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Populism's Many Faces. Understanding Its Role in Climate Scepticism Cross-Nationally

SCRIPTS Working Paper No. 55



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Series-Editing and Production: Dr. Anke Draude, Niclas Seidlitz, and Carol Switzer

Please cite this issue as: Kim, Jessica / Henry, Elizabeth A. / Carter, Jerrid / Nuhoğlu Soysal, Yasemin 2025: Populism's Many Faces. Understanding Its Role in Climate Scepticism Cross-Nationally, SCRIPTS Working Paper No. 55, Berlin: Cluster of Excellence 2055 "Contestations of the Liberal Script (SCRIPTS)".

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Populism's Many Faces

Understanding Its Role in Climate Scepticism Cross-Nationally

Jessica Kim, Elizabeth A. Henry, Jerrid Carter, and Yasemin Nuhoğlu Soysal

ABSTRACT

Drawing upon cross-national data collected by the International Social Survey Programme (ISSP) across 26 nations and over 28'000 individuals, this study explores the association between climate scepticism and populism in its many forms. Distinguishing between populism's various ideological dimensions and mechanisms of influence, we find that right-wing and pure forms of populism are linked to greater scepticism and left-wing populism to lower scepticism. Crucially, the impact of populism occurs at both the party (supply-side) and individual level (demand-side), indicating support for theories anticipating both topdown and bottom-up mechanisms of populist influence. Moreover, when combined with globalisation, the link between individual right-wing populism and climate scepticism is further exacerbated. These insights advance ongoing debates by showing that populism is not inherently exclusionary or right-wing, and its diverse forms warrant further exploration.

1 INTRODUCTION

Effectively addressing climate change requires global collaboration. However, scepticism about its severity as a global threat persists across nations. Although recent studies link climate scepticism to broader populist trends, the empirical basis of such an assertion is often missing. The lack of empirical evidence is partly due to limited, high-quality cross-national data on climate change attitudes and partly to a lack of clarity about what populism in the context of climate change entails. Populist sentiments may take different forms, including nationalist backlash against globalisation, distrust in elites, and

support for people sovereignty (i.e. seeing the public as intrinsically self-representative). Each of these factors may influence how climate scepticism manifests. Moreover, populist influences occur at different levels, representing different pathways through which populism shapes climate change attitudes. Populist sentiments at the individual level (demand side) and populist leadership (supply side), even though they have different determinants, often occur simultaneously.

In this paper, leveraging the first-time availability of the 2020 International Social Survey Programme (ISSP) cross-national module on climate change and employing multi-level modelling, we analyse the relationship between populism and climate scepticism - specifically the rejection of climate change's global impact. Our analysis draws upon responses from 28'363 individuals across 26 nations. At the individual level, we examine anti-elitist and anti-global sentiments, reflecting grassroots demand for populist narratives. Simultaneously, at the national level, we investigate the rhetoric and issue positions of political parties, representing the supply-side propagation of populist ideas. This dual-level approach allows us to capture the interplay between populist leadership and public sentiment, shedding light on how top-down party signalling and grassroots demand collectively shape climate scepticism.

Our results show the significant role of both national-level and individual-level populism in shaping anti-climate sentiments, net of alternate demographic, cultural, political, or economic factors. Specifically, we find that climate scepticism is primarily driven by a specific form of populism: anti-global nationalism. This sentiment, characterised by nationalism and rejection of international cooperation and multilateralism, operates at both the national level – through the presence of nationalist political parties - and at the individual level, where there is resistance to global engagement and multilateralism. At the same time, anti-elite populism, which involves distrust in business and government elites, is associated with greater concern about global climate change.

The evidence suggests that populism is not a monolithic phenomenon in form and effects. Populism has emerged as a critical force shaping a wide range of political and social issues (Mudde 2004), including climate change scepticism. However, scholars must be careful not to automatically assume that populism and anti-climate are analogous. Rather, the relationship between populism and climate scepticism varies based on the type of populism in question. Specifically, inward-facing nationalism, anti-global sentiments, and distrust in academic elites, often associated with right-wing ideologies, are key drivers of climate scepticism. Populism manifesting as distrust in business and government elites, on the other hand, fosters greater climate concern. The latter corresponds with the role of left-wing populism, as increasingly discussed in the literature, particularly climate justice movements, in boosting pro-climate sentiments by framing "the people" as an interconnected, global entity.

Understanding the different dimensions of populism provides essential clarity in interpreting public attitudes towards climate change and climate futures. By integrating populism's ideological diversity, cross-national data, and a dual-level

analytical framework, we provide a robust foundation for future investigations into the intricate relationship between populism and climate change scepticism. Our findings underscore the importance of recognising populism's multiple dimensions and pathways to better understand and address the global challenges posed by the denial of climate change for humanity as a whole.

2 POPULISM AND CLIMATE CHANGE SCEPTICISM

Populism has been used to explain a wide range of social and political issues in recent years, yet its core definition remains straightforward. According to the prevailing ideational perspective (Hawkins/Kaltwasser 2018; Mudde 2004), populism is an ideology centred on the antagonism between two groups: "the people", depicted as a virtuous, self-representative collective capable of governance, and "the elites", portrayed as corrupt, self-serving, and fundamentally immoral (Mansbridge/Macedo 2019). Populism endorses the notion of people sovereignty, asserting that political and decision-making power should reside with the people rather than being concentrated among leaders or elites. Thus, according to Mudde and Kaltwasser (2017), populism is an anti-elite, people-focused ideology rooted in an "us versus them" narrative (De Cleen/Stavrakakis 2020; Peters/Pierre 2020), which can manifest in various individual and collective discourses, ideologies, or worldviews.

As a "thin" ideology (Stanley 2008), populism is itself neither inherently left- nor right-wing. Rather, in its "pure" form, it establishes a dichotomy between the people and the elite, onto which ideologies across the political spectrum can attach (Peters/Pierre 2020). This broad applicability reflects the current political landscape, marked by competing strains of populism shaped by differing

conceptions of "the people" (Karlson 2024; Meyer 2024; Peters/Pierre 2020).

Left-wing populism (LWP) or inclusionary populism often adopts a heterogeneous, economically driven approach, defining "the people" as those whose livelihoods have been harmed by status-quo elites – namely neoliberal governments, big businesses, and foreign corporations advancing global capitalism (Karlson 2024; March 2011; Mouffe 2018). This perspective emphasises shared marginalisation, uniting individuals in opposition to neoliberalism and bridging "divides rooted in Indigeneity, race, class, and gender" to construct a broad, inclusive definition of "the people" (Meyer 2024: 267).

Conversely, right-wing populism (RWP) or exclusionary populism constructs a sense of belonging through a homogenous, narrow, and often culturally defined conception of "the people" based on dominant racial and ethnic identities (Meyer 2024). Rooted in nativist and nationalist sentiments, exclusionary populism opposes perceived threats to national cultural and economy, particularly globalisation (Rodrik 2021). From this perspective, cosmopolitan elites (e.g. academics or scientists), international organisations (e.g. the United Nations or the European Union), and the free movement of migrants and imports across borders are viewed as key threats to the people (Karlson 2024).

Beyond these more typical left- and right-wing configurations, valence populism – a novel and emerging concept in the literature – adopts a non-positional approach, advocating for "the people" without clearly defining who they are. Advancing generalised critiques of "the elite" and emphasising generic populist issues such as corruption, transparency, and moral integrity, valence populism, therefore, embodies a "pure" form of populism which is "neither right-wing nor left-wing", neither exclusionary nor inclusionary (Zulianello

2020: 332). While it is certainly possible for valence populism to be combined with specific ideological positions, its overall policy stance remains generic and flexible. Indeed, as existing research shows, valence populist parties compete by deliberately avoiding distinct ideological positioning, instead taking "blurry positions" in both economic and socio-cultural dimensions of populism (Zulianello/Larsen 2023: 190). This form of populism, although perhaps less commonplace than its ideological counterparts, is not insignificant in real-world settings, accounting for approximately 15% of European populist parties (Zulianello 2020).

