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ORIGINAL ARTICLE

Union membership and the willingness to prioritize environmental protection above growth and jobs: A multi-level analysis covering 22 European countries

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Abstract

This article contributes to debates about trade unions and the environment by studying differences between union members and non-members when asked to prioritize between environmental protection and jobs and economic growth. Differences are explored in a multi-level framework based on European Values Study data from 2017, covering 22 European countries. The empirical results show that members are more proenvironmentally inclined than non-members. This is demonstrated to be attributable to a large extent to the fact that members tend to be more left-leaning politically, a disposition which tends to be associated positively with environmental concern. While those employed in transport and manufacturing generally are least likely to be willing to prioritize environmental protection, membership has the most pronounced positive effect in this group. The tendency for members to be more pro-environmentally inclined is consistent across the studied countries. The article also shows that both members and non-members in countries with higher

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collective bargaining coverage tend to be more proenvironmentally inclined. Implications of the findings are discussed in terms of the political nature of collective interest representation with which unions are concerned, broader debates about union renewal and the importance of unions in garnering workers' support for a greener economy.

1 | INTRODUCTION

Trade unions are often portrayed as conservative forces on environmental issues, defending jobs with little or no concern for their effects on the natural environment (see, e.g. Barca, 2012, p. 61; Thomas & Doerflinger, 2020, p. 394; Thomas, 2021). Although this view is nuanced partly in recent scholarly debates, such portrayals remain prevalent particularly in relation to approaches in which the roots of environmental degradation are located in economic growth (Felli, 2014; Gould et al., 2004; Obach, 2004, pp. 378, 386; Barca, 2019). In short, it is often assumed that a sufficiently expeditious transition towards ecological sustainability will result in at least occasional job loss and slower economic growth, and that unions on the basis of such assumptions – regardless of their validity – will tend to tread cautiously or even directly oppose necessary measures (Offe, 1985a, p. 822; Räthzel & Uzzell, 2011; Felli, 2014 p. 386; Thomas & Doerflinger, 2020; Thomas, 2021).

While interest in unions and the environment is growing steadily, existing research tends to be qualitative, based primarily on case studies of policy documents or interviews with union officials (e.g. Lundström, 2017; Stevis et al., 2018, p. 441; Tomassetti, 2020). There is a need to add to these debates with analyses based on broader representative samples. For example, previous research reports that union leaders at national and international levels argue that they cannot engage more strongly on environmental issues because their members would not approve (Räthzel & Uzzell, 2019, p. 133). The same study argues in this connection that '[t]he dilemma of choosing between protecting jobs and protecting the environment runs through all trade union efforts to develop environmental policies' (Räthzel & Uzzell, 2019, p. 133). However, little is known about the attitudes of union members in this regard, notably from a quantitative perspective based on the analysis of nationally representative samples. The present article aims to address this gap by examining union members attitudes towards environmental agendas, and specifically their willingness to prioritize environmental protection at the expense of growth and jobs. Granted, neither leaders' nor individual members' attitudes should be conflated directly with union strategy and policy; interconnections between these levels of analysis are often complex (Offe, 1985b, pp. 221-22). Nevertheless, the above allusion to membership opposition highlights an urgent need for representative studies covering members' attitudes towards environmental efforts. While being sensitive to potential differences between survey answers and an actual willingness to engage practically, such analyses are of clear relevance for ongoing policy debates within unions, including environmentally informed debates on union renewal (Farnhill, 2018). Furthermore, studies of this kind are also important in order to address potentially erroneous deductions regarding members' attitudes on the basis of critical environmental debates focusing on the higher level of union policy. Indeed, it is the contention of this article that members will tend to be more willing than non-members to

prioritize environmental protection. The main argument laid out in support for this proposition relates to individual political orientation, as members tend to be more left-leaning, a disposition which is associated strongly with environmental concern (McCright et al., 2016). The implication of membership is examined on an international comparative basis in order to determine the extent to which the argument applies across different institutional contexts.

Based on European Values Study (EVS) data from 2017, the analyses cover 22 European countries in a multi-level framework. The study employs two levels of analysis, utilizing the possibilities of the multi-level design, distinguishing between individual- and contextual-level effects. The analyses aim to assess the argument that union members are more willing than non-members to prioritize environmental protection above growth and jobs. The aim is further to evaluate the potentially mediating effect of political orientation. Lastly, the article aims to explore whether members are more supportive of environmental protection in countries with higher degrees of collective bargaining coverage, in which employment security and skills development (ESSD) tend to be more prevalent.

The results of the empirical analyses support the core arguments: members tend to be more willing than non-members to prioritize environmental protection above growth and jobs, and this is mediated significantly by individual political orientation. Importantly, while environmental concern follows the expected pattern along sectoral lines, union membership does not amplify this effect, but tends instead to counteract it. Although workers in manufacturing and transport tend generally to be among those least willing to prioritize environmental protection, membership has the most pronounced positive effect in this group. This may suggest an important role for unions in transcending more short-term interests. Regarding the second level of analysis, country-level variation pertaining to the membership effect appears smaller than expected - the key contextual variables instead have effects which apply equally to members and non-members: higher levels of collective bargaining coverage tend to imply that individuals are more willing to prioritize environmental protection. However, this pattern is found not to be mediated by ESSD. Further research in this area is encouraged. Relating back to debates on union policy, the findings may indicate potential support among members for unions to engage more strongly in environmental issues. Indeed, based on the results, environmental advocacy may be argued to constitute a fruitful path towards union renewal (Farnhill, 2018).

The following section provides a review of literature and formulation of hypotheses. After that follows a presentation of data and methods. The results are then presented, before being discussed in a concluding section.

