of the mapping procedure.

4. Sanity Check via Regressions: For each dimension, standardized life satisfaction is regressed on its respective components according to the following specification:

$$\text{Std LifeSat}_i = \alpha + \sum_{j=1}^{n} \beta_j c_{ij} + \delta_{\text{age}(i)\times\text{gender}(i)} + \delta_{\text{nuts1}(i)\times\text{gender}(i)} + \varepsilon_i$$

In this model, Std LifeSat_i denotes the standardized life satisfaction score for individual $i$as reported in the relevant survey, while c_{ij} represents the standardized value of component $j$for that individual. The specification includes two sets of fixed effects: one for the interaction between age group and gender ($\delta_{\text{age}(i)\times\text{gender}(i)}$), and another for the interaction between NUTS1 region and gender ($\delta_{\text{nuts1}(i)\times\text{gender}(i)}$). These controls capture systematic differences in life satisfaction across demographic and regional subgroups. The residual term εireflects unexplained individual-level variation. For Economic Fairness, Access to Essential Services, Relation Equality and Political Equality, see Tables C.1 to C.4.

Across all four dimensions, the estimated coefficients display point estimates in the expected direction, with nearly all statistically significant at the 1% level. The results are also sensitive to the inclusion of fixed effects, highlighting the importance of controlling for demographic and geographic heterogeneity.

Overall, these findings confirm that the model performs well and is appropriate for capturing the relationship between life satisfaction and the underlying components of intergenerational fairness.

5. Weighting via Dominance Analysis

To assign relative importance (weights) to each component c_j within a given dimension, we employ dominance analysis, implemented via the domin command in *Stata*. This method decomposes the total R^2 from an OLS regression into additive contributions from each predictor. The resulting general dominance statistics correspond to the average additional variance explained by each variable across all possible subset models. Because these contributions are computed over every model permutation, dominance analysis remains informative even in the presence of multicollinearity, providing stable and interpretable importance weights for correlated components.

This approach is particularly well suited for assessing marginal relevance when predictors exhibit multicollinearity or overlapping informational content. By evaluating the incremental explanatory power of each variable across all 2^P possible subset models (where p is the number of predictors), it yields a robust, model-independent measure of relative importance.

However, the domin command does not support categorical variables or the inclusion of fixed effects. To overcome this limitation, we apply a residualization procedure based on the Frisch–Waugh–Lovell (FWL) theorem, implemented in three steps:

a. Outcome residualization: Regress standardized life satisfaction on the full set of fixed effects—age-by-gender (i.age ## i.woman) and region-by-gender (i.nuts1 ## i.woman)—and store the residuals.

b. Predictor residualization: For each standardized predictor c_j^2, run an analogous regression on the same fixed effects and retain the residuals (i.e., the portion of each component not explained by the fixed effects).

c. Dominance analysis on residuals: Run the domin command using the residualized outcome and predictors. This procedure performs the analysis on variation net of fixed effects, isolating the substantive contribution of each component to explained life satisfaction.

The results of each dominance analysis are present for each component in tables C.5 to C.8.

6. Computing Dimension-Level Weights

We assume that the variance explained by individual components is additive within each dimension, and that the relative weight of a dimension reflects the proportion of total explained variance attributable to its components.

The final step in constructing the overall *Intergenerational Justice Index* is to assign relative weights to each of the four dimensions. While this task is inherently challenging given the multidimensional nature of well-being, a data-driven approach relies on the share of variance in life satisfaction explained by each dimension. Specifically, we use the fit statistic (R^2) from the component-level regressions described above.

The results indicate that Distributive Fairness accounts for 9.8% of the variation in life satisfaction, Access to Essential Services for 5.7%, Relational Equality for 15.4%, and Political Equality for 2.3%. Based on these estimates, the overall index is computed as a weighted sum of the four domain scores, with weights proportional to their contribution to total explained variance:

$$\text{Overall Index}_i = 0.295 \cdot DF_i + 0.172 \cdot AES_i + 0.464 \cdot RE_i + 0.069 \cdot PE_i$$

where DFi, $AESi$, REi, and PEi denote the standardized scores for Distributive Fairness, Access to Essential Services, Relational Equality, and Political Equality, respectively, for country i.

An important caveat is that the Relational Equality dimension may be disproportionately influenced by the *depressive symptoms indicator*, which explains a substantial share of its variance. This likely reflects a mechanical correlation between depressive symptoms and life satisfaction, as both capture closely related aspects of subjective well-being. Including this component without adjustment could therefore inflate the relative weight of the Relational Equality dimension in the overall index.