Taken together, although scholars emphasise populism's adaptability across these various configurations, highlighting its multi-dimensional appeal (Arato/Cohen 2022; Bonikowski 2016; Bosworth 2020; Meyer 2024; Peters/Pierre 2020), populist responses to climate change are predominantly associated with the right.

2.1 RIGHT-WING POPULISM AND CLIMATE SCEPTICISM

As Lockwood (2018) and others argue, RWP is particularly conducive to fostering climate change scepticism. The climate change agenda - a global effort driven by liberal, cosmopolitan, and scientifically-minded elites - clashes with the socially conservative and nationalist values of RWP, fueling hostility. The abstract, technical, and complex nature of climate issues allows elites leading climate efforts, such as scientists, researchers, and academics, to be portrayed as disconnected from ordinary people and corrupted by special interests (Lockwood 2018). Concerted right-wing efforts to discredit the climate agenda exacerbate this trend, depicting scientific elites as part of a fabricated climate hoax, manipulating evidence for personal gain or exerting undue influence on policy (Dunlap 2013). Moreover, the climate agenda's dependency on international cooperation directly challenges RWP's allegiance to national identity and its anti-immigration, anti-international stance (Lockwood 2018; Norris/Inglehart 2019; Rodrik 2017; Rodrik 2021).

Some scholars argue that globalisation, particularly economic globalisation, is a key factor linking RWP to anti-climate sentiments. They suggest that globalisation fuels resentment among those who blame their declining economic security on the harmful effects of global markets (Bornschier/Kriesi 2012; Rodrik 2017). Disillusioned with the global apparatus - of which climate policy forms an integral part – these individuals embrace RWP ideologies that reflect their frustrations, further reinforcing their anti-global, anti-climate sentiments (Lockwood 2018). Similarly, studies of cultural globalisation show that right-wing individuals maintain strong anti-climate positions in reaction to global penetration (Kim et al. 2024). Thus, in many ways, the climate change agenda epitomises "the cosmopolitan issue par excellence" onto which right-wing populists can pin their broader frustrations with the products, institutions, and purveyors of globalisation (Buzogány/Mohamad-Klotzbach 2021; Forchtner 2019; Lockwood 2018: 723; Norris/Inglehart 2019).

Yet despite the strong theoretical link between RWP and climate scepticism, surprisingly few studies explore this connection empirically. While some have begun to address it, most focus either on pure or valence forms of populism, detached from ideological context - which is itself underexplored (Huber et al. 2020) or on right-wing political ideology rather than right-wing populism specifically (McCright et al. 2016; Poortinga et al. 2019; Tranter/Booth 2015; Zhou 2014), which are often conflated (Bonikowski/Gidron 2016; Huber et al. 2022; Rodrik 2021). Although existing studies provide valuable insights, they largely draw from regional and country-specific contexts. Comparative analyses of European Social Survey data, for example, show that nationalist attitudes are associated with greater climate scepticism, especially in Western Europe (Kulin et al. 2021; Kulin/Johansson Sevä 2024). Similarly, case studies in Sweden, Norway, and Austria reveal a strong correlation between right-wing populist attitudes – such as anti-immigrant nativism, anti-EU nationalism, anti-science views, and exclusionary beliefs – and climate scepticism (Arnesen 2023; Huber et al. 2022, Jylhä/Hellmer 2020; Jylhä et al. 2020; Krange et al. 2021).

Of the handful of existing cross-national studies, most examine RWP in a fragmented manner. For instance, one links pro-global sentiments to lower scepticism about the dangers of greenhouse gases (Tjernström/Tietenberg 2008), while another associates distrust in science with higher levels of scepticism (Zhou 2014). While these contributions form a useful starting point, they rarely analyse RWP as a cohesive set of anti-global and anti-elite beliefs shaped by globalisation, as recent literature suggests (Lockwood 2018). Additionally, although emerging scholarship examines the link between the various attributes of globalisation and RWP (Bergh/Kärnä 2021; Broz et al. 2021; Swank/Betz 2003; see Rodrik (2021) for a comprehensive summary), climate scepticism is largely absent from these analyses.

Thus, despite the important foundation laid by existing research, overall, the relative dearth of studies examining how populism's multiple axes simultaneously play out relative to climate beliefs, especially across diverse geographic contexts and amidst varying degrees of globalisation, severely limits our understanding of this phenomenon. This gap extends to broader explorations of populism's impact on climate scepticism, with research on left-wing populism also remaining scarce.

2.2 LEFT-WING POPULISM AND CLIMATE SCEPTICISM

Scholars increasingly highlight the pivotal role LWP can play in combating climate scepticism

and advancing the climate agenda (Andreucci 2019; Beeson 2019; Davies 2020; Mouffe 2020). Proponents argue that climate justice movements should embrace the grassroots narratives of LWP, which mobilise "the people" against "climate-destructive elites" (Meyer 2024: 273). Under this model, LWPs attribute the ongoing climate crisis to the "deleterious effects of neoliberalism", which have "profoundly exacerbated place-based harms and endangered land, water, air, homes, communities and human and nonhuman life" (Chandrasekaran 2021: 604). Positioning themselves against two primary "oligarchic" elites, big business (the polluters) and governments (the enablers), leftwing climate populists define "the people" as an inclusive, multiracial, global coalition of marginalised communities most affected by climate change (Meyer 2024).

Albeit limited, nascent literature on this topic has begun to emerge. For instance, researchers in France examine how the populist radical left party, La France insoumise, employed left-wing climate populist rhetoric to promote a robust "green populism" agenda, condemning both the economic elite for their "irresponsible attitudes" and the political elite for their "climate inaction" and "subordination to the interests of multinationals" (Chazel/Dain 2023). In the US, immigrant rural farmworkers successfully drew upon "environmental populist" frames to mobilise in support of climate justice (Chandrasekaran 2021). Additionally, in a comparative case study of five European countries, Staerklé et al. (2022) found a positive relationship between people's sovereignty and a sense of responsibility for climate change. Together, these studies illustrate LWP's pro-climate action potential. Still, this corner of the literature remains underdeveloped. Reflecting the disproportionate focus on RWP, few studies and, by extension, few cross-national datasets explore LWP or its link to climate scepticism.

Taken together, these oversights within the broader populism-climate literature underscore the need for a more comprehensive approach to studying the ideological underpinnings of climate scepticism across the political spectrum. Beyond ideology, however, another consideration remains. In addition to accounting for populism's multiple and distinct ideological dimensions, it is equally crucial to consider populism's various pathways, which, until now, have only been addressed in an ad-hoc and implicit fashion.

3 PATHWAYS OF POPULISM: SUPPLY VS DEMAND SIDE EXPLANATIONS

Scholars engaged in the study of populism emphasise two main pathways through which populism operates: supply versus demand.

3.1 INDIVIDUAL-LEVEL: DEMAND SIDE

Emphasising "people's fears and enthusiasms", demand-side explanations focus on attitudinal support for conventional populist platforms (Guiso et al. 2017: 8) and their influence on climate scepticism. Analyses of individual survey data (understandably) prioritise this perspective. For example, recent survey studies find that individuals expressing nationalist, nativist, anti-science inclinations, along with low institutional trust, exclusionary beliefs, and support for people sovereignty are more likely to be climate sceptics (Arnesen 2023; Huber et al. 2022, Jylhä/Hellmer 2020; Jylhä et al. 2020; Krange et al. 2021; Kulin et al. 2021; Kulin/Johansson Sevä 2024). Given the disproportionate focus on RWP, currently recognised predictors tend to skew right; however, left-wing demand is also possible.