2 | LITERATURE REVIEW

Assumptions about trade-offs permeate many debates about organized labour and the environment, introducing an element of sacrifice in relation to which complicated questions are raised concerning collective interest representation and the very nature of trade unionism (Räthzel & Uzzell, 2011; Thomas & Doerflinger, 2020). In this regard, the influential treadmill of production theory serves to illustrate a particularly critical account (Schnaiberg & Gould, 1994). The treadmill theory proposes: (1) that economic growth is incompatible with environmental sustainability; (2) that core union agendas related to full employment and material progress are coupled intimately with growth, and consequently; (3) that labour will tend to privilege 'economic growth preferences' to the detriment of the natural environment, in effect opposing necessary efforts towards environmental protection (Schnaiberg & Gould, 1994, p. 70; Gould, Pellow & Schnaiberg,

2004, p. 297; Obach, 2004, pp. 337–8, 340). However, also within such critical accounts, there are various interpretations and qualifying remarks pertaining to the conditions under which different positions may be reached on the part of organized labour (Obach, 2004, p. 338). This ambiguity highlights fundamental questions, raised in the broader union literature, about the nature of unionism being fraught with persistent tensions (Hyman, 2001). These tensions are reflected in different conceptualizations of union identities, or logics (Behrens & Pekarek, 2021), two internally divergent ideal types of which are elaborated here. In the first, unions are economic actors pursuing immediate work place related or sectional interests, particularly through collective bargaining. Conversely, in the second approach, unions mobilize as social movements or 'swords of justice', building broader alliances on the basis of workers' interests beyond the immediate work place (Hyman, 2001, pp. 60–61; Räthzel & Uzzell, 2011, p. 1221), the recognition of which is often argued to be important in order for unions to incorporate environmental issues on their agendas (Felli, 2014, p. 374; Lundström et al., 2015).

Previous empirical research has proposed various classifications with regard to union responses to the environment; there is agreement generally that trade unions increasingly acknowledge the importance of environmental issues (e.g. Räthzel & Uzzell, 2011, 2013; Snell & Fairbrother, 2011). However, importantly with regard to present purposes, Felli (2014, p. 380) holds that many union responses ignore or overlook key problems at the core of the 'growth imperative and the climate crisis', pursuing forms of Green Keynesianism - stimulating aggregate demand by increasing public investment in 'green sectors' of the economy - thereby promoting the contested concept of 'green growth' (see also Barca, 2019, p. 227; Hickel & Kallis, 2020). Similarly, Thomas and Doerflinger (2020) identify three ideal typical positions towards climate change mitigation strategies: opposition, hedging and support. The most common response, in keeping with the core goal of maintaining jobs and good working conditions, is that of hedging, in which unions advocate incremental approaches and minimized regulation. The authors conclude that it is unlikely for environmental concerns to prevail over job protection, although this is not predetermined, but instead argued to be mediated by the political identity and the sectoral location of individual unions. Similar conclusions are also reached by Markey and McIvor (2019, p. 97) regarding Australian unions, and Obach, who studies US unions, arguing that while their positions have become more contradictory, supporting certain issues which tend to 'slow the treadmill' (such as worktime reduction), and there are tendencies pointing towards more active engagement, labour is still to be regarded as a key treadmill actor (Obach, 2004, p. 349). Returning to the issue of sectoral variation, unions in production and transport are often posited to be particularly likely to oppose environmental efforts, since theirs are the jobs which tend to be threatened – although there are differing positions to be found within such a broad category (Räthzel & Uzzell, 2011, p. 1219; Thomas & Doerflinger, 2020; Thomas, 2021). The opposite has been claimed to apply to service sector unions, because environmental policy is suggested to increase employment in this sector (see Obach, 2004,

Previous case studies thus provide valuable insights regarding the positions of unions in environmental debates, and highlight the importance of sectoral differences in this regard. However, the implications of these findings when it comes to the attitudes of individual union members, even in particular sectors, are not certain. On the basis of the prevalence of hedging strategies, one interpretation would suggest a selection mechanism resulting in a negative membership effect: in the extent to which unions are perceived by the public as pursuing growth and jobs above or even at the cost of environmental protection, pro-environmentally inclined individuals with a growth critical orientation may be less likely to select into unions. Questions of this nature are indeed proposed to constitute a core line of demarcation between unions and 'new social movements', such

as the environmental movement, into which such individuals would then be more likely to select (Offe, 1985a, p. 832). The logic of these arguments could then also be reflected in union members being less likely than non-members to prioritize environmental protection above growth and jobs.

However, it is the contention of this article that there are stronger reasons to expect members to be more likely than non-members to prioritize environmental protection. Most importantly, left-wing political identification is linked strongly with pro-climate views (McCright et al., 2016), and union members tend to be more left-leaning (Iversen & Soskice, 2015). Indeed - while historically presented as displacing more traditional value cleavages, sometimes, as discussed above, to the detriment of 'old social movements' like unions (Offe, 1985a) – environmental issues often tap into the traditional left-right value dimension because they tend to involve conflicting views on the organization of production (Malm, 2018, p. 134; Korpi, 2019, p. 158). The principles of free market and private enterprise, in other words, often conflict with preferences for public regulation oriented towards environmental protection. Hence the repeated finding that a free-market ideology is associated negatively with environmental concern; such a disposition is in fact identified as one of the most significant determinants for climate change denial (Heath & Gifford, 2006, p. 65; Hornsey et al., 2016). The political implications of environmental concern can thus be understood as analogous to many social causes traditionally associated with organized labour, both tending to imply support for de-commodification (Spies-Butcher & Stebbing, 2016). Beyond political orientation, other tendencies also suggest a positive membership effect. Individualism has a negative effect on environmental concern (Goebbert et al., 2012) and there are reasons to expect union members to be more collectively inclined, or indeed solidaristic, than non-members (Mosimann & Pontusson, 2017). There is also a potential insider status associated with membership, reflected in factors such as job security and stronger labour market attachment (Lindbeck & Snower, 1986), which may in turn increase the propensity to prioritize environmental protection, particularly when trade-offs involving job loss are implied. In fact, the very limited amount of previous research on environmental attitudes based on representative samples of union members tends to support the more positive approach to the role of labour (Kojola et al., 2014; Vachon & Brecher, 2016; Chen, 2017). However, it must be stressed that all such studies analyse US data only, and given the particularities of American unions, the results may not apply to members in other countries. Nevertheless, Vachon and Brecher (2016) show that US union members tend fairly consistently to express more environmental concern than non-members, and Chen (2017) finds that US members, even in high-polluting sectors, are more likely than non-members to describe public spending on the environment as being 'too little'. Chen (2017, p. 786) also concludes that the findings would gain greater validity if built upon by research exploring other outcome variables, going beyond approval for public spending. In this connection, the outcome variable of the present study, adding an element of sacrifice involving issues of core union concern, arguably constitutes a strong test of how far members are willing to go in order to protect the environment.

