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Exploring the association between economic democracy and income inequality

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Abstract

In this paper, we contribute to ongoing debates about the relationship between economic democracy and inequality. We do this through two novel contributions to the literature. First, we develop an economic democracy index (EDI), which is then applied to OECD member states (except those lacking data) from 2000-2019. Drawing on a range of theoretical traditions, the Index broadens our conception of economic democracy beyond conventional concerns with the workplace and employment relations to the economy more broadly and at different scales, from micro to macro. Second, we then use the index to investigate a potential association (correlation) between economic democracy and income inequality. Our findings suggest that Western European, especially Nordic countries have consistently higher levels of economic democracy than Anglo-American and Eastern European economies and that economies with greater levels of economic democracy have lower levels of income inequality.

Keywords: Economic democracy index (EDI); income inequality; income share; Gini coefficient, Pearson correlation

JEL Codes: B50; D63; I30; J54; P16

1. Introduction

There is a longstanding interest in the relationship between economic democracy and inequality. The late political theorist, Robert Dahl, suggested that an inequitable distribution and ownership of wealth and resources was incompatible with economic and political democracy (Dahl 1985). More recently, it has been suggested that more democratic involvement in economic decisions can reduce "structural" inequalities by redistributing power and resources (e.g. Malleson, 2013), while Galbraith (2012) and Pickett, *et al* (2024) find that democracy and income inequality are inversely related. In the latest version of their celebrated work, *The Spirit Level*, Pickett *et al* (2024), show a strong correlation between levels of inequality and a decrease in democratic governance across the world's wealthier countries.

Yet, despite this broader interest and assertion of the important connections between inequality, democracy and economic power, there is, as yet, no study that has undertaken a statistical analysis of the relationship between economic democracy and inequality. This is the central aim of this paper. As such, we make three novel contributions to the broader debate. The first is to construct our own Economic Democracy Index (EDI). To do this, we operationalise our earlier theoretical work (Author 1), where we advocated for an expanded conception of economic democracy that goes beyond the workplace and employment relations to develop a framework for analysing democratic practice across the economy as a whole. Secondly, we use the EDI to measure the extent of economic democracy across OECD countries, developing a ranking and tracing levels from 2000 to 2019. A key finding is that Nordic countries tend to rank higher than elsewhere. Finally, our third contribution is to use the EDI to measure any association between economic democracy and inequality. Our findings suggest an inverse association between the EDI and various measures of income inequality, highlighting the potential importance of *economic* democracy in the distribution of income.

The remainder of the paper is structured as follows. The next section briefly discusses our expanded conceptualisation of economic democracy and its potential relationship with the distribution of income. Section 3 sets out our approach to economic democracy, in which we establish four dimensions that inform the development of the EDI. Section 4 discusses the construction of the index, justifying the weighting we apply across the different dimensions and presents the EDI rankings of OECD member states. In Section 5 we then detail the correlation between the EDI and the Gini coefficient, and the income share of the top 1% and 5% of earners, before investigating whether the component dimensions of the index share the same association. Section 6 concludes.

2. Reconceptualising economic democracy and its relationship to inequality

For much of its history, economic democracy has been primarily focussed on the workplace in terms of collective rights to participate in organisation decision-making and in ownership of the production process (Cumbers, *et al*, 2020). Yet, more recently, there have been a new set of debates concerned with broadening democratic participation in the economy more generally. One set of literature is relatively abstract in that it presents a series of models of valuation and price formation procedures as alternatives to a market economy (e.g. Adaman and Devine 1994; Cockshott and Cottrell 1993; Hahnel 2021; Jossa 2018). Adaman and Devine, in particular employ the socialist calculation debate as an analytical entry point to their analysis. Others, such as Hahnel present sophisticated frames for participatory arrangements at different scales of production and decision-making. All contend that more deliberative

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democratic participation will address inequitable social relations under capitalism that facilitate the exploitation of workers (see, Tremblay-Pepin, 2022).

A second group revolves around extending democracy in economic decision-making beyond the workplace (e.g. Ellerman (1992), Malleson (2013), Wright (2010), and Zafirovski (2020)). Wright, for instance, argues that participatory budgeting initiatives in municipalities, local authorities and other public bodies, and new forms of cooperative around urban agriculture are examples of economic democracy beyond the workplace. Ellerman articulates the case for ownership over one's own labour within and beyond the individual workplace, and Malleson presents an interlocking domains approach, which includes the financial sector and democratising investment decisions in addition to the workplace. Drawing from a variegated capitalism approach (Hall and Soskice, 2001), Zafirovski develops an index of economic democracy, which centres on employment rights, such as holiday entitlements and collective bargaining.

To a varying degree, this literature begins to explore the link between economic democracy and income inequality. For example, Malleson (2013) argues that economic democracy, through participation in decision-making, can reduce income inequality, although he highlights two tensions. The first is the risk of democratic structures becoming symbolic as organizations grow, and the second is their dominance by highly motivated individuals. To address the first issue, Malleson emphasizes the importance of fostering a culture of transparency, accountability, and participation. For the second, he suggests ensuring equal participation, citing Porto Alegre, Brazil's participatory budgeting as an example. Malleson's argument is compelling, especially given the harms and injustices associated with inequality. Income inequality undermines distributive justice (Rawls, 1971) and contributes to systemic instability and individual harm (DeMartino, 2022). Wilkinson and Pickett (2010; 2019) link inequality to social issues like higher incarceration rates. Similar views are also increasingly being expressed by mainstream governance bodies such as the OECD (Cingano 2019) and the IMF (Ostry, *et al*, 2014), where, for example, evidence is presented that countries with higher inequality experience lower and more volatile growth, and that typically the costs of this exceed any opportunity costs of redistribution (Ostry, *et al*, 2014).

Yet, Malleson (2013) does not present compelling evidence of the posited relationship between economic democracy and income inequality. More recently, Pickett, et al (2024) identify a clear inverse relationship between democracy and income inequality. Those democratic states with relatively low levels of democracy and high-income inequality, include, the USA and Israel. Scandinavian and mainland northern European countries record comparatively high levels of democracy and low income-inequality. Their analysis draws upon The Economist's Democracy Index which measures political rather than economic democracy. Nevertheless, in their subsequent comments they suggest that: "A major challenge to preserving democratic integrity is curbing the influence of large corporations and other bastions of economic power" (Pickett et al, 2024, 17). But, once again, the more specific link between economic democracy and inequality remains theorised rather than demonstrated statistically.

Deaton (2013) and Galbraith (2012) are prominent among those making a moral case for the analysis of inequality by economists. Moreover, institutional arrangements in the generation and persistence of inequalities in income and wealth (Galbraith, 2013; Milanovic, 2016)¹ are

¹ Milanovic's (2016) analysis recognises a substantial role for institutional arrangements. He introduces the concept of "Kuznets waves" in his attempt to explain growing inequalities in industrialised economies, counter to Kuznets' predictions. Instead, Milanovic contends that it is possible to observe two different influences on inequality: "malign", such as epidemics, natural disasters, and wars, "benign", such as greater

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arguably assuming greater prominence in some economic thinking, especially following the emergence of stratification economics (for example, Darity, 2005; Darity and Mullen, 2020; Davis, 2019; 2022).