3.2 PARTY-LEVEL: SUPPLY SIDE

In contrast to demand-side explanations, supply-side perspectives focus on "supply rhetoric",

focusing on how political parties claiming to represent the people inject populist narratives into political discourse, influencing climate scepticism (Buzogány/Mohamad-Klotzbach 2021; Guiso et al. 2017: 1-3). A substantial body of research underscores the pivotal role of political parties in shaping public opinion through "party cues". Since many individuals lack the expertise or interest to independently form opinions, they often rely on signals from political elites, such as party leaders, to guide their stance on issues. Consequently, the public tends to adjust its views to align with elite positions (Druckman et al. 2013; Lupia/McCubbins 1998; Zaller 1992). According to Nicholson (2012), these party cues hold "the greatest potential for shaping public opinion on difficult or unfamiliar issues", including climate change.

Existing research validates this notion. Studies repeatedly illustrate that party cues, originating from a variety of ideological positions, shape public attitudes towards climate policy, levels of concern, perceptions of risk, and degrees of scepticism (Brulle et al. 2012; Carmichael/Brulle 2017; Guisinger/Saunders 2017; Linde 2018; Linde 2020; Tesler 2018). RWP parties may be particularly influential in this process, given their strong opposition to climate policies (Forchtner/Kølvraa 2015; Gemenis et al. 2012; Huber et al. 2021). Although these prior studies only reflect European and American contexts, together they suggest that top-down, supply-side populism by way of party cues does shape climate scepticism - and is likely to do so across different national contexts.

Thus, whereas demand-side explanations emphasise individual-level factors, exploring how various attitudes, policy preferences, and identities foster support for populist intervention, supply-side explanations prioritise party-level dynamics, emphasising how parties strategically amplify and disseminate populist rhetoric to the masses (Rodrik 2021). Demand-side approaches offer bottom-up explanations of populist

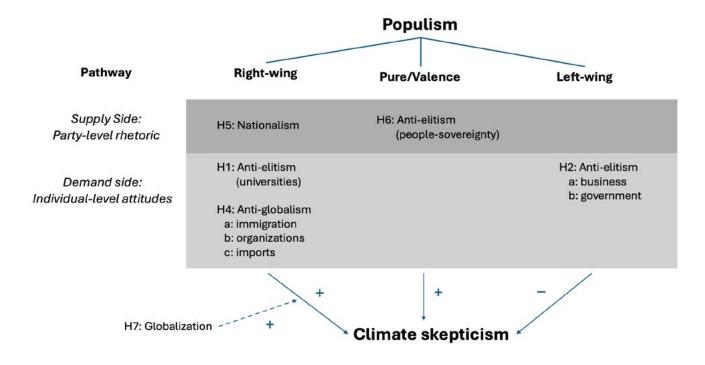
influence on climate beliefs, whereas supply-side approaches emphasise top-down dynamics. Despite these two distinct pathways, few empirical studies distinguish between them (with the exception of Medeiros (2021), often favouring one explanation over the other. Furthermore, existing studies do not theorise about the implied directionality of such influences – whether top-down, bottom-up, or both. As a result, we lack a systematic understanding of which mechanism(s) prevail and under what conditions.

4 OUR CONTRIBUTION

To date, the lack of research addressing populism's multifaceted nature – in relation to both its ideological underpinnings and its pathways of influence – has limited our understanding of its relationship with climate scepticism, particularly cross-nationally. Many of these limitations stem from the literature's inadequate conceptualisation and, by extension, operationalisation of populism. Just as current studies tend to focus on RWP or conflate RWP with populism as a whole (Bonikowski 2016; Huber et al. 2022; Rodrik 2021), so too do existing data sources.

Figure 1 summarises our proposed hypotheses, broken down by ideological leaning and pathway or level of influence based on available data, and reflects this limitation. As the figure illustrates, right-wing measures of populism are rather comprehensive, appearing at both the party and individual levels and along several conceptual axes. Such is not the case for valence and left-wing measures, which are absent and, arguably, underdeveloped at both the party level for LWP and the individual level for valence populism. Although this study undertakes the most comprehensive cross-national exploration of populism's influence on climate scepticism currently possible, this lopsided availability of data limits our ability to draw systematic conclusions about

Figure 1: Summary of proposed hypotheses



populism's many forms and their impact on climate scepticism.

Still, our proposed approach offers a useful start, illuminating these gaps and advancing the current literature in three key ways. First, unlike previous studies, we engage populism from multiple ideological angles, thus bringing attention to the underexplored effects of LWP and the varying impacts of populism based on its ideological roots. Second, by integrating both supply- and demand-side explanations, we develop a deeper understanding of the mechanism(s) driving populism's influence at both the individual and party levels. Finally, by using newly available cross-national datasets, we move beyond small-scale, Western-focused studies to understand populism's global role in shaping climate scepticism.

In developing our analysis, we propose a series of hypotheses. We begin on the demand side, at the individual level. While all forms of populism share an anti-elite stance, we suspect that left- vs right-wing notions of who "the elite" comprises

will produce divergent effects. On the right, given RWP's disdain for liberal, academic elites who advance the climate agenda, we hypothesise that:

H1: Greater right-wing anti-elitism, specifically, greater distrust in universities, is associated with higher climate scepticism.

On the left, we anticipate that LWP anti-elitism will counteract climate scepticism, as current literature implies:

H2: Greater left-wing anti-elitism is associated with lower climate scepticism.

Specifically:

H2a: Greater distrust in business is associated with lower climate scepticism.

H2b: Greater distrust in government is associated with lower climate scepticism.

Beyond populism's anti-elitist dimension, we also consider its anti-globalisation flare, particularly of the right-wing variety. Consistent with RWP's anti-global, nationalist, and nativist stance, we suspect:

H4: Greater anti-global sentiment is associated with higher climate scepticism.

Breaking this anti-global sentiment down by each of its composite attributes, we specifically ly anticipate:

H4a: Hostility towards foreign imports is associated with higher climate scepticism.

H4b: Anti-immigration beliefs are associated with higher climate scepticism.

H4c: Disdain for international organisations is associated with higher climate scepticism.

Next, we turn to the supply-side, party-level hypotheses. Like its individual-level counterparts, we expect nationalist, right-wing parties to foster greater scepticism. We hypothesise:

H5: Greater exposure to nationalist party rhetoric is associated with higher climate scepticism.

Additionally, although our party-level anti-elite measures are generic and do not specify whom "the elite" represent, prior research suggests that even valence or pure forms of populism – through the endorsement of people sovereignty – can drive scepticism (Huber 2020; Huber et al. 2020). Building on this and the literature on party cues, we hypothesise:

H6: Greater exposure to anti-elite, people-sovereign party rhetoric is associated with greater climate scepticism.

Finally, looking across both individual- and party-level pathways, we acknowledge the role of globalisation in conditioning the link between RWP and climate scepticism:

H7: Globalisation exacerbates the positive link between RWP and climate scepticism.

5 DATA AND METHODS

5.1 DATA

To best evaluate populism's influence across multiple levels and ideologies, we combine nationally representative individual-level survey data (demand-side) from the most recent ISSP Environment module (2020) with country-level measures of populist rhetoric (supply-side) from Norris (2019)'s Global Party Survey (GPS) data.

Environmentally oriented and international in scope, the ISSP Environment module provides unmatched global coverage of climate scepticism and its individual-level demand-side populist covariates. On the supply side, the GPS similarly provides by far the most comprehensive cross-national measures of populist party positions currently available - drawing on insights from 1'861 party and election experts to estimate the endorsement of various populist values among 1'043 populist parties across 163 countries in 2019. Although other high-quality country-level datasets on populism do exist,1 the GPS stands out for its nuanced measurement of party positions, capturing populist rhetoric and issue stances rather than merely categorising parties as right or left or tallying their votes. This precision better equips us to test our hypotheses. Moreover, the cross-national scope of both datasets, particularly the GPS's inclusion of cases outside of Europe,

¹ For example, "The PopuList", or "Votes for Populists"; also the Chapel Hill Experts Survey, which focuses on Europe.

allows us to move beyond narrow, Western-centric case studies to examine the global link between populism and climate scepticism. Together, these data enable us to investigate the relationship between various dimensions and levels of populist ideology and climate scepticism among 28'363 individuals across 26 nations (see Appendix 1 for a list of sample nations).