Previous research does not tend to theorize or seek to explain the union effect empirically. For example, Chen (2017) focuses largely on the importance of sectoral differences when it comes to workers' interests, and refers occasionally to the higher level of union policy. It is thus not necessarily clear why members' attitudes would be distinct from those of non-members, although this is not of prime concern if the main aim is to get a picture of members' attitudes as such. More explicitly, Vachon and Brecher (2016, p. 199) conclude an interesting but largely descriptive analysis by suggesting that multivariate analyses studying the relative effects of membership remain warranted. Relatedly, recent research based on panel data provides cause for caution in theoretical explanations which attribute a large *transformative* effect to membership itself, such that attitudes are attributed causally to the experience of membership, as opposed for example

to selection effects in which certain individuals are more likely to join a union in the first place (Hadziabdic & Baccaro, 2020). Without further specifying causality, it may be posited on the basis of the discussion above that union members are more likely than non-members to be willing to prioritize the environment above growth partly because they are more politicized, inclined towards leftist political orientations and thus critical of the idea of an unregulated free market (Iversen & Soskice, 2015; Wright, 1985, pp. 269–272). The following hypotheses are thus proposed:

 $H1_a$: Union members are more likely than non-members to prioritize environmental protection above economic growth and jobs

 $H1_{h}$: The positive effect of membership on willingness to prioritize environmental protection is mediated by political orientation

The implications of membership may also vary between countries. A potentially important factor in this regard relates to collective bargaining, which is likely to contribute to some material conditions under which members generally are less constrained by pure economic concern, and hence more willing to prioritize issues such as environmental protection, especially when tradeoffs involving job loss are involved. Indeed, collective bargaining is often presented as vital when it comes to restructuring and managing a 'just transition' (Eurofound, 2018a, p. 34; Tomassetti, 2020). For example, Eurofound concludes that the involvement and support of a trade union '[...] creates a greater acceptance among employees of the restructuring decisions and helps to mitigate feelings of job insecurity' (Eurofound, 2018a, p. 47). One key aspect pertains to the provision of qualitative adjustment mechanisms, providing workers with reskilling and training, which '[...] has a transitional dimension, facilitating internal or external job-to-job transition' (Bergström, 2019, p. 97). Also, even in the absence of reskilling, collective bargaining is often associated with broader forms of decommodification (Streeck & Hassel, 2003, pp. 357-58) - reducing the extent to which individuals' welfare is dependent upon market forces - something which may also increase the probability of prioritizing issues beyond the economy; particularly important in this regard should be the level of unemployment protection.

In assessing the argument, the present article analyses the effects of country-level collective bargaining coverage, which tends to correlate positively with similar institutional measures, such as bargaining centralization and union participation in the formulation of public policy (Baccaro & Howell, 2017, p. 44). The supporting argument is evaluated empirically by exploring whether a potentially positive effect of bargaining coverage is mediated by 'ESSD', using a country-level composite measure constructed by Eurofound (2018b pp. 21, 24). The measure fits present purposes because it is based on several of the key aspects associated with a 'just transition' discussed above, that is: job security, involuntary temporary employment, lifelong learning and use of skills, and unemployment protection coverage. Furthermore, for reasons analogous to those of bargaining coverage, there is cause also to assess the effects of union density (e.g. Esser & Olsen, 2012), with which it tends to correlate positively but not perfectly (Baccaro & Howell, 2017, p. 44).

The implications of the arguments above should be such that members in countries with higher degrees of bargaining coverage are more likely to support environmental protection at the cost of growth and jobs. Furthermore, however, given that many of the outcomes of collective bargaining are collective goods - although the extent to which this is the case may vary between countries (Jódar et al., 2010, pp. 163-4) – the same process may apply to non-members as well. The following hypotheses are proposed:

 $H2_{a}$. In countries with higher levels of bargaining coverage, both members and non-members are more likely to prioritize environmental protection above growth and jobs.



TABLE 1 Share (%) willing to prioritize environment above growth and jobs

| Country | Non-member | Member | Difference member and non-member | Sig. |
|-------------|------------|--------|----------------------------------|------|
| Spain | 64 | 84 | 20 | 0.00 |
| Poland | 44 | 59 | 16 | 0.03 |
| Netherlands | 61 | 74 | 13 | 0.00 |
| France | 58 | 70 | 12 | 0.04 |
| Estonia | 71 | 82 | 11 | 0.21 |
| UK | 60 | 69 | 9 | 0.03 |
| Bulgaria | 58 | 65 | 7 | 0.21 |
| Norway | 67 | 73 | 7 | 0.03 |
| Switzerland | 76 | 82 | 6 | 0.02 |
| Denmark | 70 | 76 | 6 | 0.00 |
| Lithuania | 35 | 39 | 4 | 0.54 |
| Finland | 72 | 75 | 3 | 0.32 |
| Germany | 71 | 74 | 3 | 0.33 |
| Slovenia | 68 | 71 | 3 | 0.59 |
| Sweden | 87 | 89 | 2 | 0.35 |
| Czech Rep. | 60 | 60 | 0 | 0.97 |
| Croatia | 58 | 58 | 0 | 0.97 |
| Romania | 50 | 50 | 0 | 0.99 |
| Hungary | 68 | 67 | 0 | 0.97 |
| Iceland | 77 | 75 | -2 | 0.47 |
| Slovak Rep. | 68 | 63 | -5 | 0.46 |
| Austria | 67 | 59 | -8 | 0.09 |

Note: Significant differences (p < 0.05) in bold, based on chi-square tests. Based on full EVS sample including both employed and not employed. Calibration weights included (adjusting for age, sex, educational level and region of residence).