In short, based on a studies examining the persistence of income and wealth racial inequalities in the US since slavery, stratification economics highlights the institutional arrangements in place that maintain hierarchical relations, including intergenerational transfers of income and wealth that reinforce privilege, indigence, and discrimination (Darity, 2005; Darity and Mullen, 2020). Davis (2019) uses the heuristic of common pool and club goods to demonstrate the obstacles to equality. Those outside the club are confronted with resource depletion and scarcity associated with common pool, whereas club members experience abundance and privilege. Following this, an argument may be made that institutional barriers of the nature depicted by Davis, may be eroded through the dispersal of power associated with economic democracy, in a broad sense. This certainly holds intuitive appeal for us based on our understanding of the central arguments of stratification economics.

That said, we are cautious about confining our analysis to a single causal chain running from the argument that democratic equalising tendencies facilitate the appropriate conditions for greater equality in the distribution of income. We readily acknowledge a two-way process. For instance, Dahl (1985) explicitly argues that greater equality fosters the appropriate conditions for economic democracy. In this sense, it is difficult to establish a distinctive sequence. This leads us to adopt a cautious approach using similar methods to well-known contributions, such as Wilkinson and Pickett (2010, 2019) and Deaton (2013) in basing our empirical approach on investigating correlations. We now turn to our conception of economic democracy and how this has informed the construction of the EDI.

3. Conceptualising economic democracy

For us, economic democracy centres on an individual's rights and abilities to participate in economic decision-making processes alongside collective institutions such as trade unions, cooperatives and collective bargaining structures. Accordingly, it has two critical elements: the rights of individuals (as citizens, workers, and consumers) to participate in economic decision-making throughout the economy; and the development of institutional forms and mechanisms that strengthen democratic processes, enabling the broadest feasible and most pluralistic public participation and deliberation (Cumbers *et al*, 2020).

Robert Dahl (1985) argues that democracy is facilitated by the underlying legal framework. We believe this is a highly important insight, lacking in some of the literature; democracy ensures dispersed power and accordingly promotes distributive justice in that the rights of minorities are recognised and protected (Dahl, 1985). On this, Dahl refers to the importance of a range of civic institutions, such as media, business associations, trade unions, academia and so forth, and, importantly, a judiciary independent of the state. This pluralism should also be reflected in the structure of the state, with a clear demarcation of powers between various levels of government. Accordingly, the power of central government is counterweighted by the array of civic institutions.

For us, Dahl's emphasis on the legal framework provides a strong normative prospectus. He argues that a democratic deficit emerges when the protection of property rights is privileged over the rights of the individual, especially the autonomy of labour. By this reasoning, there is

accessibility to education, progressive taxation, and generous welfare states, both of which act to reduce inequality. Thus, with an erosion of benign influences, as has arguably occurred in many Western economies, inequality may be expected to rise.

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little moral justification for corporations possessing the same rights as an individual, given that firms' success is a consequence of the collective endeavour of its employees. Moreover, shareholders do not (and cannot) contribute to a corporation's durability and success to nearly the same degree as its employees. Similarly, Ellerman's (1992) work alludes to a shortfall in democratic participation in economic activity. Indeed, Olin Wright (2010) refers to the hierarchical characteristic of "capitalist firms" as "workplace dictatorships" with power residing in senior management and shareholders (see also, Lazonick and Shin, 2020). On this theme, an ethical distinction emerges in Dahl's and Ellerman's analyses around productive and rentier income streams, resonating with more recent studies on income and wealth inequality (Christophers, 2020; Pickett, *et al*, 2024; Stiglitz, 2013; 2016). While neither Dahl nor Ellerman dispute the right to assets and property, they do emphasise that where this conflicts with an individual's right to own and control their labour, then the individual's rights to self-government on labour should be privileged.

There is another aspect to the importance of the legal framework, which Dahl and others have not emphasised in their work. Legal frameworks are central to facilitating the emergence of institutions aligned with democratic principles, such as accountability, participation, and transparency (for example, Hodgson, 2015), and an important dimension to this is freedom from corruption. We consider this in more detail in section 4.

For the moment, we recognise the importance of Fraser's (2008) alignment of the participative property of democracy with justice in her conception of "participatory parity". With this, Fraser makes a similar normative invocation of rights and pluralism as Dahl, and in doing so, acknowledges the significance of the law. Similarly, Levine (1998) argues that justice can be equated with democracy. Economic democracy requires the participation of individuals in either the workplace or in policy, or both. Importantly, for Levine, democracy in the workplace can act as a counterweight to the dehumanization of labour and facilitate a Kantian sense of respect for the individual. Of course, the notion of participation is fundamental in the literature on economic democracy. As already noted, there has been a tendency to centre this on the workplace (Cumbers, *et al*, 2020), but irrespective of the economic sphere, top-down decision-making processes and frameworks should be challenged, and the opportunities for wider participation emphasised.

We also acknowledge an Aristotelian influence in our emphasis on human flourishing, most appropriately expressed in the way 'capabilities' provides a platform for a meaningful and rich life (Nussbaum 2011; Sen 1993), underscoring the central importance of rights to participate in economic life, which aligns with Dahl's and Ellerman's references to "self-governance". Capabilities are therefore both an individual level concept, where a person may decide which of their capabilities to realise (autonomy), and an institutional one, in which an individual's ability to realise capabilities is partly shaped by their environment. If, for example, an individual is born into profound poverty and excluded from educational opportunity, whether by the need to seek employment or the institutional failure to provide widespread education, they are unlikely to acquire and realise capabilities. Our point is that capabilities, partially influenced by institutional process, on this occasion through economic democracy, may have some association with equality of outcome, manifested in the distribution of income. Indeed, we may anticipate a two-way flow, such that greater income equality may facilitate the conditions for equitable process. In this sense, we appeal to Dahl's attention to distributive justice, which may assume a plurality of forms, including, wealth, income, capabilities, and voice (democracy).

4. Towards an Economic Democracy Index

There is growing interest in index construction in informing debate over important socio-economic issues (Adams, *et al*, 2017; EIU, 2024; Freudenberg, 2003; Goertz, 2008). A composite indicator is formed when a number of individual indicators are compiled into a single index, operationalising multi-dimensional concepts, using a theoretical framework to drive its construction (EIU, 2024; Hein, *et al*, 2021). We recognise that there is a case for questioning the ability of any index to adequately capture complex social relations and therefore proceed cautiously in our claims here. Nonetheless, there is nothing new about the construction of indices which can be traced back to social reformers such as Charles Booth and Joseph Rowntree, who developed quantitative approaches to measure and inform policy concerning poverty (Adams, *et al*, 2017).

In the context of our argument, we structure economic democracy in a way that reflects the different dimensions of economic activity. Similarly, Malleson (2013) advocates an interlocking components conceptualisation of economic democracy. He identifies workplace, finance, investment, and markets as distinctive elements and alludes to a contagion effect, when he argues that increasing democracy in one area is likely to enhance it in another. For instance, he speaks of democratising the financial sector through “democratic banks”, which he suggests will create conditions for further workplace democracy.