5.2 DEPENDENT VARIABLE

Drawing upon one question from the ISSP, our dependent variable, **Climate Scepticism**, captures respondents' degree of climate scepticism regarding global climate concern. Respondents are asked to evaluate the following: "On a scale from 0 to 10, how bad or good do you think the impacts of climate change will be for the world as a whole? [0 means extremely bad, 10 means extremely good]". A score of 0 thus reflects the highest level of global climate concern, which indicates that climate change will have severe and detrimental consequences for the world population. Conversely, a score of 10 signals a lack of concern and the belief that climate change will have positive effects.

This question and its use as a proxy for impact scepticism is well supported in the literature. Rahmstorf (2004) defines impact sceptics as individuals who, while acknowledging that climate change is driven by human activity, do not believe it will have detrimental global effects. Rather, impact sceptics "underscore the possible positive consequences of climatic warming" (p. 78). Indeed, this sentiment corresponds with anti-climate messaging promoted by the broader climate change countermovement, which works to advance climate denialism. For instance, the now-defunct Greening Earth Society - a front group for the coal industry - advanced the view that carbon dioxide is good for the environment (Brulle/Dunlap 2021). Previous studies similarly operationalise impact scepticism as a lack of climate concern – from Poortinga et al. (2011) to de Graaf et al. (2023), employing survey items such as "it is uncertain what the effects of climate change will be" or "I am concerned about the consequences of climate change" (reverse scored). Like others, our selected survey question, therefore, captures similar notions of scepticism about the negative impact of climate change, but with a particular focus on the global level.

5.3 INDEPENDENT VARIABLES: POPULISM

Consistent with our study's focus, we employ several measures addressing different axes and levels of populism across the political spectrum, as permitted by available data. Using both individual and country-level measures, we simultaneously consider both demand- and supply-side explanations.

5.3.1 COUNTRY LEVEL: POPULIST POLITICAL PARTIES

The first measure, **Nationalist Parties**, uses one question from the GPS to assess the prominence of right-wing anti-global nationalism (versus multilateralism) among political parties within each country. According to the GPS, parties favouring multilateralism "seek to respect international treaties, engage with United Nations agencies, and collaborate with regional organisations like the EU, OAS, AU, ASEAN, and OSCE", while nationalist parties reject these principles. Each party is assigned a score ranging from 0 (strongly favours nationalism) to 10 (strongly favours multilateralism). We reverse-code this variable such that higher scores indicate greater nationalism and, therefore, populism. Party scores within each nation are then averaged, producing a country-level measure of the average nationalist inclination of political parties for each nation in our sample.

The second measure is developed from two GPS items measuring political parties' use of

people-sovereign rhetoric. The first, scored from 1 to 10, reflects the extent to which parties use rhetoric that politicians should "follow the will of the people" (0) rather than "lead public opinion" themselves (10). The second, similar in nature, measures the extent to which parties advance the belief that ordinary people should decide important issues (0) as opposed to leaders (10). Both items are again reverse coded so that higher values correspond to greater populist rhetoric, then averaged across parties for each nation. The final measure, **People Sovereignty**, represents the average of these country-level item items, providing a single, country-level indicator of people-sovereign populist party rhetoric.

5.3.2 INDIVIDUAL LEVEL: ANTI-GLOBALISM AND ANTI-ELITISM

At the individual level, we leverage numerous IS-SP questions to operationalise populism. On the right, we construct three issue-specific, anti-global measures advancing exclusionary notions of "the people", capturing agreement with the following statements: 1) the country should "limit import of foreign products to protect [the] national economy" (Imports) and 2) the country should "limit immigration to protect [the] national way of life". (Immigration), and that 3) "international organisations are taking away too much power from the government" (International Organisations [IOs]). Response to these questions originally range from 1 (strongly agree) to 5 (strongly disagree), but they are reverse-coded so that higher index scores indicate stronger anti-global populist sentiment and lower index scores indicate weaker anti-global populism. These measures are then combined into an additive index, Anti-Glo**balism** (Cronbach's alpha = 0.65), providing a composite measure of respondents' overall opposition to global flows.

We use another battery of questions to distinguish between left- and right-wing manifestations

of anti-elitism. Respondents are asked: "On a scale of 0 (no trust at all) to 10 (complete trust), how much do you personally trust each of the following institutions? 1) university research centres; 2) the national parliament; and 3) business and industry". All items are again reverse coded, such that higher values reflect greater distrust in each elite institution, indicating strong anti-elite populism. Distrust in Universities captures conventional right-wing hostility towards academics, while distrust in Government and Business each captures left-wing opposition towards a global capitalist oligarchy. In addition to analysing each measure individually, we construct an overall measure of Left-Wing Anti-Elitism, combining the latter two measures into an additive index (alpha = 0.51).

5.3.3 COUNTRY-LEVEL CONTROLS

Our country-level controls account for nation-specific attributes that may influence climate scepticism. Given the link between globalisation and RWP, we use the KOF Globalisation Index, which provides an overall measure of the globalisation a country has experienced (Gygli et al. 2019). Consistent with previous research (Kim et al. 2024; Zhou 2014), we also control for Environmental Condition using the Yale Center for Environmental Law and Policy's Environmental Protection Index (EPI). Measuring each country's relative climate performance and environmental health, the EPI accounts for the tendency for individuals facing more severe environmental issues to exhibit greater environmental concern (Givens/ Jorgenson 2011; McGranahan et al. 2007). Additionally, GDP per capita (logged for skewness) controls for the greater presence of post-materialist, pro-environmental attitudes typically observed within advanced industrialised nations (Inglehart 1990). Finally, we use V-Dem's polyarchy measure (Coppedge 2021) to control for the inverse association between **Democracy** and climate scepticism (Kim et al. 2024; Marquart-Pyatt 2012).

5.3.4 INDIVIDUAL-LEVEL CONTROLS

At the individual level, we include several demographic controls: **Age** (in years), **Female** (Male [ref] = 0, Female = 1), Education (ranked least to most), subjective socioeconomic Class (ranked low to high), Religiosity (measured as the frequency of attendance at religious services), and Employment Status (Employed = 1 [ref], Unemployed = 2, Other = 3). These controls reflect established patterns of greater climate scepticism among older, conservative, wealthy, and religious populations. Prior research also links being male and unemployed to anti-climate dispositions (Benegal 2018; Clements 2012; Kim et al. 2024; Poortinga et al. 2011; Tranter/Booth 2015; Wang/Kim 2018; Zhou 2014). Although we considered age-squared to account for non-linearity, no significant results emerged.

5.3.5 INTERACTIONS

To evaluate whether globalisation amplifies RWP's scepticising effects, as hypothesised, we interact each measure of RWP with globalisation, resulting in a total of six interaction terms.

5.4 METHODS

We analyse these data using multilevel mixed-effects linear regression. As is the case for all cross-national surveys, ISSP data are nested (e.g. respondents from the same country are likely to be more similar than those from a different country), making standard regression techniques inadequate. Multilevel models address this unique data structure without violating regression assumptions (Snijders/Bosker 2012). Our model adopts a two-level approach, whereby individuals (L1) are nested within countries (L2), thereby allowing us to evaluate the scepticising effects of populism at the national and individual levels simultaneously. Although ideally, we would utilise past ISSP environment modules to also explore

variation over time, unfortunately, our key survey items of interest were not incorporated into the ISSP environment module until its latest iteration and GPS data are only available from 2019 onward, making longitudinal analysis impossible. Nevertheless, given the relatively underdeveloped literature on this topic, our study offers key insights that can inform future research.