H2_b: The positive effect of bargaining coverage on willingness to prioritize environmental protection is mediated by ESSD

3 | DATA AND METHODS

The analyses use data from the EVS (2020), which cover representative probabilistic samples of adult populations (18 years or older). The main mode of data collection is face-to-face interviews. The advantage of the EVS is that data are recent (collected in 2017) and cover samples of countries for most of which key contextual variables are available in the database on Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts (ICTWSS) (Visser, 2019). The sample used in the analyses is limited to individuals who are currently employed, except for country-level analyses in Table 1, which include both employed and non-employed in order to increase statistical power. Calibration weights are applied to descriptive analyses shown in Table 1, but not to the subsequent regression models. After listwise deletion, the main sample includes 15,351 individuals nested in 22 European countries.

3.1 | Dependent variable

The dependent variable is based on a question in which respondents are asked to choose which of the following statements comes closer to their own view: '1. Protecting the environment [is a] priority, even if slower economic growth and loss of jobs, 2. Economic growth and creating jobs [is a] priority, even if environment suffers, 3. Other answer (if volunteered only)'. The variable is dichotomized, distinguishing between those prioritizing the environment (1) versus those prioritizing growth and jobs (0). Alternative 3 is coded as NA.

3.2 | Individual-level independent variables

The main individual-level independent variable is union membership (currently member = 1, no = 0). Further key individual-level independent variables are occupational category and political orientation (0–10, original scale is reversed, a higher value means more to the left). The occupational categorization is based on 2-digit ISCO08 codes, resulting in the following categories: clerical, managers, professionals, manufacturing and transport workers, and service workers. Due to their containing few individuals, agriculture and armed forces are omitted from the sample; some models fail to converge if included. See Table A1 for detailed information on the categorization of the ISCO codes.

Unfortunately, there are no individual-level data on job security in the EVS. The variable closest approximating to the insider argument is hours worked per week. Additional analyses (not shown) reveal that, in the multivariate setting, it does not alter or interact with the effect of membership. It is thus not included below. Following previous studies (e.g. Chen, 2017), models control for age (and age squared), gender and education, based on a harmonized EVS variable distinguishing between lower (1), medium (2) and higher (3) education. Two further potentially important individual-level variables are also initially controlled for: sector (public/private) and income (standardized deciles). However, in the multivariate setting, neither of these have significant effects (nor do their inclusion alter the effects of the key variables), and since they are not the main focus of the study and each variable has a considerable amount of missing observations, they are not included in the models shown. While the income variable is not significant, the inclusion of a random slope significantly improves model fit, suggesting it may have more of an effect in certain contexts. However, the inclusion of the random slope does not alter the effects of the key variables, and it is thus not included in the models.

3.3 | Country-level independent variables

All contextual-level variables refer to 2016 or closest year with available data, if nothing else is stated. Data on collective bargaining coverage and union density come from the ICTWSS database (Visser, 2019). The density results are reported but not shown.

Data on 'ESSD' come from Eurofound (2018b). The variable is a composite measure (ranging from 0 to 100) based on: unemployment protection coverage, involuntary temporary employment, job security, lifelong learning and use of skills. The data refer to the period 2013–2017 (Eurofound, 2018b: 31). ESSD data are not available for the three non-EU countries in the sample (Norway, Iceland and Switzerland); the models assessing its effect thus contain slightly fewer observations.

The analyses also account for the large body of research drawing on the post-materialist theory, studying the association between economic development and environmental concern (e.g. Marquart-Pyatt, 2012). Some studies suggest that economic development (GDP) may have a positive effect on environmental concern, which motivates including it as a control variable. The variable used is GDP/capita purchasing power parity, constant 2017 international \$ (World Bank, 2019).

There are substantial country-level differences in terms of bargaining coverage: the standard deviation is 32 (mean = 52). The main contextual-level variables are correlated significantly and to a fairly high extent: Pearsons' r ranges from 0.65 (bargaining coverage and ESSD), to 0.81 (GDP and ESSD). Given the high degree of correlation between the contextual-level variables, in combination with the relatively low number of higher-level units (22), a cut-off level for statistical significance slightly higher than conventional is reported (p < 0.1) for the contextual-level models.

3.4 | Methods

In order to get a descriptive view of the difference between members and non-members in each country of the study, the analyses first investigate bivariate associations (cross-tables and associated chi-square tests) between union membership and the dependent variable within each country. Multi-level logistic regression models (MLA) (Hox et al., 2017) then seek explanations to potential differences between members and non-members in a multivariate setting, which among other things takes into account and controls for the composition of union membership across countries and occupations. MLA accounts for the clustered data structure and the fact that observations are not independent (i.e. responses are likely to vary systematically between countries) by allowing a random intercept - resulting in more efficient estimations. Due to the hierarchical data structure, in which individuals are 'nested' in countries, the method also enables calculation of the proportion of total variance explained by the country-level, referred to as the intraclass correlation (ICC) (Hox et al., 2017, p. 13). Furthermore, MLA allows specification of random coefficients, determining whether the effect of individual-level variables differs across higher-level units. A first set of models focus on individual-level variables, exploring hypothesis 1. A second set of models focus on contextual variables (hypothesis 2), initially testing for cross-level interactions between the contextual variables and union membership in order to assess whether the contextual variables have specific effects on union members.

Statistical software used is R (R Core Team, 2020). Multi-level models are produced with the lme4 package (Bates et al., 2015). The mediating effect suggested by $\mathrm{H1}_{\mathrm{b}}$ is explored by use of the mediation package (Tingley et al., 2014).

4 | RESULTS

Table 1 shows the proportions of union members and non-members willing to prioritize the environment above growth and jobs, aggregated by country, sorted according to the size of the difference between members and non-members. It is notable that in most countries, a clear majority of members favour environmental protection above growth and jobs. In terms of differences between members and non-members, the *tendency* is close to being one-sided: members tend to be more likely than non-members to prioritize the environment. These results provide support for H1_a. In

8 of 22 countries, the difference is statistically significant (p < 0.05). Differences between members and non-members are very large in Spain – 20 percentage points – and substantial in Poland, the Netherlands and France. Some non-significant differences (e.g. Estonia and Bulgaria) are related to the relatively low numbers of union members in these country samples. It is worth emphasizing that no country has a significant negative union effect, and that Austria is the only country in which there is even such a tendency nearing *some* degree of statistical certainty. Next, in order to evaluate systematically some of these differences, we turn to the MLA.