Zafirovski (2020) presents a detailed case for an economic democracy indicator. He centres his analysis on labour participation; noting that union density, coverage, representation/consultation in firm management, and collective bargaining arrangements are consistent with economic democracy. Interestingly, Zafirovski alludes to “prior state laws” (2020: 7) in relation to collective bargaining, and in doing so acknowledges the potential influence of the legal system, but does not elaborate. Other indicators of economic democracy listed by Zafirovski include; employee ownership, “public participation in economic decisions, including participatory budgeting” (2020: 13), and public ownership. Further, Zafirovski identifies what he terms as possible “proxies/covariates of economic democracy”, which includes, employment protection, unemployment benefits, work hours, and paid holiday/vacation entitlements, *inter alia*. The argument being that more generous entitlements signal greater labour power vis-à-vis the owners of capital.

We find these analyses to have considerable merit and appeal. Yet, while Malleson presents a multi-component conception of economic democracy, he does not explicitly consider the significance of the underlying legal framework. Zafirovski’s approach is centred on the employment relationship, and there is an explicit allusion to the possible influence of the legal framework on economic democracy, albeit translated through collective bargaining rights. Nonetheless, unlike Malleson, Zafirovski does not reflect on the influence of the structure of the financial sector. We believe that both the legal framework and the financial sector are significant to the study of economic democracy. The former influences the facilitation of the reproduction of social relations, and accordingly income and other forms of inequality. Finance is a source of extensive power in the economy, and its structure, ownership, governance, and size relative to the rest of the economy are, we believe substantial matters, particularly in relation to economic democracy. There are good reasons to suspect that many of the features of the financial sector in Western economies, especially the Anglo-American variant, with a marked concentration of ownership and control, are not conducive to economic democracy (Christophers, 2020; Epstein, 2005; Galbraith, 2008; Lazonick and Shin, 2020; Malleson, 2013; Pettifor, 2017).

For us, Dahl (1985) and Hodgson (2015) provide a basis for informing a broader conception of economic democracy, and thereafter its relationship with inequality. Importantly, Hodgson argues that the capitalist property-based system of institutions is no guarantor of equality, and

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indeed may legitimise extensive power, income, and wealth inequalities. It is worth noting the prominence Hodgson places on the legal system in enabling the other features of capitalist organisation. Social systems are to some extent contingent on the rule of law. Capitalism, for instance could not function in the absence of (enforceable) legal protection of private property, and weights and measures regulations (for example, Hodgson, 2015). We recognise that for economic democracy to flourish the appropriate legal system is a necessary but insufficient pre-requisite. This may also be the case for the distribution of income, where legally specified minimum (and even maximum) wage levels and the structure of the tax regime may have a some bearing. This draws us to Dahl's and Levine's moral cases for what we term the 'priority principle': individual rights assume greater weight than corporate rights to any surplus.

Relatedly, the underlying legal framework is significant in other ways. Circumstances in which the legal system is ineffective or corrupted can imply entrenched and persistent inequalities and social stratification (see, for example, Darity, 2015; Hodgson, 2015; Hodgson and Jiang, 2007), and the undermining of democracy (Dahl, 1985). Indeed, describing corruption in terms of some moral deterioration and the spoiling of something for private gain (Gorsira, *et al*, 2018; Hodgson and Jiang, 2007) invites considerations of power². On this, it is possible to distinguish between first and second order types of corruption as abuse of power by individuals or groups for private gain; within an existing system of rules, or by changing a prevailing rule system, respectively (Zyglidopoulos, 2016). Democracy thus, has a complex relationship with corruption. It may be a means of diminishing opportunities for corrupt practices, such as limiting second-order instances, and an absence of corruption may be a signal of effective institutional transparency and democratic accountability that limit abuses of power. Accordingly, and unlike other studies (for example, Malleson, 2013; Zafirovski, 2020), we consider that control of corruption has a bearing on the degree of economic democracy.

Drawing from the foregoing, and as a means of expressing the potential breadth and multi-scalar configuration of economic democracy, we develop four dimensions in our index (EDI) encompassing individual workplace rights, macro level policy, and the different levels of intersections between economy and society, which extend beyond the employment relation. For example, in principle it is possible, if not feasible for an individual employee to possess extensive *de jure* workplace rights in the absence of co-operative firm ownership and trade union density. It is also possible that individual employment rights and significant trade union influence, consistent with economic democracy can coincide with a highly centralised state, which lacks sensitivity to regional issues. In short, we consider that presenting economic democracy as multi-dimensional and multi-layered enables appreciation and potentially interrogation of the complexities of democratic processes in an economy. It may also provide a useful insight into those areas of economic activity that are comparatively more/less democratic and their relationship, or association (or lack thereof) with inequality. The four dimensions are:

1. Workplace and individual economic rights – Clearly, given its centrality to economic activity, this is a significant component of economic democracy (see for example, Jossa, 2018; Vanek, 1970; Zafirovski, 2020). Following Dahl, we emphasise individual rights in the context of work, rather than the collective organisation of workers which is dealt with in our second component. Thus, autonomy, security, and influence experienced by individual employees are of relevance. In his analysis, Zafirovski identifies a series of rights, such as employment protection, unemployment benefits, social protection, working hours, statutory holiday entitlement, etc as proxies of economic democracy. Rather than identify such variables as “proxies”, we feel that

² Transparency International's definition of corruption explicitly refers to power: “Abuse of entrusted power for private gain. It can be classified as grand, petty, and political depending on the amounts of money lost and the sector where it occurs” (<https://www.transparency.org/what-is-corruption>).

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individual economic rights merit consideration as a particular dimension of economic democracy. The dimension is representative of the underlying legal framework. Following Sen, the security afforded by employment protection, for instance, enables the development of capabilities at an individual level. Nussbaum (2011) and Sen (1993) both contend that phenomena, such as employment precariousness, exploitation, indebtedness, and so forth are inimical to capabilities, functionings, and the ability to make life-enriching decisions.

2. Degree of associational economic democracy – This refers to the nature and extent of collective and collaborative economic governance. Specifically, following Dahl, Ellerman, and Wright, pluralism in civil society enhances deliberation and consultation in economic discourse. Thus, the density of trade union membership, the ownership structure of firms, the nature and extent of co-operative ownership³, and the networks of employers' associations are all relevant considerations. Zafirovski identifies co-determination and collective bargaining arrangements as indicators of economic democracy.
3. Distribution of economic decision-making powers across space and sector – This concerns the nature of economic decision-making across a state territory and society, and the extent to which this is concentrated or dispersed (for example, economic policy formation within and between different layers of government, nature of a country's financial infrastructure, are of relevance). Our thinking on this is informed by Dahl's (1985) argument that in civil society, institutions should be sufficiently powerful and possess clearly defined parameters as a potential counterweight to central government. This is part of Dahl's advocacy of protecting minorities and minority views. It invites reflection on the structure of governance, such as confederal, federal, and unitary forms (see for example, Smith, 2007), which is beyond the scope of the paper. Nonetheless, Dahl (and others) emphasise that governmental structures should be transparent and open to broad popular participation with clear lines of demarcation between the levels of government. To this end, we employ proxies for the extent of devolution in government. Further, we also consider the degree of the influence of the financial sector by virtue of its size in a national economy and the view that a sizable financial sector with concentrated private ownership goes against the pursuit of economic democracy (relatedly see, Black, 2014; Christophers, 2020; Galbraith, 2008; Malleson, 2013; Pettifor, 2017).
4. Transparency and rights to democratic engagement in macroeconomic decision-making – Of interest are the deliberative processes that inform macro-economic policy-making, particularly in its transparency, openness, and democratic engagement of the broader population⁴. Again, this corresponds with the capabilities approach and reflections on justice in that we are interested in the institutional framework and the extent to which it nurtures individual capabilities and just process (Fraser, 2008; Levine, 1998). Further, as part of our approach, we invoke the control of corruption as an indicator of the strength of the legal system and of the transparency of governance. Our expectation is that evidence of corruption is less likely to be associated with economic democracy.