A baseline model intraclass coefficient reveals that approximately 4.85% of the variance in the dependent variable is explained by country-level clustering. This finding, in addition to our interest in exploring multiple levels of populism simultaneously, validates our use of a multilevel model. To ensure proper time ordering, country-level variables are lagged by at least one year. Nevertheless, owing to the cross-sectional nature of our research design, results should be interpreted with caution and used only to draw associational rather than causal inferences. Random intercepts are included at each level in all models. Appendices 2 and 3 present the descriptive statistics and correlation matrix for all variables.²

6 RESULTS

Table 1 (in the Appendix) presents a series of regression models evaluating our main effects, while Table 2 shows interaction effects. All models include robust standard errors to account for potential heteroskedasticity. Although VIF scores for GDP per capita (7.71) and Environmental Condition (8.41) indicate some concern for multicollinearity, these variables are retained as controls since they do not affect our primary predictors of interest.³ For each variable, the first number is the regression coefficient, and the second is the standard error.

² All replication materials are available at: https://osf.io/6hzf-d/?view_only=5037aac7fe1d4d9e92366c5247b8505b.

³ Models evaluating these variables separately do not affect our main findings, and substantive effects remain consistent.

6.1 MAIN EFFECTS

In Table 1, Model 1 presents the main findings, including composite measures for right-wing anti-globalism and left-wing anti-elitism, providing an overview of how populism's levels and ideologies shape climate scepticism. Models 2-4 break down right-wing anti-globalism, while Models 5-6 do the same for left-wing anti-elitism, providing a detailed look at the specific dimensions and their effects.

At the national level, Model 1 shows that both Nationalism and People Sovereignty are positively and significantly associated with climate scepticism, supporting H5 and H6. In countries where nationalist populist parties and people-sovereign, anti-elite rhetoric are prevalent, individuals are more likely to express climate scepticism. These findings confirm the effectiveness of topdown party signalling, regardless of ideology, providing strong evidence for supply-side explanations.

At the individual level, right-wing anti-globalism is also associated with higher climate scepticism, which is in line with H4. Models 2-4 indicate that each anti-global measure (Imports, Immigration, and IOs) is positive and significant (p<.001), further supporting H4a-c and demonstrating the robustness of RWP across anti-globalism's various dimensions. As can be observed with the anti-elitism panel in Figure 3, on the right, distrust in universities is positively and significantly associated with scepticism (p<.001), confirming H1. Conversely, left-wing anti-elitism is associated with lower scepticism, both in general (p<.001) and specifically regarding distrust in government and business (p<.001), as indicated by Models 5 and 6, supporting H2 and H2a-b. These results, taken together, suggest that demand-side explanations are equally as powerful in linking populism to climate scepticism – both across the political spectrum and along various dimensions.

Considering our controls, although none of the country-level variables reached significance, the individual-level coefficients for religiosity and age are positive and significant, while those for female, education, and class are negative and significant, consistent with prior research. Employment status also failed to reach significance.

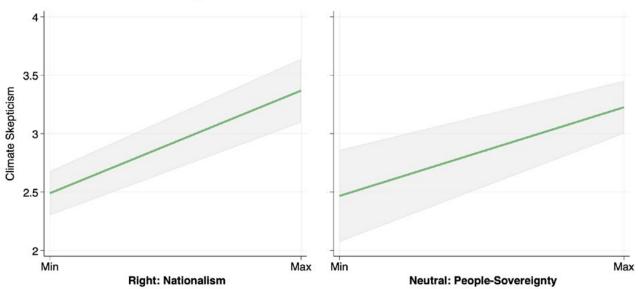
To better illustrate the tangible effects of these findings, we plot the predicted margins (all else held at their means) for all country-level (Figure 2) and individual-level (Figure 3) predictors across their full range of values. In Figure 2, the upwardly sloping lines indicate that as parties' use of nationalist (right-wing) and people-sovereign (valence) populist rhetoric increases, so too does climate scepticism. Whereas the average scepticism score is approximately 2.5 when populism is at its lowest across both measures, scepticism increases to 3.37 and 3.22 when nationalism and people sovereignty are at their maximum, respectively – approximately a 30% increase.

Figure 3 illustrates that, at the individual level, margins for anti-global populism indicate similar scepticising effects, with average scepticism scores increasing from approximately 2.25 to over 3.5 across the range of overall anti-global values. Results are relatively consistent across the three sub-measures; however, the slightly shallower slope for imports suggests that protectionist populist attitudes are less salient to climate scepticism compared to anti-immigrant and anti-organisational beliefs.

Finally, the second panel of Figure 3 displays the margins for our individual anti-elite measures. Whereas right-wing anti-elite populism is linked to greater scepticism, as implied by the upwardly slanting slope for universities, left-wing anti-elite populism is associated with lower scepticism, evident in the three downward slopes for overall, government, and business measures. Specifically, for right-wing anti-elitism, when distrust

Figure 2: Marginal effects for country-level populism

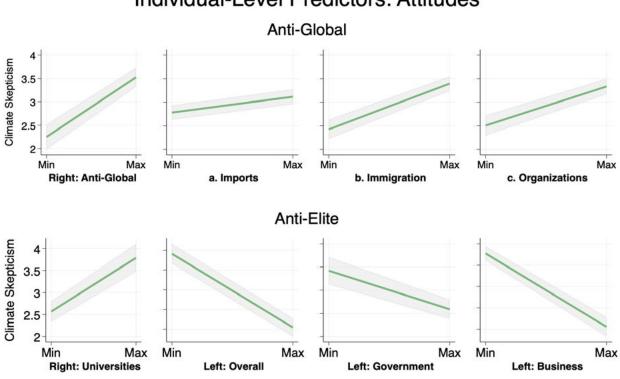




Note: All margins plotted at 95% confidence intervals.

Figure 3: Marginal effects for individual-level populism

Individual-Level Predictors: Attitudes



Note: All margins plotted at 95% confidence intervals.

in universities is lowest, the average predicted scepticism score is 2.56. This score increases to 3.79 when distrust is at its peak – a 40% increase. On the left, we see nearly the exact opposite effect: greater overall anti-elitism and distrust in business correspond to a decrease in scepticism from 3.91 and 3.71 to 2.05 and 2.04, respectively. Distrust in government follows a similar trend but is slightly less pronounced, with scepticism decreasing from 3.42 to 2.59.

6.2 INTERACTION EFFECTS

In Table 2 (in the Appendix), each model addresses a different RWP X globalisation interaction. Across all RWP measures – except nationalism – the interaction term is positive and significant, indicating that globalisation does exacerbate the already positive link between RWP and scepticism. Figure 4 plots the predicted margins for all interactions. In each plot, the solid line represents predicted

values for the lowest level of globalisation occurring in the sample, and the dashed line represents the highest.

Looking across the individual-level interactions (i.e. all plots except nationalism), a consistent pattern emerges. In places where globalisation is lowest, increases in populism are not significantly linked to scepticism, as indicated by the relatively flat, solid line. Yet when globalisation is at its highest, rising populism corresponds to increased scepticism, as the upward-sloping dashed lines indicate. For instance, in the university interaction plot, the average predicted scepticism in highly globalised places more than doubles, climbing from 2.21 to 4.43. This finding highlights the role of globalisation in intensifying the relationship between RWP and climate scepticism.

However, this effect appears limited to demand-side explanations. On the supply side,

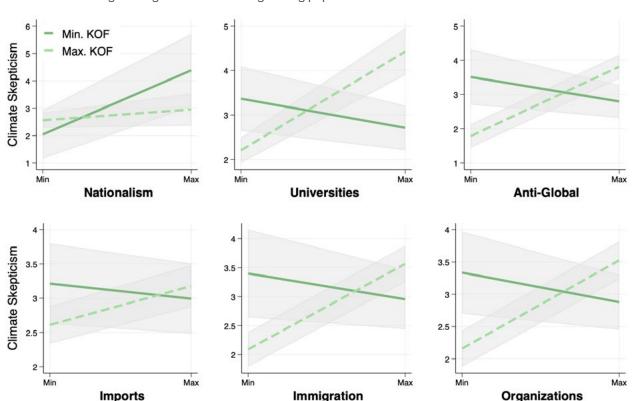


Figure 4: Predicted margins for globalisation and right-wing populism interactions

Note: All margins plotted at 95% confidence intervals.

globalisation does not augment the top-down influence of nationalist political parties. In fact, the nationalism plot reveals the opposite: scepticism remains constant across the range of values for nationalism when globalisation is at its highest. However, when globalisation is low, the presence of nationalist political parties is linked to greater scepticism. Thus, although overall, we find support for H7, the unexpected outcome relative to nationalist populist parties suggests that globalisation's influence on RWP is not uniform.