The models in Table 2 focus on individual-level variables, evaluating hypothesis 1. The ICC is 0.08, justifying the multilevel modelling strategy. First, the inclusion of a random slope for membership does not significantly improve model fit, suggesting that the effect of membership does not vary substantially by country, at least not to the extent that it improves model fit.² It should be noted, however, that Table 1 suggests some differences between countries in this regard, and that these should be kept in mind when interpreting the results. Model 1 shows that members - independent of occupation, education and age - tend generally to be more likely than nonmembers to prioritize environmental protection at the cost of economic growth, thus supporting HI_a . The fact that the odds ratios of the occupational categories are above one means that workers in these categories are more likely than transport and manufacturing workers (the reference category) to prioritize environmental protection. Workers in transport and manufacturing overall are least likely to prioritize environmental protection at the cost of growth. However, as seen in Model 2 - which includes an interaction term between occupation and union membership - the difference between members and non-members is biggest in this group. Given that manufacturing and transport workers are the reference category, the 'main' union effect now applies to this category only, increasing substantially in comparison to Model 1 – implying that the positive union effect is stronger among manufacturing and transport workers than most other occupational categories. ⁴ This is also reflected in the significant negative (below one) interaction terms for most occupational categories; that is, in comparison to manufacturing and transport workers, membership has less of a positive effect or no effect among many other occupational categories. However, as support for the argument that members tend to be more supportive of environmental protection across occupational groups, see Table A2, which displays differences between members and non-members aggregated by occupational group.

Model 3 explores the degree to which the positive union effect is attributable to members being more left-leaning politically, which in itself is shown to be associated strongly with willingness to prioritize environmental protection. The effect of membership is reduced substantially and no longer significant in Model 3, which indicates that a significant amount of the membership effect is explained by individual political orientation. Indeed, results of separate causal mediation analyses (not shown) support this conclusion: 39% of the membership effect is mediated by political orientation (p = 0.02). Furthermore, the model also includes a random slope for political orientation, which improves model fit and hence suggests variation between countries in the extent to which political orientation is associated with environmental concern. Consequently, the degree to which political orientation explains the membership effect may also vary across contexts. Nevertheless, there is general support for H_{1b} ; individual political orientation is a significant mediating factor in the membership—environmental concern association.

The models in Table 3 focus on contextual-level variables, exploring hypothesis 2, according to which individuals in countries with higher degrees of collective bargaining coverage are more likely to be willing to prioritize environmental protection ($H2_a$). $H2_b$ holds that this is mediated by ESSD. Model 1 shows that the level of bargaining coverage, independent of GDP/capita – which,

TABLE 2 Multilevel logistic regression models (odds ratios), willingness to prioritize environmental protection above growth and jobs

| | M1 | M2 | M3 |
|---|-----------|-----------|-----------|
| Union member | 1.143** | 1.423*** | 1.078 |
| | (0.050) | (0.099) | (0.051) |
| Occupation (manufacturing and transport = ref.) | | | |
| Clerical | 1.197* | 1.300** | 1.211* |
| | (0.076) | (0.085) | (0.077) |
| Manager | 1.233** | 1.266** | 1.322*** |
| | (0.078) | (0.087) | (0.079) |
| Professional | 1.655*** | 1.742*** | 1.633**** |
| | (0.058) | (0.064) | (0.059) |
| Service | 1.119 | 1.225** | 1.113 |
| | (0.061) | (0.068) | (0.062) |
| Political orientation (left) | | | 1.374*** |
| | | | (0.058) |
| Union member*clerical | | 0.689* | |
| | | (0.175) | |
| Union member*manager | | 0.879 | |
| | | (0.174) | |
| Union member*professional | | 0.795* | |
| | | (0.117) | |
| Union member*service | | 0.658** | |
| | | (0.138) | |
| Constant | 2.119*** | 2.021*** | 2.105*** |
| | (0.127) | (0.129) | (0.135) |
| Variance | | | |
| Country | 0.258 | 0.260 | 0.300 |
| Political orientation | | | 0.064 |
| Log Likelihood | -8758.677 | -8753.283 | -8547.281 |

Note: Standard errors in parenthesis. Individuals = 15,351. Countries = 22. Models also control for gender (female = ref.), education (higher = ref.), age and age squared. Quantitative variables are standardized (z-score). Difference log likelihood M1 and M2 (p = 0.03), M1 and M3 (p < 0.001). An additional mediation model exploring the mediating role of political orientation on the effect of membership is applied to Model 3 (not shown). The results reveal that the proportion of the membership effect mediated by political orientation is 39% (p = 0.02, CI lower = 0.174; CI upper = 1.420). ACME (average) = 0.009 (CI upper = 0.006; CI upper = 0.01), ADE (average) = 0.014 (CI lower = -0.004; CI upper = 0.03). Confidence intervals derived by Quasi-Bayesian bootstrapping. Inclusion of the interaction between membership and occupation does not change the proportion of the membership effect mediated by political orientation.

as does bargaining coverage, has a strong positive effect when explored separately (p < 0.001, results not shown) – has a positive effect on members and non-members alike. No significant interactions with membership appear, and the individual membership effect remains significant when controlling for these contextual factors. The results support $H2_a$: in countries with higher degrees of collective bargaining coverage, individuals, regardless of membership, are more likely

^{*}p < 0.05; **p < 0.01; ***p < 0.001.