In advocating these dimensions, we aim to highlight the possible expressions of economic democracy at various levels and scales. The identification of distinctive domains enables the

³ In constructing the index, we note the density of financial co-operatives.

⁴ Interestingly, central bank independence was not significant, and therefore was not used in the composite index.

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development of a composite index of the extent of economic democracy overall, and within the domains themselves.

5. Measuring economic democracy

In making our case for an EDI, we recognise that it is not a definitive and uncontested objective statement of fact, but rather an attempt to inform discourse similar to other efforts at index construction (e.g. Adams, *et al*, 2017; Michie and Oughton's, 2013)⁵. To this end, we have followed the foremost technical guidance on composite index construction, *Handbook on Constructing Composite Indicators: Methodology and User Guide* (OECD (Statistics Directorate and the Directorate for Science, Technology and Industry) and Joint Research Centre of the European Commission, 2008, hereafter OECD/JRC). We turn to outlining the procedure we employed in computing the index.

5.1 Constructing the index

The OECD/JRC guidance sets out ten linear stages in the construction of a composite index, or indicator (see also Adams, *et al*, 2017):

Table 1: Stages in constructing a composite index

Stage	Description
1	Development of a theoretical framework, which provides the platform for variable selection as well as the purpose of the index
2	Data selection that reflects the relevance of variables to the theoretically informed framework and the coverage of data
3	Imputation for missing data, which refers to a predictive distribution of missing values via either implicit or explicit modelling procedures
4	Multivariate analysis, which investigates the overall suitability of variables and the data set. This may include, for example, factor analysis to explore the relationships of variables with a view to grouping similar variables
5	Normalisation to ensure the compatibility of indicators measured using different scales. The minimum-maximum method is a standard means of generating an identical range from 0 to 1 for each indicator, and the approach we employed
6	Weighting and aggregation of the component indicators. This should reflect the theoretical basis of the approach, and account for correlation issues across the indicators
7	Sensitivity analyses and robustness tests. The composite indicator/index should be tested over a range of terms, such as individual component indicators, missing data, weights and aggregation, process of normalisation, and so forth
8	Reanalysis of the data to identify the "main drivers" of "performance". The <i>Handbook</i> stresses that transparency – for example, in the weighting of dimensions and variables – is paramount to ensure the robustness of the index
9	Testing the association – principally correlation – between the composite index and a range of variables and other indicators
10	Visualisation of results in order to enhance interpretability

Adapted from OECD/JRC (2008)

⁵ Zafirovski identifies ten components as a means of constructing an index of economic democracy for thirty-six OECD member states: trade union density; union/bargaining coverage; works councils; employee membership of corporate boards; employment legal protection; unemployment and related benefits; average annual hours worked; statutory holiday/vacation entitlement; annual minimum wages; government spending on social protection. Unsurprisingly perhaps, there is some overlap with the variables we select. Nonetheless, the EDI presented here is broader in scope and coverage.

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Given space constraints, we confine our observations to the principal stages – 1, 2, 6, and 9 in this section, and 10 in section 3.2⁶. Section 2 above, provides the theoretical foundation of the EDI, and accords with stage 1 outlined in Table 1. Following the identification of the four dimensions, we then established indicators relevant to each of them. Stage 2 emphasises data availability and reliability as key issues. Indeed, a major criticism of any index is the availability and quality of data (for example, Goertz, 2008; OECD/JRC, 2008). Accordingly, we confine our analysis to OECD member states⁷.

The selection of variables within the four dimensions is based on the theoretical discussion outlined above, and summarised in Table 2 below. There is a statistical preference for parsimony to at least reduce data availability issues and correlations between indicators (Freundenberg, 2003). Our data set has 128 indicators, which includes items employed in constructing the index and variables used in the multivariate analysis (stage 4 in Table 1), which investigates variable suitability. Following rigorous testing (stages 4, 5, and 7), we selected the indicators in each of the four dimensions in Table 2.

Table 2: Dimensions of economic democracy

Dimension	1 – Workplace and individual rights	2 – Degree of associational democracy	3 – Distribution of economic decision-making powers	4 – Transparency and democratic engagement of broader population in macroeconomic decision-making
Indicators	Labour market security; long-term unemployment; employment protection – individual dismissal	Trade union density; employers' association density; credit union and financial co-ops	Net worth of financial corporations as % of GDP; attribution of tax revenues to local and regional government as % of total tax revenue; total government expenditure as % of GDP	Involvement of trade unions and employers in government decisions – social and econ policy; voice and accountability; control of corruption

Apart from Stage 1, Stage 6 (weighting and aggregation of indicators/variables) is arguably most reflective of the underlying theoretical approach. As a robustness and sensitivity check, we initially apply an equal weighting to each dimension (25%) and variables. Our preference though, based on our understanding of the theory and our contention that concepts of economic democracy have tended to be confined to industrial democracy or the workplace, is to weight our dimensions differentially as part of our broader conception.

⁶ We are happy to provide details on the other stages on request.

⁷ Two OECD members (Mexico and Turkey) were omitted from the study based on a lack of data availability for several variables over the course of the past three decades. We sourced data from reputable sources, including; the OECD, IMF, World Bank, International Labour Organisation (ILOSTAT), Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts database (ICTWSS, Amsterdam Institute for Advanced Labour Studies), European Association of Co-operative Banks data, European Federation of Employee Share Ownership, European Values Survey, World Values Survey, World Wealth and Income database, and Worldwide Governance Indicators.

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Although we emphasise economic democracy over space and scale, we recognise the significance of individual rights in the workplace in the democratisation of the economy. Indeed, different institutions, such as trade unions, may have an important role in facilitating and progressing such rights. Drawing from the capabilities approach, an argument may be formulated to the effect that workplace rights and the overarching institutional context influence the potential development of an individual's capabilities and their opportunities to realise these capabilities. Accordingly, dimensions 1 and 4, which include variables that explicitly relate to the legal framework, such as unemployment protection and control of corruption, resonate with the potential facilitation of capabilities. Further, an emphasis of this sort corresponds to Hodgson's (2015) argument of the importance of the legal framework in economic relations.

As part of the weighting process, we establish the average score over the sample period of each dimension as well as the composite index. This is set out in Figure 1, which shows the average EDI over the twenty-year period from 2000-2019 in OECD member states (except Mexico and Turkey). Additionally, the average of each of the component dimensions is traced. Higher scores indicate greater levels of economic democracy.