To address this potential bias, an alternative weighting scheme is computed excluding the depressive symptoms indicator from the fit calculation. When this adjustment is applied, the dimension-level R^2 for Relational Equality decreases to 0.0489, yielding a more balanced distribution of weights across dimensions and reducing the risk of mechanically driven correlations.
The adjusted specification is as follows:

$$\text{Overall Index}_i = 0.432 \cdot DF_i + 0.251 \cdot AES_i + 0.215 \cdot RE_i + 0.101 \cdot PE_i$$

This revised weighting structure offers a more balanced contribution from each dimension and mitigates the risk of overweighting a single, highly correlated component. The adjustment is particularly relevant if depressive symptoms are viewed as both a cause and a consequence of low well-being, which would otherwise blur the conceptual distinction between outcomes and determinants of intergenerational fairness.

C.2 Normative Approach

This section outlines the normative rationale underpinning the weighting structure of the *Intergenerational Equity Index*. The Index comprises four macro-dimensions—Economic Fairness, Access to Essential Services, Social Equality, and Political Equality—each capturing a distinct but complementary aspect of justice across generations.

The allocation of weights reflects three core normative principles:

1. The priority of meeting basic needs (sufficiency);
2. The mitigation of long-term scarring across the life course; and
3. The protection of free and equal citizenship.

These principles guide both the relative importance assigned to each dimension and the distribution of weights across their constituent indicators.

Economic Fairness receives the highest weight *(30%)*, reflecting the foundational role of material resources in enabling autonomous and dignified life plans. Within this dimension, poverty (30%) and unemployment (25%) are given the greatest internal weights, as both directly threaten basic functioning and generate enduring life-course disadvantages. Employment security, proxied by the share of permanent contracts (20%), further reduces exposure to precarity and cumulative disadvantage. Labour income differentials, captured through *Mincerian wage premiums* (10%), receive a lower weight, as they shape relative living standards but do not fundamentally compromise sufficiency. Residential overcrowding (10%) reflects material and psychosocial constraints on dignity, health, and opportunity, while financial distress (5%) captures the subjective dimension of vulnerability and potential volatility in self-reported measures.

Access to Essential Services (25%) represents non-monetary conditions that sustain basic capabilities and shape life opportunities. Unmet health needs (30%) are weighted most heavily, given their decisive impact on human development and well-being. Social transfers (25%) buffer income shocks and labour-market risks, supporting stability over the life course. Environmental exposure—to pollution, noise, or grime (20%)—is also weighted prominently due to its cumulative and often irreversible effects on health and productivity. Internet connectivity (15%) is

recognized as a key infrastructure for education, employment, and civic participation, while perceived neighbourhood safety (10%)—capturing problems of crime and vandalism—reflects basic security and trust in one's surroundings.

Social Equality (20%) addresses the relational and recognitional dimensions of justice—that is, the conditions under which individuals are treated with equal respect and embedded in supportive social structures. Discrimination (30%) receives the highest weight, as it constitutes both a direct violation of equal standing and a driver of cumulative disadvantage. Mental well-being (25%) is central to individuals' capacity for participation in social and civic life and represents a critical aspect of subjective quality of life. Close interpersonal ties (20%) and broader social relations (15%) capture the density of informal support networks, while regular leisure activity (10%) measures opportunities for participation, inclusion, and rest within community life.

Political Equality (25%) captures the institutional and participatory dimensions of intergenerational justice. Voting behaviour (25%), as the primary expression of political agency, carries the highest weight. Political saliency (17.5%) and representation (17.5%) follow, reflecting their importance for ensuring that the interests of younger and older generations are both visible and institutionally embedded. Measures of political efficacy—including perceived influence or *having a say* (10%)—and political interest (10%) capture motivational aspects of engagement. Partisan closeness (10%) indicates depth of political attachment, while confidence in institutions (10%) reflects the perceived legitimacy of democratic governance. Adjustments for country-specific contexts (e.g., representation weighting in Croatia) are applied where necessary.

Overall Composition: The four macro-dimensions are then aggregated into the composite *Intergenerational Equity Index* according to the following normative structure:

$$\text{Normative Index}_i = 0.30 \cdot EF_i + 0.25 \cdot AES_i + 0.20 \cdot SE_i + 0.25 \cdot PE_i$$

This weighting scheme balances the immediate urgency of economic and service-based deprivations with the enduring importance of political voice and social recognition. It embodies the principles of sufficiency, resilience, and citizenship that underpin the concept of intergenerational justice.