Multilevel logistic regression models (odds ratios), willingness to prioritize environmental protection above growth and jobs

| | M1 | M2 | M3 |
|----------------------------------|-------------|-----------|-----------|
| Collective bargaining coverage | 1.231* | | 1.310** |
| | (0.111) | | (0.123) |
| ESSD | | 1.232* | 1.030 |
| | | (0.110) | (0.129) |
| GDP/capita (PPP) | 1.120 | | |
| | (0.121) | | |
| Individual level | | | |
| Union member | 1.155*** | 1.185*** | 1.190*** |
| | (0.049) | (0.055) | (0.054) |
| Union member*bargaining coverage | 0.986 | | |
| | (0.050) | | |
| Union member*ESSD | | 1.037 | |
| | | (0.055) | |
| Constant | 2.258**** | 2.054**** | 2.096**** |
| | (0.107) | (0.126) | (0.117) |
| Variance | | | |
| Country | 0.151 | 0.205 | 0.163 |
| Log Likelihood | -10,191.580 | -8245.387 | -8243.463 |
| Observations | 17,552 | 13,804 | 13,804 |

Note: Standard errors in parenthesis. M1 = 22 countries. M2 and M3 = 19 countries. Models also control for occupation, gender, education and age. Quantitative variables are standardized (z-score). Difference in log likelihood M2 and M3 (p < 0.001). Mediation model applied to Model 3 (not shown). Proportion of bargaining coverage mediated by ESSD close to zero (p = 0.77). p < 0.1; p < 0.05; p < 0.01; p < 0.01; p < 0.001.

to prioritize environmental protection. The next question is whether this is mediated by ESSD. First, Model 2 shows that ESSD is associated positively with individuals' willingness to prioritize environmental protection, but the effect does not appear to be particularly robust, even without further contextual controls (p < 0.1). The effect, furthermore, is reduced substantially when controlling for bargaining coverage (Model 3). It is not possible to distinguish between the effects of bargaining coverage and GDP in the ESSD model; if both are included, neither have significant effects, but GDP does not contribute to model fit (not shown). As seen in Model 3, the coverage effect remains significant when controlling for ESSD. Hence, while ESSD has a positive effect in isolation, it does not mediate the effect of collective bargaining coverage. This conclusion is supported further by separate causal mediation analyses (not shown) in which the proportion of the coverage effect attributed to ESSD is shown to be close to zero (p = 0.77). The results support $H2_g$: bargaining coverage is associated positively with individuals' willingness to prioritize environmental protection. However, this finding is not attributable in turn to higher levels of ESSD: $H2_b$ is thus not supported. Lastly, with regard to all three models, the effect of density largely mirrors that of bargaining coverage in terms both of sign and significance.



5 | DISCUSSION

This article contributes to debates about trade unions and the environment by demonstrating that union members are more likely than non-members to prioritize environmental protection above economic growth and jobs. Particularly noteworthy is the fact that membership has the strongest positive 'effect' among those employed in transport and manufacturing, who are often suggested to have the most to lose from environmental protection, and indeed are shown in the results above to be least favourable. Thus, while environmental concern follows the expected pattern along sectoral lines, union membership does not simply reflect this general configuration - and it certainly does not augment it. Arguably, this indicates that unions can be important actors in transcending - rather than reinforcing - more narrow short-term economic interests, particularly in those occupational sectors most often claimed to be affected by the jobs versus environment dilemma (Räthzel & Uzzell, 2011; Thomas, 2021). Due to the cross-sectional nature of the data, the analyses do not disentangle causally the degree to which this pertains to a transformative, moulding effect of union membership, as opposed to a selection effect in which certain individuals are more likely to join a union (see Hadziabdic & Baccaro, 2020). The lack of further causal clarity, however, does not compromise the broader implications of the findings. Unions are sometimes situated awkwardly in debates on environmental regulation (Thomas, 2021), and particularly those - such as the influential treadmill of production theory - in which the dominance of economic growth preferences is questioned (Schnaiberg & Gould, 1994, p. 70; Gould, Pellow & Schnaiberg, 2004; Felli, 2014; Barca, 2019). However, individual members tend to be more pro-environmentally inclined than non-members.

The results build on prior studies (Chen, 2017; Kojola, Xiao & McCright, 2014; Vachon & Brecher, 2016) by extending insights beyond the United States to a much larger number of countries. The results also add a previously missing explanatory dimension. As hypothesized, the positive effect of membership relates significantly to the fact that members tend to be more left-leaning politically (Iversen & Soskice, 2015; Wright, 1985), a disposition which is associated positively with environmental concern (McCright et al., 2016). Indeed, the subject of environmental protection often brings to the fore conflicting views on the organization of production and the value of free private enterprise (Heath & Gifford, 2006; Malm, 2018; Korpi, 2019, p. 158). The general disposition of members in this regard plausibly explains why they are supportive of environmental protection. Arguably, social causes aiming towards decommodification, traditionally supported by union members, can thus be understood as being in alignment with those related to a proenvironmental orientation (Spies-Butcher & Stebbing, 2016). The decisive role of political orientation arguably also points to a tendency similar to the one discussed in relation to the positive union effect among production and transport workers: individual political orientation can be posited to function as a way of transcending more immediate short-term economic interests. This is in line with the argument raised by Frangi et al. (2017, p. 835) that: '[...] certain ideational dispositions, a leftist political orientation in particular, might offset the rational mechanism that is closely related to one's socioeconomic position [...]'. This is not to intimate that environmental concern is an irrational position, but merely that it may conflict with more short-term interests. Arguably, then, the results pertaining to the implications of political orientation could be seen as reflecting at the individual level the contingent and often political nature of collective interest aggregation and representation (or indeed definition) with which unions are concerned (Offe & Wiesenthal, 1985, p. 179; Hyman, 2001), manifesting tensions between broader and more narrow agendas as well as between interests as defined in the short- versus long-term. This lends some

support to the claim that a unionized environmental agenda is served by being a broader political one.