Figure 1: Average rating of the dimensions of the EDI (2000-2019)

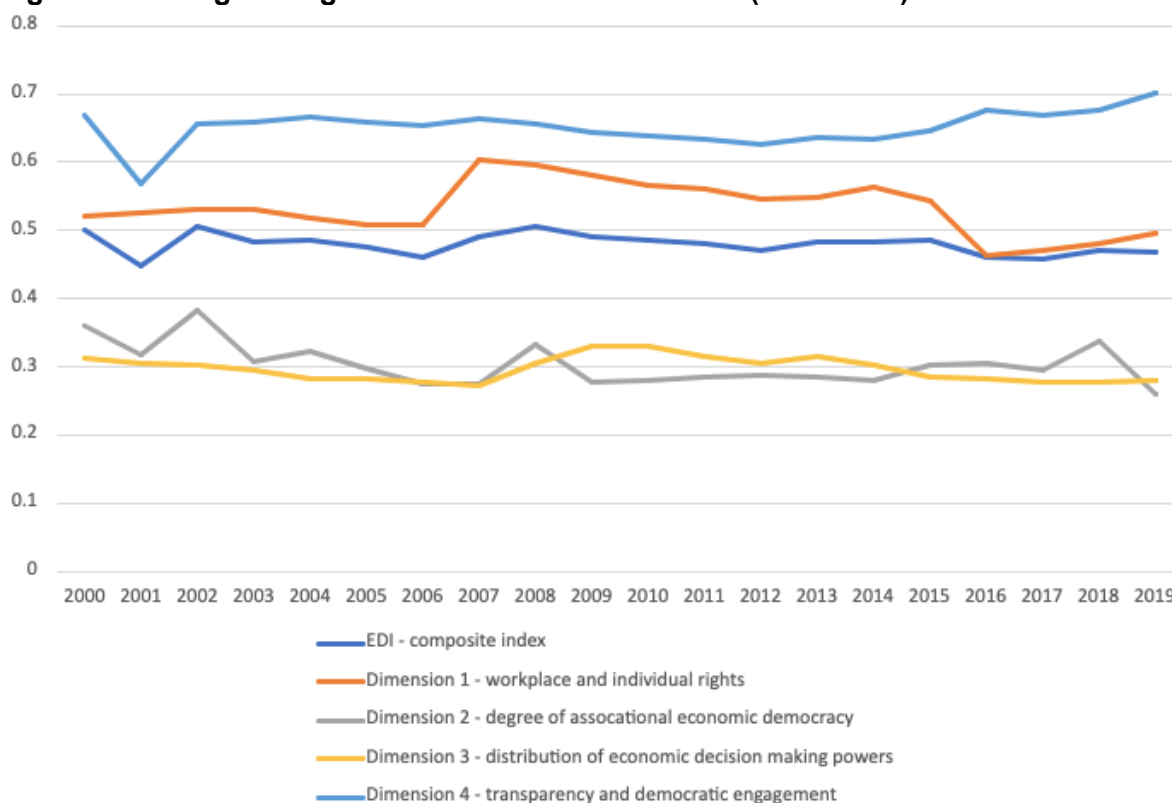


Figure 1 shows the pattern for the entire sample over the period (2000-19) for which data are available. Several observations may be made. The overall EDI has broadly flatlined, with relative peaks in 2002 and 2008, and some relatively modest decline from 2015. Potentially, the declines in Dimensions 1 (workplace and individual rights), 2 (degree of associational economic democracy) and 3 (distribution of economic decision-making powers across space and sector) shape this pattern. Interestingly, a counter movement in Dimension 4 (transparency and democratic engagement) may have mitigated these influences in the overall measure of economic democracy in the OECD.

At the early stages of the period (principally around 2001), there is some volatility in the paths of two of the dimensions (2 and 4). We believe this is partly due to some issues of data

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availability. This impacts on the composite measure, with a relatively sharp decline in 2001. Given the likely source of this, we do not wish to over-emphasise the pattern here.

Arguably, since 2007, except for the period 2012-14, there has been a steady decline in Dimension 1, suggesting diminishing workplace and individual rights across OECD member states. In contrast, since around 2012, there appears to have been a steady increase in transparency and democratic engagement (as assessed via voice and accountability, control of corruption, and involvement in government decision-making measures).

Over the period, Dimension 2 seems to display a trend decline, with outlying peaks in 2008 and 2018. Dimension 3 seems to flat-line around 0.3, although for the majority of the period, the trend line lies below this measure. Interestingly, from 2008 to 2015 and in 2019, Dimension 3 recorded a higher value than Dimension 2. There is no obvious explanation for this, and again, the interests of space limits us to merely note this pattern occurred during the period following the financial crisis, and may therefore reflect the response of governments in increasing expenditure as a proportion of national income and declines in the relative net worth in the financial sector. The trend is also consistent with the finding that trade union density (a variable in Dimension 2) in the OECD has steadily declined (for example, Tridico, 2017).

For the purposes of our argument, Dimensions 1 and 4 are consistently higher scoring than 2 and 3, suggesting that the former are the main drivers of the composite index. There is an intuitive appeal to this finding in that it seems to reflect our emphasis on capabilities and the legal framework. Indeed, over the entire period, dimension 4 is the highest scoring. For us, this provides some support for a broader view of economic democracy. Given this emphasis, we have elected to weight Dimensions 1 and 4 at 60% (30% each). Accordingly, dimensions 2 and 3 are together weighted at 40% (20% each). We acknowledge that there may appear to be an arbitrariness to those weightings – can we be sure of the magnitude of difference? As a robustness check, we also use uniform weighting (25% weightings across the four dimensions).

5.2 *EDI rankings*

We recognise that the average measures in Figure 1 masks potentially important distinctions in the direction of travel across the OECD, and moreover, takes no cognisance of the size of member states. A lack of data means that we can only provide an account of the impact of the policy environment from the 2000s onwards.

Figure 2 and Figure 3 below, set out the rankings of each state up to the final year of the sample period (2019), 30/20/20/30 weightings, and equal weights across dimensions and variables (weighted and unweighted), respectively.

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Figure 2: EDI rankings (OECD member states, 30-20-20-30% weights per dimension, respectively, or weighted index)