Table C.1. Economic Fairness Components

Variable	(1) Std. LifeSat	(2) Std. LifeSat
Std. Risk of Poverty	−0.076*** (0.002)	−0.069*** (0.002)
Std. Unemployment Status	−0.058*** (0.002)	−0.061*** (0.002)
Std. Permanent Contract	0.027*** (0.002)	0.024*** (0.002)
Std. Net Income (PPP-adjusted)	0.063*** (0.002)	0.057*** (0.002)
Std. Overcrowding Rate	−0.005** (0,002)	−0.006** (0,002)
Std. Material or Housing Distress	−0.238*** (0,002)	−0.238*** (0,002)
Constant	0.016*** (0,002)	0.494*** (0,0020)
NUTS FE	No	Yes
Age FE	Yes	Yes
Observations	342,284	313,002
R-squared	0.104	0.138

Note: Standard errors in parentheses. *p < 0.05, **p < 0.01, ***p < 0.001*

Table C.2. Access to Essential Services Components

Variable	(1) Std. LifeSat	(2) Std. LifeSat
Std. Unmet Health Needs	−0.097*** (0.002)	−0.091*** (0.002)
Std. Share of Social Transfers	0.041 (0.025)	0.043 (0.026)
Std. Environmental Quality	0.074*** (0.002)	0.078*** (0.002)
Std. Crime and Safety	−0.057*** (0.002)	0.057*** (0.002)
Std. Internet Access	0.138*** (0.003)	0.120*** (0.003)
Constant	−0.056*** (0.002)	0.437*** (0.029)
NUTS FE	No	Yes
Age FE	Yes	Yes
Observations	221,371	203,928
R-squared	0.046	0.089

Note: Standard errors in parentheses. *p < 0.05, **p < 0.01, ***p < 0.001*

Table C.3. Social Relation Equality Components

Variable	(1) Std. LifeSat	(2) Std. LifeSat
Std. Leisure Activities	0.053*** (0.005)	0.082*** (0.007)
Std. Meeting Frequency	0.070*** (0.005)	0.066*** (0.008)
Std. Close Relationships	0.113*** (0.005)	0.106*** (0.005)
Std. Experienced Discrimination	−0.044*** (0.008)	−0.040*** (0.008)
Std. Depressive Symptoms	−0.375*** (0.008)	−0.357*** (0.008)
Constant	−0.027*** (0.005)	0.204*** (0.069)
NUTS FE	No	Yes
Age FE	Yes	Yes
Observations	29,960	29,960
R-squared	0.178	0.221

Note: Standard errors in parentheses. *p < 0.05, **p < 0.01, ***p < 0.001*

Table C.4. Political Equality Components

Variable	(1) Std. LifeSat	(2) Std. LifeSat
Std. Ability to Have a Say in Decisions	0.108*** (0.005)	0.071*** (0.006)
Std. Perceived Political Influence	0.087*** (0.006)	0.084*** (0.006)
Std. Voter Participation	0.101*** (0.006)	0.098*** (0.006)
Std. Political Party Closeness	0.029*** (0.006)	0.033*** (0.006)
Std. Political Interest	0.036*** (0.006)	0.030*** (0.006)
Constant	−0.005 (0.005)	0.435*** (0.244)
NUTS FE	No	Yes
Age FE	Yes	Yes
Observations	34,385	34,198
R-squared	0.046	0.114

Note: Standard errors in parentheses. *p < 0.05, **p < 0.01, ***p < 0.001*

Table C.5. Distributive Fairness Index: Component Weights

Component	Weights
Risk of Poverty	0.108
Unemployment Status	0.104
Permanent Contract	0.043
Household Net Income (PPP)	0.067
Overcrowding	0.023
Distressed	0.655
Total	1.00
Dimension-Level Overall Fit	0.098

Table C.6. Essential Services Index: Component Weights

Component	Weights
Unmet Health Needs	0.207
Share of Social Transfers	0.063
Exposure to Pollution (Environment)	0.182
Crime Rate	0.133
Internet Access	0.416
Total	1.00
Dimension-Level Overall Fit	0.057

Table C.7. Relational Equality Index: Component Weights

Component	Weights
Leisure Time	0.050
Frequency of Social Meetings	0.050
Close Personal Relationships	0.050
Experience of Discrimination	0.040
Depressive Symptoms	0.820
Total	1.00
Dimension-Level Overall Fit	0.150
(Net of Depressive Symptoms)	0.040

Table C.8. Political Equality Index: Component Weights

Component	Weights
Ability to Have a Say in Decisions	0.241
Perceived Ability to Influence Outcomes	0.172
Voter Participation	0.406
Closeness to Political Parties	0.103
Interest in Politics	0.078
Total	1.00
Dimension-Level Overall Fit	0.023