Turning to the contextual level, the results show that the membership effect varies between countries to a lesser extent than expected. The contextual variables instead apply equally to members and non-members: individuals in countries with higher degrees of collective bargaining coverage tend to be more willing to prioritize the environment above growth and jobs. However, the main explanation proposed is not supported by the data: the effect of bargaining coverage appears not to be attributed to the mitigating factors associated with a 'just transition' covered by the measure of ESSD. It should be noted, though, that there may be important nuances not picked up by the ESSD variable: further research is warranted. Disaggregated measures could prove to have more robust effects, as some aspects of ESSD may matter more than others. Due to the high levels of correlation between the contextual variables, this suggestion would be explored most adequately by the use of data covering a higher number of countries. Ultimately, nevertheless, the results support the main contextual hypothesis: collective bargaining is a significant positive factor when it comes to explaining country-level differences pertaining to workers' support for environmental protection. This does suggest a key role for unions in encouraging workers to prioritize long-term 'public interests' against short-term sectional interests (Lange, 1984). Arguably, workers' support is essential when it comes to the viability of environmental policies. In this connection, trade unions are important actors by representing workers' interests and ensuring that these are accounted for in environmental debates. Rather than exacerbating them, strong industrial relations institutions thus appear to deconstruct certain trade-offs between workers' interests and environmental concerns (Tomassetti, 2020, p. 441). A somewhat similar effect of collective bargaining may be applied to coordination or collective action problems on the part of capital (Streeck, 2016; Wright, 2000). The logic of labour imposing institutional constraints, closing off low road competitive strategies, could potentially be extended to 'externalities' relating to the environment. Therefore, as governments are becoming increasingly committed to internationally agreed environmental targets, strong industrial relations institutions can offer both legitimation and actor capacity (Compston, 2002) for delivering on these policy agendas.

Further research unpacking and expanding upon the contextual results is needed. Beyond the material conditions discussed above, one may speculate that strong industrial relations institutions promote pro-environmental orientations also by fostering, upholding or at least correlating in causally indeterminate ways with a higher degree of social cohesion and trust; a more generalized collective orientation and social outlook in turn conducive to a better appreciation of, as well as a higher willingness to engage with – and make sacrifices for – long-term societal objectives. This could be construed partly as a 'solidarity effect' (Mosimann & Pontusson, 2017) that applies both to the contextual-level outcomes of strong industrial relations institutions and to the individual-level implications of membership, particularly among manufacturing and transport workers

As argued above, systematic explanations pertaining to contextual variation regarding the *specific* implications of union membership do not appear as easily observed. This is because the effect varies to a lesser extent than expected; there is a tendency in most countries for members to be more pro-environmentally inclined than non-members. Differences in this regard appear to pertain more to the size of the positive effect. Spain may be an illustrative example of some contextual factors potentially affecting the implications of membership – being the country in this sample in which the positive union effect is found to be the largest. The Spanish case may thus suggest interesting paths for future research. For historical reasons tracing back to a legacy of political dictatorship, the Spanish union movement has tended to assume a broader political, less

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narrowly economistic identity. As Hamann and Martínez Lucio have observed, although unions are increasingly integrated into the state structure, they '[...] remain part of an antagonistic, if under-organized, civil society' (2003, p. 75). This relative autonomy from the state (Lundström et al., 2015), and particularly the broader political identity of Spanish unions, possibly explain why their members are especially likely to support environmental protection even when counterposed to more 'narrow', immediate economic interests related to job protection.

This relates back to broader debates about the nature of unionism, and can be seen to support arguments about the 'mediating' effect of unions' political identity on whether (and how) they engage with environmental issues (Thomas & Doerflinger, 2020). It should be emphasized, however, that the results more generally indicate that the countries in which the 'membership effect' appears larger are diverse in terms of dominant political identity. In this regard, the positive effect in Poland is especially noteworthy, given that its labour movement is influenced strongly by the miners' unions, who are described as particularly oppositional towards environmental protection (Thomas & Doerflinger, 2020). Poland may also illustrate some implications of the results pertaining to the consequences of the occupational composition of union movements. The results suggest that, all else being equal, whereas a larger overall share of workers employed in transport and manufacturing will amount to lower levels of environmental concern, a larger share of this group *among members* will result in a bigger union effect. Although the results of this study indicate a remarkable consistency across countries in terms of the positive membership effect, further comparative research is needed to explore country-specific effects that could have been masked by the macro focus of the present article.

It should be emphasized that the results reported are of a general nature, and potential nuances in terms of contextual variation are not exhausted. The effect of political orientation varies across contexts, which may imply that it does not explain the membership effect equally across countries. Also, the moderating effect of membership on the occupation-concern association - most importantly the specifically positive effect on those employed in production and transport - does seem to have quite general validity. Nevertheless, future research could delve deeper into aspects of contextual variation in this regard, as well as seeking further explanations for the particular effect on this group. The call for further explanations also applies to the membership effect more generally: research is encouraged to address causal questions of the nature raised earlier, for example by making use of panel data, as well as exploring qualitatively potentially transformative experiences related to membership. A further potential explanation for the positive membership effect, which is not pursued empirically due to lack of relevant data, pertains to the potential insider status of union members (Lindbeck & Snower, 1986): the effect of membership may relate partly to unobserved variation in job security. This interpretation depends on the degree to which these variables - that is, membership and job security on the one hand, and job security and willingness to prioritize the environment on the other hand – are in fact correlated.

In conclusion, this article set out to build on the primarily case-based debates on unions and the environment by contributing with the first broader representative study of the environmental attitudes of union members, covering a wide range of European countries. The contribution adds the important and often missing view of union rank and file. It should be stressed at this stage that it is not certain that members' pro-environmental attitudes can be translated into official union policy (see also Chen, 2017, p. 785). In this connection, the results provide interesting ground for further scrutiny of the often complex relation between different levels of analysis in the study of unions (Offe, 1985b, pp. 221–22). While these links may be uncertain, the results show that in most countries, a majority of members favour environmental protection even above growth and jobs, therefore suggesting the further hypothesis that there would be support among

many members for unions to move beyond prevailing positions of hedging – that is, advocacy for incremental change and minimized regulation (Thomas & Doerflinger, 2020) – or 'Green Keynesianism' (Felli, 2014, p. 380), in variants which embrace *only* environmental policies compatible with and serving as vehicle for growth. Although pragmatism may encourage unions to focus on strategies that avoid real trade-offs with jobs and growth, there appears to be support for more ambitious environmental agendas also where such trade-offs do come into play. These suggestions invite studies on more specific variables relating explicitly to members' preferences regarding union policy. It can be argued, however, that the particular outcome variable explored in the present article constitutes a very strong test of members' commitment to environmental protection; surely, if members are willing to prioritize the environment at the cost of growth and jobs, somewhat less extensive but still ambitious environmental agendas are also, even more readily, within reach. Hence, while being sensitive to the fact that there may be a potentially quite decisive difference between survey attitudes and an actual willingness to *act*, these results indicate that union leaders invariably cannot justify environmental inaction with reference to presumed opposition among the rank and file (see Räthzel & Uzzell, 2019, p. 133).