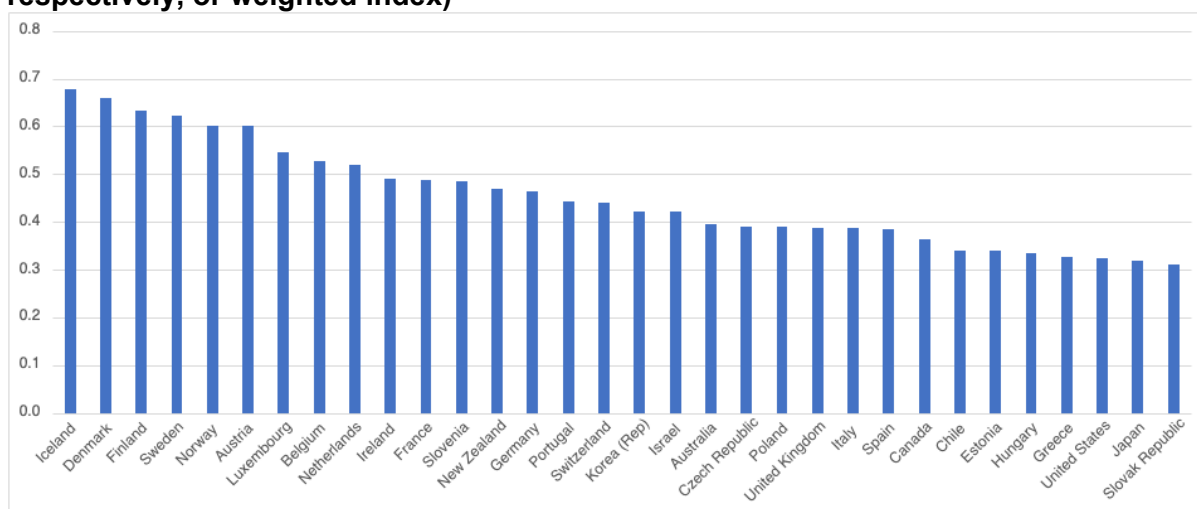
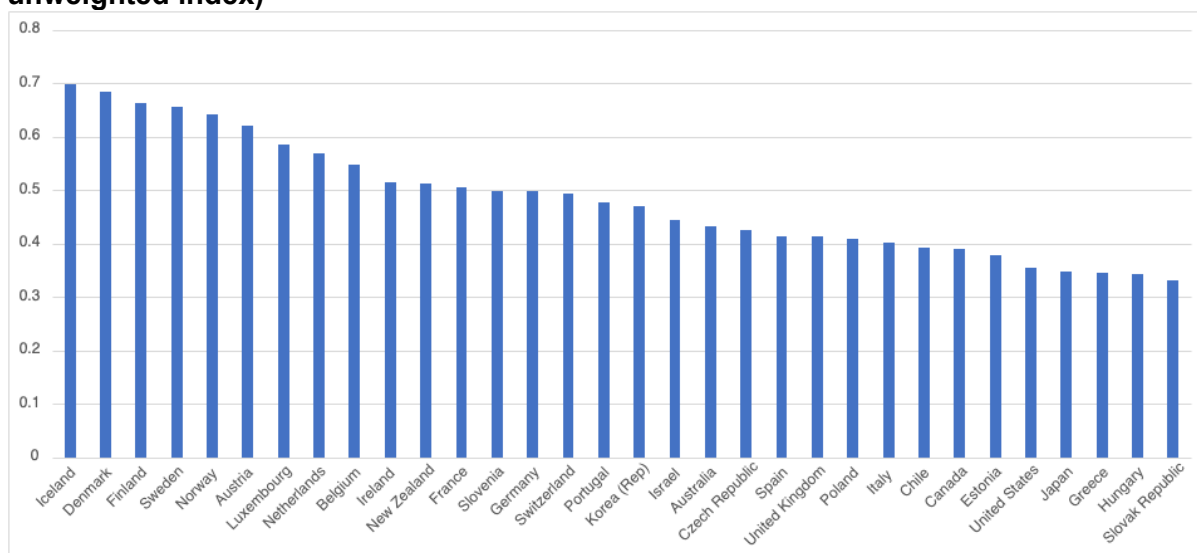


Figure 3: EDI rankings (OECD member states, equal weights per dimension (25%), or unweighted index)



For us, there is an intuitive appeal in the charts, suggesting that Nordic countries, with longstanding social democratic institutional arrangements, tend to have higher rankings than other OECD countries. Mainland Western European economies tend to record higher levels than Eastern European countries, which may reflect the absence to date of robust institutional systems in newly emerging democracies (Galbraith, 2012). Anglo-American economies perform relatively modestly, especially the US (ranked twenty-eighth and thirtieth in unweighted and weighted, respectively). This may reflect relatively low trade union density, the relative size of the financial sector, and comparative individual workplace rights, *inter alia*. Our findings resonate with a varieties of capitalism type argument (Esping-Andersen, 1990; Hall and Soskice, 2001; Zafirovski, 2020) in that they reflect marked differences in institutional arrangements and policy and are similar to Zafirovski (2020), who similarly records high rankings for Nordic and Western European states.

Interesting outliers include, Slovenia, which is by far the highest ranked of East European economies in the index. Slovenia's institutional arrangements and legacy from the Yugoslav federation, and stability from its subsequent dissolution, promote relatively high levels of

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individual economic rights (Cumbers *et al* 2023). Another case is Ireland, which, despite its comparatively limited welfare state and deregulated low tax governance regime for much of the past two decades, ranks fairly highly. This may be partly attributable to its mixed financial sector, with significant incidence of credit unions and financial co-operatives, and trade union density. France is also an interesting case in that trade union density is relatively low by European standards, yet trade unions are potentially more influential. This, we believe is partly due to the legal right of non-union members to engage in collective action with members, meaning that union density levels do not sufficiently measure the overall strength of union collective action. For our Index, this may lower France's overall ranking although we should note that its ranking overall remains similar or higher than other western European variants of capitalism such as Belgium, Germany and Switzerland. Again, these examples are illustrative of a broader argument concerning the path dependent, disrupting, and creating properties associated with institutions and their historical and geographical contingencies, reinforcing our preference for an OECD member state focus.

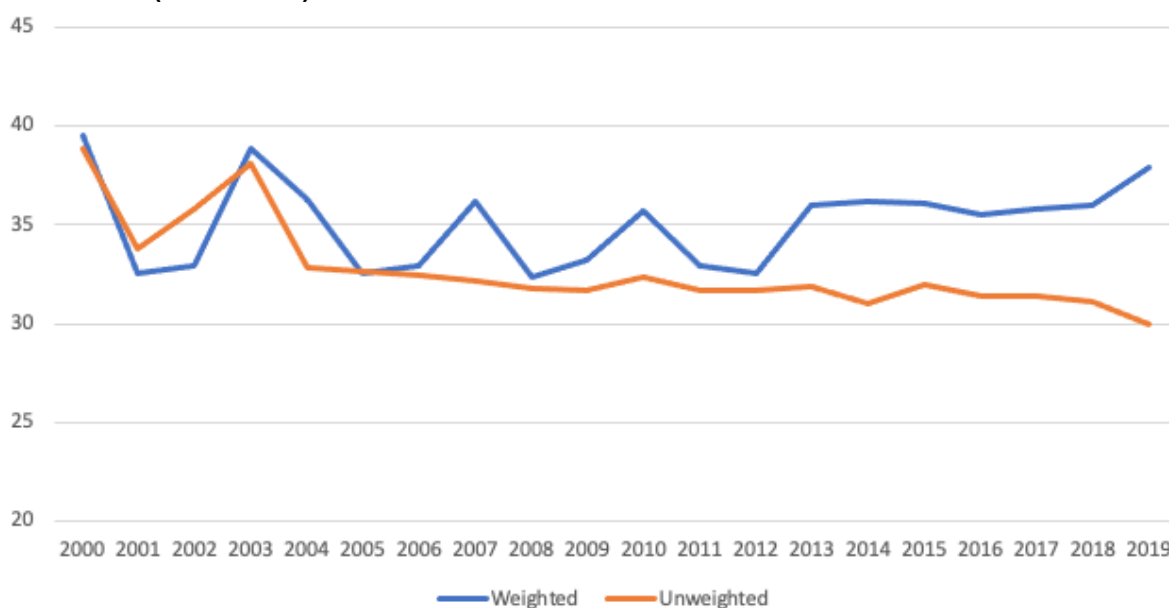
Except for New Zealand, non-European economies tend to rank below western European economies. Obviously, there is heterogeneity across this group, yet what appears evident is the modest ranking of major non-European economies, notably Japan and the US. The former demonstrates some idiosyncrasies in its institutional arrangements, such as its exceptional employment practices (for example, Ito and Hoshi, 2020) – many workers tend to remain with one employer throughout their careers and have relatively ungenerous entitlements – which may partially account for its placing in the EDI. The US demonstrates a similar pattern in individual and workplace rights to Japan, and the relative size of the financial sector also contributes to its modest ranking⁸.