6.3 ROBUSTNESS CHECKS

We conduct two robustness checks to validate our findings.4 First, we replace the EPI with an alternate measure of climate risk: the Notre Dame Global Adaptation Initiative's Country Index, which measures nations' vulnerability to climate disruptions. Like the EPI, this measure does not achieve significance, reinforcing the consistency of our main results. At the individual level, we introduce political ideology (Left = 1, Centre = 2, Right = 3), which was excluded from our main models due to significant missing data that could undermine the rigour of our statistical models. Still, given the role that ideology plays in shaping scepticism, it is critical to consider it. Although results should be interpreted with caution, given that our sample size is reduced from over 28'000 respondents to just under 18'000 and that nonresponse bias is likely present, we find that, substantively, all findings hold. Importantly, the coefficient for right-wing ideology is positive and highly significant at p<.001. Compared to their leftwing counterparts, right-wing individuals are significantly more likely to exhibit scepticism, consistent with existing literature. Finally, given its high correlation with EPI and, more importantly, KOF Globalisation (r=0.9050 and 0.8431), we exclude GDP from all models and find that all results hold, substantively confirming that high collinearity is not driving our results.

7 DISCUSSION

This study demonstrates that while valence and right-wing populism are associated with higher climate scepticism, left-wing populism is linked to lower climate scepticism. Both party-level and individual-level populism predict scepticism; however, globalisation – a key driver and antagonist of RWP – amplifies only individual-level effects. These findings highlight the complex interplay between populism's dimensions, levels, and ideologies, shedding light on their impact on climate scepticism and offering important implications for future research.

7.1 IDEOLOGICAL CONSIDERATIONS: DISTINGUISHING "THE PEOPLE" AND "THE ELITE"

First, our results highlight the importance of distinguishing between different ideological forms of populism. While populism fundamentally reflects an antagonistic relationship between "the people" and "the elite", its specific form depends on who each of these groups comprise. For instance, whereas RWP views elites primarily as cultural figures, LWP targets economic and political elites. This distinction is crucial: when anti-elitism focuses on universities – seen as climate knowledge hubs led by "out-of-touch", culturally liberal intellectuals - climate scepticism rises. In contrast, when it is aimed at corporations and governments responsible for the climate crisis - seen as oligarchs who consolidate global wealth and power - climate scepticism decreases.

Clarifying what constitutes "the people" is equally important. Net of ideology, valence forms of populism identify "the people" as a competent, self-governing collective, as reflected in

⁴ Results available upon request.

people-sovereignty values. Notably, exposure to valence people-sovereign rhetoric is linked to higher scepticism, suggesting that political ideology isn't the sole driver of climate scepticism – even pure populism can foster it. Yet ideological interpretations of "the people" remain highly relevant. Exclusionary, right-wing definitions rooted in shared ethnicity, race, religion, or other dominant social identities tied to "authentic" citizenship, are also associated with increased scepticism.

Together, these findings align with an emerging perspective in the literature: populism is not inherently exclusionary or right-wing, and its alternative forms merit further exploration (Bonikowski/Gidron 2016; Meyer 2024). As our study shows, the ideological origins of populism critically shape its effects. Overlooking or conflating these distinctions, as is often the case in current scholarship, risks obscuring populism's diverse and sometimes opposing influence. This is especially relevant for LWP, which holds significant but underexplored potential to reduce climate scepticism and advance climate justice (Bosworth 2020; Meyer 2024). While our study highlights this potential, future research can expand upon our exploratory framework by fully capturing populism's ideological diversity, particularly on the left.

To this end, new data collection efforts should prioritize the development of measures addressing heterogeneous left-wing interpretations of "the people" among individual attitudes (e.g. support for grassroots coalitions, anti-capitalist, anti-neoliberal social movements, or framing "the oppressed" as multicultural and globally interconnected) and "the elite" within parties (e.g. rhetoric or positions vilifying the "one per cent", multinational corporations, and neoliberal governments). Measures of valence or pure populism should also be included in standard questionnaires (e.g. endorsement of people sovereignty, anti-establishment, and anti-corruption positions) to enhance

our understanding of the most fundamental aspects of populism, net of ideological embellishments. Incorporating such measures into climate- and issue-specific surveys can enhance comparisons both across and beyond ideologies. This approach is especially valuable for large-N, cross-national studies, which can further build upon our work to investigate these differences.

7.2 SUPPLY VS DEMAND-SIDE EXPLANATIONS

Our second contribution is our adjudication of the specific mechanisms through which populism influences climate scepticism - operating through top-down and bottom-up pathways, supporting both supply- and demand-side explanations. In other words, populism fuels scepticism, whether supplied by influential political parties or demanded by individuals disillusioned with eliteled societal decline. In short, both populist party cues and individual anxieties contribute to climate scepticism. By demonstrating these dual effects, we provide a clearer understanding of how populism influences public opinion while illustrating the need to consider both top-down and bottom-up mechanisms. Future research can expand on these findings by exploring where and when supply- or demand-side dynamics prevail, how they intersect with ideological variations of populism, and the extent to which they reinforce one another.

7.3 POPULISM AND GLOBALISATION

Our final contribution lies in our consideration of how RWP interacts with globalisation to advance climate scepticism – a popularly theorised but underexplored relationship. Our findings, which mostly confirm globalisation's tendency to intensify the already positive link between RWP and climate scepticism, validate this line of inquiry. Still, at the national level, the influence of nationalist political parties on climate scepticism actually

thrives amidst lower globalisation. This finding is unexpected, given that nationalism, by definition, rejects global engagement – something globalisation enhances.

Although we cannot be sure why this is the case, it may be that in highly globalised countries, nationalist rhetoric struggles to override pro-climate global narratives, limiting its impact on scepticism. As previous scholarship by World Society scholars illustrates, pervasive globalisation may lead individuals to adopt more liberal (Kim 2020; Pandian 2018) and specifically more pro-environment and pro-climate attitudes (Givens/Jorgenson 2013; Kim et al. 2024), thereby reducing the effectiveness of nationalist critiques. In contrast, in low-globalisation contexts, nationalist parties may encounter a more receptive audience. If globalisation remains only an emerging threat, nationalist parties can amplify these fears, framing climate policies as symbols of encroaching globalism and thus leading to increased scepticism. These findings suggest that globalisation primarily influences bottom-up rather than topdown populist dynamics. Further research exploring when and why party signalling is more or less effective in globalised settings can help confirm and elaborate upon this claim.

7.4 FINAL CONSIDERATIONS: HARNESSING POPULISM TO ADDRESS CLIMATE CHANGE

In addition to its theoretical and empirical contributions, this study offers valuable insights for policymakers and activists. Populism, embodied by particular political values, can rally support for or against climate policies. The key factor shaping this outcome lies in how "the elite" and "the people" are defined. When "the people" are framed as inclusive and most vulnerable to the climate crisis, LWP parties have a unique opportunity to cultivate popular support for climate action. In contexts where such frames are absent, activist movements can appeal to RWP's anti-elitism by

highlighting the collective harm inflicted – both domestically and globally – by corporate and political elites, thus fostering solidarity beyond RWP's typically exclusionary frameworks.