On the contrary, environmental advocacy could even be argued to constitute a fruitful path towards union renewal, reflecting members' core concerns. Relating back to the discussion above about political orientation and the often seemingly overlapping interest of labour and environmentalists in decommodification, such efforts may include formations of coalitions with environmental movements - referred to in the American literature as 'Blue-Green' coalitions (Gould et al., 2004; Kojola, Xiao & McCright, 2014). Indeed, given the urgency and principal societal concern engendered by climate change - likely only to have been exacerbated further in light of the most recent IPCC (2021) report - it could perhaps even be argued that the climate movement can play a part in revitalizing organized labour, in ways echoing those in which the civil rights movement previously reinvigorated American labour (Isaac & Christiansen, 2002). It is prudent here to distinguish between efforts for renewal directed at membership recruitment on the one hand and those designed to mobilize current membership on the other hand. Given that support for environmental protection in fact tends to be higher among members than non-members, the results indicate that the latter would be a more immediately expectable outcome. This is in line with the conclusions drawn also by Farnhill (2018, p. 716): while the effects on membership recruitment are uncertain, an environmental union agenda may serve to attract and engage new activists.

6 | CONCLUSIONS

This article analyses data from 22 European countries and shows that union members tend to be more pro-environmentally inclined than non-members. The effect of membership is demonstrated to be attributable to a large extent to the fact that members tend to be more left-leaning politically. Generally, workers in transport and manufacturing are least willing to prioritize environmental protection; however, membership has the most pronounced positive effect in this group. The results also show that both members and non-members in countries with higher collective bargaining coverage are more pro-environmentally inclined, supporting the argument that strong industrial relations institutions are important when it comes to garnering workers' support for a greener economy. Whether unions in turn act upon such support is another question; however, the results do indicate that environmental issues can provide a fruitful path towards union revitalization, mobilizing membership along one of its core concerns.

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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author, upon reasonable request.

CONFLICTS OF INTEREST

The author has no conflicts of interest to declare.

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NOTES

- ¹ Following Hox et al. (2017, p. 117) when calculating ICC for logistic regression models.
- ² Neither a random slope for occupation improves model fit.
- ³ The effect is significant also in a model omitting Spain. Furthermore, there is no interaction between membership and education (not shown).
- ⁴ Similar to the general membership effect, this does not appear to vary substantially across countries; a random slope for membership does not improve model fit in Model 2. Nevertheless, there may be specific countries in which the moderating effect of membership on the sector-concern association functions differently.

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APPENDIX

TABLE A1 Occupational categorization based on 2-digit ISCO08

| Occupational | |
|--------------|--|
| category | 2 digit ISCO08 code |
| Manager | |
| | 10 ISCO 1-digit: Managers |
| | 11 Chief Executives, Senior Officials and Legislators |
| | 12 Administrative and Commercial Managers |
| | 14 Hospitality, Retail and Other Services Managers |
| | 13 Production and Specialized Services Managers |
| Professional | |
| | 20 ISCO 1-digit: Professionals |
| | 21 Science and Engineering Professionals |
| | 22 Health Professionals |
| | 23 Teaching Professionals |
| | 24 Business and Administration Professionals |
| | 25 Information and Communications Technology Professionals |
| | 26 Legal, Social and Cultural Professionals |
| | 30 Technicians and Associate Professionals |
| | 31 Science and Engineering Associate Professionals |
| | 32 Health Associate Professionals |
| | 33 Business and Administration Associate Professionals |
| | 34 Legal, Social, Cultural and Related Associate Professionals |
| | 35 Information and Communications Technicians |
| Clerical | |
| | 40 ISCO 1-digit: Clerical Support Workers |
| | 41 General and Keyboard Clerks |
| | 42 Customer Services Clerks |
| | 43 Numerical and Material Recording Clerks |
| | 44 Other Clerical Support Workers |
| Service | |
| | 50 ISCO 1-digit: Services and Sales Workers |
| | 51 Personal Services Workers |
| | 52 Sales Workers |
| | 53 Personal Care Workers |
| | 54 Protective Services Workers |
| | 91 Cleaners and Helpers |
| | 94 Food Preparation Assistants |
| | 95 Street and Related Sales and Services Workers |
| | (Continues) |

(Continues)

TABLE A1 (Continued)

| Occupational | |
|---------------|--|
| category | 2 digit ISCO08 code |
| Transport and | |
| manufacturing | |
| | 70 ISCO 1-digit: Craft and Related Trades Workers |
| | 71 Building and Related Trades Workers (excluding Electricians) |
| | 72 Metal, Machinery and Related Trades Workers |
| | 73 Handicraft and Printing Workers |
| | 74 Electrical and Electronics Trades Workers |
| | 75 Food Processing, Woodworking, Garment and Other Craft and Related Trades Workers |
| | 80 ISCO 1-digit: Plant and Machine Operators and Assemblers |
| | 81 Stationary Plant and Machine Operators |
| | 82 Assemblers |
| | 83 Drivers and Mobile Plant Operators |
| | 93 Labourers in Mining, Construction, Manufacturing and Transport |
| | 96 Refuse Workers and Other Elementary Workers |

TABLE A2 Share (%) willing to prioritize environment above growth and jobs

| Occupational category | Non-member | Member | Sig. |
|-----------------------------|------------|--------|------|
| Transport and manufacturing | 53.9 | 64.0 | 0.00 |
| Clerical | 65.5 | 69.8 | 0.15 |
| Managers | 66.8 | 76.7 | 0.00 |
| Professionals | 71.7 | 75.3 | 0.00 |
| Service | 60.3 | 65.2 | 0.00 |

Note: Aggregated proportions across sample of individuals currently employed. *p*-value is from chi-square tests. Calibration weights included (adjusting for age, sex, educational level and region of residence).