6. Economic democracy and inequality

Figure 4 traces the path of the average weighted and unweighted Gini coefficient for OECD member states. The vertical axis scale measures income inequality, where zero is perfect equality and 100, perfect inequality. Therefore, the higher the measure, the greater the inequality.

⁸ Our results do not appear to be impacted substantially through our preferred weightings, and our findings align with a varieties of capitalism approach, there may be a case for assembling member states on the basis of a particular category. Thus, the Nordic countries could constitute a discrete group, similarly Western European economies, and so forth. We reflected on this, but opted to retain individual member states – despite obvious differences in size – as a means of apprehending ranks and identifying potentially interesting cases emerging from the data. This, we believe indicates the potential importance of historical and institutional contingencies that may be submerged or overlooked from a categorical approach.

Figure 4: OECD* average weighted (by country population) and unweighted Gini coefficient (2000-2019)



*Except Mexico and Turkey.

From Figure 4, the initial few years suggest some instability in the measure. We believe this partially reflects missing data across several countries. As the period progresses, this volatility declines. Nonetheless, there are seemingly pronounced differences in the trajectories of the weighted and unweighted measures. The unweighted average treats each OECD member state identically, regardless of population size. By contrast, the weighted score reflects differences in population.

From around 2003, the trajectory of the unweighted measure declines, suggesting that as a crude average, income inequality is less marked in OECD member states. By contrast, over the same period the weighted Gini coefficient increases, barring a short-lived steep decline in 2008. Indeed, by this measure, income inequality has increased since the financial crisis. A potential explanation for the divergent trajectories in the Gini averages may revolve around disproportionately growing income inequality in larger member states, such as the US, which acts to pull the coefficient upwards.

The Gini coefficient remains a broadly accepted way of expressing income inequality despite recognition of its limitations (e.g. Atkinson and Piketty, 2007; Atkinson, 2015)⁹. For instance, as a frequency distribution, the Gini index can generate the same measure for two countries with different average income distributions. It does not recognise a country's relative stage of development, such that a 'rich' developed economy may record an identical Gini measure as a 'poor' under-developed one. The coefficient is more sensitive to transfers in the middle of the income distribution than at the extremes (Alvaredo, 2011), and changes in the tails can significantly impact on inequality (Alvaredo, 2011; Atkinson, 2015). Given this, we employ multiple measures of income inequality, including the Gini coefficient and income shares (top

⁹ At the outset of their book, Atkinson and Piketty explicitly state that their "primary motivation" (2007: 1) is to address the "general dissatisfaction" with inequality data bases and methodologies. They view their income shares methodology as providing greater consistency.

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1% and 5%) across OECD members, both unweighted and weighted for relative population size¹⁰.

Figure 5 shows the income share of the top 1% and 5% of earners weighted for population size over the twenty-year period. The vertical axis refers to the proportion of national income. There has been an increase in the shares appropriated by the top 1% and 5% of earners. The trajectory was briefly interrupted immediately following the financial crisis in 2007-08, only to recommence in 2009. Compared to the Gini coefficient over the same period (Figure 4), the measure of income attributed to the top 1% and 5% has a more obvious pathway, whereas the Gini appears more volatile. The differences between the measures may reflect concentrations in transfers at the extremes of the distribution.

Figure 5: Income Share of Top 1% and 5% (weighted for population, 2000-2019)

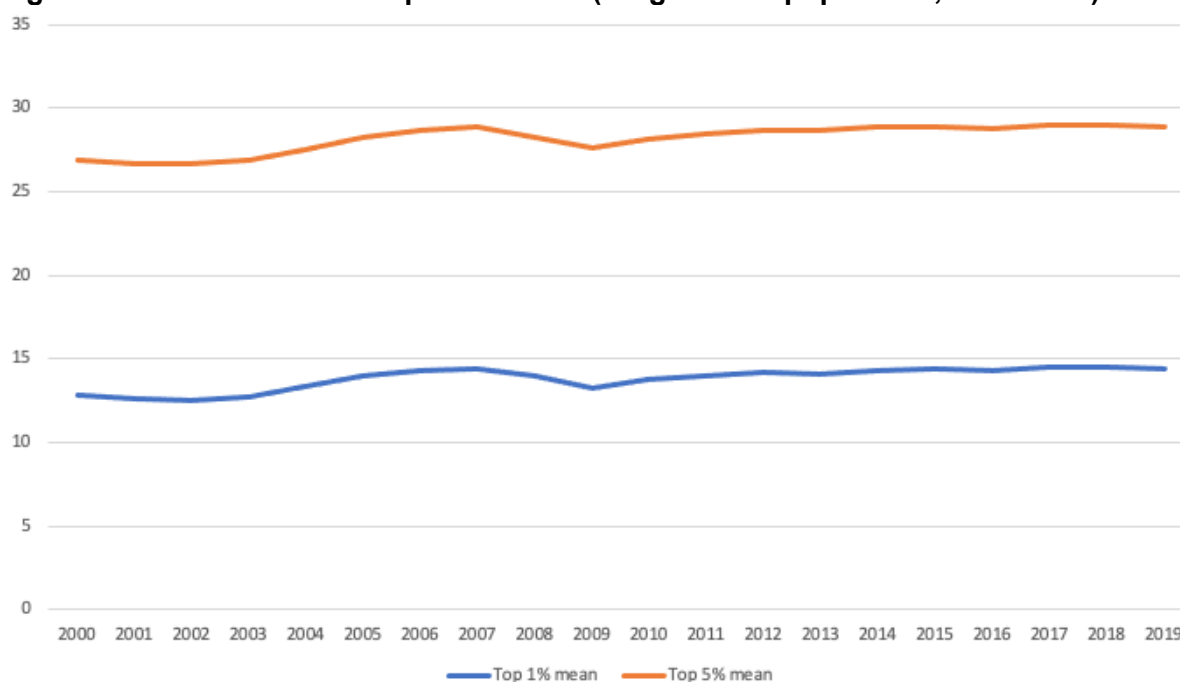


Table 3 shows the correlation results between the weighted and unweighted EDI, the weighted and unweighted Gini coefficient and income shares.