From a policy perspective, effective climate action hinges on values of shared humanity and global solidarity - values that are fundamentally at odds with RWP's exclusionary ethos. However, our findings reveal that RWP is not the sole populist force shaping climate attitudes. Policymakers and activists can harness the potential of LWP to advocate for multiracial, intersectional climate solutions that prioritise frontline communities over technocratic, top-down approaches - what Meyer (2024: 268) describes as a "strategically invaluable" method. At the same time, challenging RWP's narrow, homogenous conception of "the people" is essential to advancing inclusive climate policies, particularly as climate displacement grows. Without this shift, climate refugees may be cast as threats to national identity, hindering essential refugee protections and exacerbating scepticism. To this end, international bodies should also consider the challenge posed by inward-facing nationalism in perpetuating displacement.

The global urgency of addressing climate change cannot be overstated, especially in the face of rising scepticism and RWP. By disaggregating populism into its diverse forms and employing a cross-national, large-N analytical framework, we provide a nuanced and comprehensive understanding of how populist ideologies intersect with climate concerns. This approach is crucial for designing effective policies and mobilisations. Future research can build on these insights by examining how different forms of populism influence other climate attitudes and actions across nations, ultimately improving interventions and fostering global cooperation.

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APPENDIX I: COUNTRIES IN SAMPLE

Australia, Austria, Croatia, Denmark, Finland, France, Germany, Hungary, Iceland, India, Italy, Japan, Lithuania, New Zealand, Norway, Philippines,

Russia, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Thailand, United States.

APPENDIX II: DESCRIPTIVE STATISTICS, ALL VARIABLES

Variable	Mean	Std. Dev.	Min.	Max.
National-level (N=26)				
Nationalist Parties	4.56	0.859	2.88	5.987
People Sovereignty	5.469	0.751	3.362	6.725
KOF Globalisation Index	80.539	7.582	62.345	90.573
Environmental Condition	70.143	12.95	30.57	87.42
GDP per capita (logged)	10.12	0.983	7.545	11.371
Democracy	0.762	0.206	0.166	0.918
Individual-level (N=28,363)				
Climate Scepticism	2.94	2.37	0	10
Anti-Globalism	3.277	0.908	1	5
Imports	3.337	1.145	1	5
Immigration	3.256	1.276	1	5
International Organisations [IOs]	3.236	1.122	1	5
Anti-Elite Measures				
Right: Universities	3.331	2.375	0	10
Left: Overall	5.023	2.052	0	10
Government	5.318	2.731	0	10
Business	4.728	2.222	0	10
Age	49.623	16.993	15	103
Female	0.509	0.5	0	1
Education	4.085	1.962	0	8
Class	5.682	1.783	1	10
Religiosity	2.137	2.102	0	7
Employment Status	1.766	0.935	1	3

Variable	Mean	Std. Dev.	Min.	Max.
Interactions				
KOF x Nationalism	81.106	7.914	62.345	90.573
KOF x Universities	370.828	67.12	219.621	488.158
KOF x Anti-Global	266.117	186.746	0	905.729
KOF x Imports	264.862	76.228	62.345	452.864
KOF x Immigration	269.576	94.401	62.345	452.864
KOF x IOs	262.653	104.829	62.345	452.864
	262.357	94.658	62.345	452.864

APPENDIX III: CORRELATION MATRIX, ALL INDEPENDENT VARIABLES

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	1		J	7	J	J	•	0	,	10	•••	12	13	1-7	13	10	- 17	10	17	20
2	0.05	1																		
3	-0.24	0.40	1																	
4	-0.24	0.45	0.87	1																
5	-0.23	0.39	0.85	0.91	1															
6	-0.15	0.30	0.66	0.65	0.75	1														
7	0.09	-0.06	-0.13	-0.17	-0.19	-0.13	1													
8	0.08	-0.04	-0.12	-0.14	-0.17	-0.13	0.73	1												
9	0.08	-0.07	-0.15	-0.19	-0.21	-0.18	0.81	0.39	1											
10	0.06	-0.02	-0.02	-0.05	-0.04	0.02	0.76	0.32	0.44	1										
11	0.16	-0.01	-0.22	-0.23	-0.24	-0.22	0.22	0.12	0.21	0.17	1									
12	0.15	0.01	-0.03	-0.03	-0.04	-0.07	0.14	0.09	0.10	0.14	0.45	1								
13	0.19	-0.04	-0.08	-0.10	-0.10	-0.08	0.18	0.09	0.16	0.17	0.37	0.86	1							
14	0.04	0.08	0.04	0.06	0.05	-0.03	0.03	0.06	-0.02	0.04	0.37	0.79	0.37	1						
15	-0.1	0.05	0.2	0.22	0.23	0.18	0.09	0.04	0.08	0.07	-0.02	-0.02	-0.03	0.001	1					
16	0.004	0.001	-0.03	-0.04	-0.03	-0.03	0.02	0.09	-0.04	-0.004	0.004	0.02	0.001	0.03	-0.02	1				
17	-0.03	0.06	0.22	0.28	0.28	0.15	-0.26	-0.19	-0.23	-0.19	-0.18	-0.03	-0.06	0.02	-0.09	-0.01	1			
18	-0.07	0.04	0.14	0.14	0.19	0.18	-0.15	-0.11	-0.12	-0.12	-0.20	-0.22	-0.20	-0.15	0.01	-0.03	0.28	1		
19	0.14	-0.05	-0.35	-0.36	-0.37	-0.22	0.14	0.13	0.13	0.06	0.11	-0.05	-0.01	-0.08	0.03	0.08	-0.13	-0.01	1	
20	-0.03	-0.01	-0.01	-0.02	-0.02	0.03	0.07	0.06	0.06	0.05	0.02	-0.01	-0.02	0.01	0.34	0.07	-0.20	-0.09	0.07	1

Variables: (1) Nationalism (2) People Sovereignty (3) KOF Globalisation Index (4) Environmental Condition, (5) GDP per capita (logged) (6) Democracy (7) Anti-Global (8) Anti-Global: Imports (9) Anti-Global: Immigrations (10) Anti-Global: International Organisations (11) Distrust in Universities (12) Anti-Elite: Left-Wing (13) Distrust in Government (14) Distrust in Business (15) Age (16) Female (17) Education (18) Class (19) Religiosity (20) Employment Status.

Table 1. Multilevel Regression Analysis of Climate Scepticism.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
National-Level Populism						
Right: Nationalism	0.283***	0.297***	0.286***	0.287***	0.277***	0.223**
	(0.069)	(0.070)	(0.063)	(0.067)	(0.073)	(0.069)
Valence/Pure: People Sovereignty	0.225**	0.216*	0.222**	0.225**	0.219*	0.240***
	(0.086)	(0.091)	(0.086)	(0.082)	(0.093)	(0.071)
Individual-Level Populism						
Right: Anti-Globalism	0.319***	-	-	-	0.324***	0.285***
	(0.052)	-	-	-	(0.052)	(0.047)
Imports	_	0.084***	-	-	-	-
•	_	(0.024)	-	-	-	-
Immigration	-	-	0.242***	-	-	-
3	_	_	(0.036)	_	-	-
IOs	_	_	-	0.207***	_	_
-30	_			(0.038)		_
Right: Anti-Elitism				(0.000)		
Universities	0.122***	0.135***	0.121***	0.125***	0.086***	0.116***
Oniversities	(0.026)	(0.029)	(0.025)	(0.027)	(0.023)	(0.027)
	(0.020)	(0.02)	(0.023)	(0.027)	(0.023)	(0.027)
Left: Anti-Elitism	-0.187***	-0.181***	-0.182***	-0.187***	_	_
Leit. Anti Littisiii	(0.021)	(0.022)	(0.021)	(0.022)		_
Government	-	-	-	(0.022)	-0.083***	_
Government	<u>-</u>	<u> </u>		<u> </u>		<u> </u>
Business	-	-	-	-	(0.022)	0.470***
Business	-	-	-	-	-	-0.172***
	-	-	-	-	-	(0.016)
Country-Level Controls						
KOF Globalisation	-0.010	-0.006	-0.011	-0.008	-0.010	-0.013
	(0.011)	(0.012)	(0.011)	(0.012)	(0.012)	(0.012)
Environmental Condition	-0.017	-0.017	-0.017	-0.017	-0.019	-0.017
	(0.011)	(0.012)	(0.011)	(0.011)	(0.012)	(0.012)
GDP per capita, logged	0.076	0.036	0.085	0.024	0.058	0.100
	(0.130)	(0.138)	(0.127)	(0.129)	(0.143)	(0.151)
Democracy	-0.157	-0.148	-0.055	-0.259	-0.072	-0.237
	(0.675)	(0.710)	(0.631)	(0.708)	(0.646)	(0.726)
Individual-Level Controls						
Religiosity	0.042*	0.049**	0.043**	0.046**	0.049**	0.046**
	(0.017)	(0.017)	(0.017)	(0.017)	(0.018)	(0.016)
Female	-0.169***	-0.180***	-0.136***	-0.159***	-0.183***	-0.152***
	(0.038)	(0.039)	(0.034)	(0.036)	(0.038)	(0.036)
Age	0.006**	0.007***	0.006**	0.007***	0.006**	0.006***