Table 3: Correlation between EDI, the (un)weighted Gini coefficient, and (un)weighted income share of top 5% and 1% (correlation coefficients and probability values (in parenthesis), 2000-2019)

Pearson correlation	Unweighted Gini coefficient	Weighted Gini coefficient	Unweighted Top 5% income share	Weighted Top 5% income share	Unweighted Top 1% income share	Weighted Top 1% income share
EDI (weighted: 30-20-20-30%)	-0.462**	-0.679**	-0.607**	-0.579**	-0.467**	-0.498**
	(0.001)***	(0.001)***	(0.001)***	(0.001)***	(0.001)***	(0.001)***

¹⁰ We readily acknowledge that the measures we employ do not record gender or racial aspects of inequality.

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EDI (unweighted: 25% each dimension)	-0.482**	-0.702**	-0.610**	-0.595**	-0.466**	-0.510**
	(0.001)***	(0.001)***	(0.001)***	(0.001)***	(0.001)***	(0.001)***

Where the probability value is equal to, or less than 0.01, 0.05, and 0.1 indicates significance at the 99%***, 95%**, and 90%* confidence levels, respectively. Weighting of the Gini coefficient and income shares reflects OECD members state's relative population size. The weighting of the EDI refers to the index's four dimensions.

We used the two-tailed approach to explore the possibility that any relationship may be in both directions (positive/negative). A positive relation would indicate that higher levels of economic democracy are associated with greater income inequality.

The results shown in Table 3 provide evidence of an inverse relationship between the levels of economic democracy, as measured by the EDI, and income inequality. There is a consistent 95% confidence across all correlations. In other words, regardless of weightings and measures of inequality applied, the results demonstrate the same levels of significance. On this basis, we venture that greater economic democracy is associated with lower levels of income inequality.

We interrogated the association further by decomposing the index into its constituent dimensions (the four identified in Section 2). Table 4 shows the results.

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Table 4: Correlation between EDI dimensions and the (un)weighted Gini coefficient, and (un)weighted income share of top 5% and 1% of earners (2000-2019)

EDI Dimensions	Unweighted Gini Coefficient	Weighted Gini Coefficient	Unweighted top 10% income share	Weighted top 10% income share	Unweighted top 1% income share	Weighted top 1% income share
Dimension 1 – Workplace and individual rights	-0.023	0.114**	-0.208**	-0.267**	-0.269**	-0.307**
	0.625	(0.001)***	0.009	(0.001)***	(0.001)***	(0.001)***
Dimension 2 – Degree of associational economic democracy	-0.444**	-0.630**	-0.482**	-0.562**	-0.324**	-0.490**
	(0.001)***	(0.001)***	(0.001)***	(0.001)***	(0.001)***	(0.001)***
Dimension 3 – Distribution of economic decision-making powers across space and sector	-0.463**	-0.591**	-0.327**	-0.287**	-0.281**	-0.196**
	(0.001)***	(0.001)***	(0.001)***	(0.001)***	(0.001)***	(0.001)***
Dimension 4 – Transparency and democratic engagement of broader population in macroeconomic decision-making	-0.430**	-0.629**	-0.572**	-0.454**	-0.387**	-0.361**
	(0.001)***	(0.001)***	(0.001)***	(0.001)***	(0.001)***	(0.001)***

Where the probability value is equal to, or less than 0.01, 0.05, and 0.1 indicates significance at the 99%***, 95%** , and 90%* confidence levels, respectively. Weighting of the Gini coefficient and income shares reflects OECD members state's relative population size. The weighting of the EDI refers to the index's four dimensions.

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Except for Dimension 1 of the EDI and the Gini coefficient, the results of Table 3 are replicated across each of the components of the composite index. That said, for the weighted Gini coefficient, Dimension 1 has a positive correlation, suggesting that greater workplace and individual rights are associated with higher levels of income inequality. This is an interesting finding, and out-of-line with other dimensions, and Dimension 1 vis-à-vis other measures of inequality.

Overall, our findings suggest that our four spheres of economic democracy all have a significant association with measures of income inequality and *vice versa*. Moreover, our results indicate a negative association between economic democracy and income inequality: higher measures of economic democracy are correlated with lower levels of income inequality. This finding applies across all the measures of income inequality we use. We believe that the construction of the index and the correlation exercise offer insights into those institutional configurations that promote economic democracy and potentially reduce income inequalities. In that Nordic economies rank most highly on our index, our findings are intuitively appealing, suggesting that those countries' record of comparative (income and wealth) equality, albeit in common with the general trend of increases in inequality over recent decades (Milanovic, 2016), goes beyond a matter of welfare state and tax and expenditure regimes. The tale of inequality is more nuanced than assessing the size of the state in relation to the rest of the economy. Democracy in the economic realm may be highly pertinent in any examination of income inequality.

7. Conclusions

To the best of our knowledge, our analysis is unique in that for the first time the role of economic democracy in the broader sense, compared to political democracy (Pickett et al 2024), is explicitly investigated as a factor in the distribution of income. We present evidence of the potential importance of economic democracy through the establishment of a new index that takes a broader definition than those conventionally associated with collective bargaining or industrial democracy.

The index provides an indication of the levels of economic democracy in developed economies and where data permits, it would be important to extend analysis to other types of economy, particularly to the global south, in the future. The contrast is marked between Nordic, Anglo-American, and Eastern European economies. Varieties of capitalism type analyses also identify pronounced distinctions between capitalist economies, but tend to do so by emphasising the extent of state intervention, and the size and nature of the welfare state (for example, Esping-Andersen, 1990; Hall and Soskice, 2001). This is highly insightful, and our findings are compatible with much of this literature. In our view, this supports the intuitive appeal of our EDI rankings. That said, arguably our focus on economic democracy represents a dimension not directly highlighted in this literature, going beyond the relations between state and economy to explore broader relations of democratic engagement and civic engagement in economic decision-making. Acknowledging economic democracy in the way that we do, also emphasises the importance of the legal framework, perhaps to a greater degree than that found in the varieties of capitalism literature.

Our approach draws from Deaton's (2014) and Wilkinson and Pickett's (2010; 2019) studies of inequality in that we employ a correlation procedure to establish whether there is any association between economic democracy and income inequality, and if so, its nature. We believe that our findings provide some evidence of an association between the two. We urge caution for fear of making unwarranted assertions. To this extent, we suggest that there is evidence of a negative relationship between levels of economic democracy and income inequality, the causes of which requires further investigation. Our preference for weighting

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elements of the composite economic democracy index, which we believe is intuitively and theoretically appealing, did not impact the pattern of the association our results suggest. Our findings are consistent with other contributions in the broad area. For instance, the study resonates with Christophers' (2020) and Stiglitz's (2016) arguments that rentierism – ownership and control of assets – is a source of inequality. Exclusionary ownership rights seem to us to be the antithesis of democratic rights (and responsibilities) (Zafirovski, 2020), an institutional arrangement that may contribute to declining wage shares in national income (for example, Stockhammer, 2015; Wisman, 2013).

Despite our acknowledged data limitations, we believe that we achieved our principal purpose in providing a measure of economic democracy and seeking to use it to establish a possible evidential basis that facilitates further analysis. In doing so, we feel that our analysis is supportive of emphases on the structure of the economy and income inequality, and Dahl's (1985) allusion to economic democracy as a potential force of distributive justice. We believe our findings provide some tentative support for this proposition.

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