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Education	-0.090***	-0.112***	-0.092***	-0.100***	-0.097***	-0.088***
	(0.014)	(0.014)	(0.014)	(0.013)	(0.013)	(0.014)
Class	0.055**	0.051**	0.050**	0.054**	0.069***	0.058**
	(0.017)	(0.018)	(0.018)	(0.017)	(0.017)	(0.019)
Employment Status (ref=employed)						
Unemployed	0.065	0.079	0.075	0.070	0.061	0.090
	(0.069)	(0.069)	(0.070)	(0.068)	(0.072)	(0.075)
Other	0.004	-0.000	0.011	0.000	0.006	0.018
	(0.038)	(0.039)	(0.037)	(0.038)	(0.038)	(0.037)
Constant	1.070	1.832	1.241	1.776	0.873	1.199
	(1.030)	(1.034)	(1.066)	(0.947)	(1.148)	(0.907)
Respondents	28363	28363	28363	28363	28363	28363
Countries	26	26	26	26	26	26
Model Chi-Square	712.402***	791.887***	866.449***	861.869***	499.618***	1245.396***
AIC	125923.3	126283	125862.9	126054.2	126305.4	125854.2
BIC	126080.1	126439.8	126019.7	126211	126462.2	126011
Sd(Country)	.085	.094	.078	.083	0.091	0.088
Sd(Residual)	4.942	5.004	4.932	4.965	5.001	4.930

Robust standard errors in parentheses

Coefficients for unpresented variables substantively hold with main findings.

^{***} p<0.001, ** p<0.01, * p<0.05

Table 2. Multilevel Regression Analysis of Climate Scepticism, RWP by Globalisation Interactions.

	Model 1	Model 4	Model 5	Model 6	Model 2	Model 3
National-Level Populism						
Right: Nationalism	2.011	0.272***	0.276***	0.291***	0.287***	0.282***
	(1.179)	(0.072)	(0.068)	(0.069)	(0.064)	(0.066)
Valence/Pure: People Sovereignty	0.253**	0.218**	0.220**	0.213*	0.209**	0.233**
	(0.089)	(0.084)	(0.083)	(0.090)	(0.080)	(0.084)
Individual-Level Populism						
Right: Anti-Globalism	0.320***	0.291***	-1.548***	-	-	-
	(0.052)	(0.054)	(0.340)	-	-	-
Imports	-	-	-	-0.449*	-	-
	-	-	-	(0.180)	-	-
Immigration	-	-	-	-	-1.071***	-
	-	-	-	-	(0.287)	-
IOs	-	-	-	-	-	-1.026***
	-	-	-	-	-	(0.176)
Right: Anti-Elitism						(6 6)
Universities	0.122***	-0.641***	0.117***	0.134***	0.115***	0.122***
00.3.1.03	(0.026)	(0.138)	(0.027)	(0.029)	(0.027)	(0.027)
	(0.020)	(0.130)	(0.027)	(0.02)	(0.027)	(0.027)
Left: Anti-Elitism	-0.187***	-0.188***	-0.191***	-0.183***	-0.183***	-0.190***
	(0.021)	(0.021)	(0.021)	(0.021)	(0.020)	(0.021)
Country-Level Controls	(0.02.)	(0.02.)	(0.02.)	(0.02.)	(0.020)	(6162.)
KOF Globalisation	0.078	-0.039*	-0.080***	-0.027	-0.060**	-0.054***
NO. Grobation	(0.056)	(0.016)	(0.021)	(0.015)	(0.019)	(0.016)
Environmental Condition	-0.014	-0.018	-0.021	-0.018	-0.020	-0.019
Livionine ital condition	(0.011)	(0.012)	(0.011)	(0.011)	(0.011)	(0.011)
GDP per capita, logged	0.108	0.038	0.049	0.022	0.057	0.032
obr per capita, togged	(0.127)	(0.142)	(0.133)	(0.141)	(0.127)	(0.127)
Domocracy	-0.172	-0.155	-0.129	-0.130	-0.075	-0.234
Democracy		(0.763)				
Individual Loyal Controls	(0.536)	(0.763)	(0.714)	(0.714)	(0.689)	(0.720)
Individual-Level Controls	0.0/2*	0.0/0*	0.041*	0.040**	0.07.2**	0.046**
Religiosity	0.042*	0.040*		0.049**	0.043**	
	(0.017)	(0.017)	(0.016)	(0.017)	(0.016)	(0.017)
Female	-0.169***	-0.168***	-0.166***	-0.184***	-0.127***	-0.153***
	(0.038)	(0.041)	(0.039)	(0.038)	(0.036)	(0.036)
Age	0.006**	0.006**	0.006**	0.007***	0.005**	0.006***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Education	-0.090***	-0.087***	-0.083***	-0.110***	-0.086***	-0.096***
	(0.014)	(0.013)	(0.013)	(0.014)	(0.013)	(0.013)
Class	0.055**	0.057**	0.055***	0.051**	0.050**	0.055**

	Model 1	Model 4	Model 5	Model 6	Model 2	Model 3
	(0.017)	(0.018)	(0.017)	(0.018)	(0.017)	(0.017)
Employment Status (ref=employed)	0.076	0.071	0.074	0.079	0.073	0.069
Unemployed	(0.070)	(0.076)	(0.069)	(0.068)	(0.069)	(0.069)
	0.007	0.006	0.007	-0.000	0.009	0.000
Other	(0.037)	(0.036)	(0.037)	(0.039)	(0.036)	(0.037)
Interactions						
KOF X Nationalism	-0.021	-	-	-	-	-
	(0.014)	-	-	-	-	-
KOF X Universities	-	0.010***	-	-	-	-
	-	(0.002)	-	-	-	-
KOF X Anti-Globalism	-	-	0.023***	-	-	-
	-	-	(0.004)	-	-	-
KOF X Imports	-	-	-	0.007**	-	-
	-	-	-	(0.002)	-	-
KOF X Immigration	-	-	-	-	0.016***	-
	-	-	-	-	(0.004)	-
KOF X IOs	-	-	-	-	-	0.015***
	-	-	-	-	-	(0.002)
Constant	-6.938	3.959**	7.399***	3.767***	5.785***	5.580***
	(5.207)	(1.222)	(1.349)	(1.114)	(1.186)	(1.148)
Respondents	28363	28363	28363	28363	28363	28363
Countries	26	26	26	26	26	26
Model Chi-Square	744.913***	658.500***	2120.031***	1546.251***	3096.823***	1271.428**
AIC	125923.3	125750.2	125797.8	126267.4	125739.1	125951
BIC	126088.3	125915.2	125962.9	126432.5	125904.2	126116
Sd(Country)	.078	.099	.087	.095	.079	.083
Sd(Residual)	4.942	4.911	4.920	5.002	4.910	4.947

Robust standard errors in parentheses

^{***} p<0.001, ** p<0.01, * p<0.05

Coefficients for unpresented variables substantively hold with main findings.

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