



## The Short End of the Stick: Income Inequality and Populist Sentiment in Europe

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### I. Introduction

Though populism is not new, its recent resurgence in Europe is noteworthy. In the past year alone, an ever-growing list of populists mounted strong electoral challenges. This list includes the AfD in Germany, Wilders in the Netherlands, Le Pen and Mélenchon in France, the Freedom and People's parties in Austria, and Babiš in the Czech Republic. Elsewhere, the United Kingdom muddles through 'Brexit' negotiations, Hungary closed its last independent university, and Poland assaults the judiciary branch. Though left-wing populism's stint in Southern Europe is waning (the Five Star movement in Italy is a notable exception), the fact it occurred marks a diversion from traditional political discourse. Even Scandinavia's long standing social democratic tradition is not immune to far-right populist parties in Denmark (People's Party), Sweden (Sweden Democrats Party), and Norway (Progress Party). Since the 1960s, the average vote share of populist parties in national and European parliamentary elections grew from 5.1 percent to 13.2 percent and its share of seats from 3.8 percent to 12.8 percent (Inglehart and Norris 2016). Seven years after his address, Former European Union President Herman van Rompuy looks like a clairvoyant when he declared populism "the biggest danger to Europe" (Frankfurter).

More troubling is the breakdown of the *cordon sanitaire* that previously confined populism to the fringes of political activity (Berezin 2013). Like a virus, it infects parties with 'epidemic effects' (Bartolini 2011). Thus, populists have disproportionate pull whereby their electoral success puts pressure on mainstream parties to accommodate their stances. External stimuli such as the rise of new parties, force incumbents to realign to remain competitive (Harmel and Janda 1994). Evidence is particularly strong on the issue of immigration (Spanje 2010, van Spanje and van der Brug 2009). France's Macron recently passed an immigration bill that reduces the consideration period for asylum seekers—a departure from his calls for France to do its fair share to address the Refugee Crisis during the campaign. Likewise, one state over, Angela Merkel supported a ban on partial face coverings ("Burqa Ban") around the same time as the AfD's ascendancy in the polls. By virtue of this two-part spreading of populist 'ideology'<sup>1</sup>, first through the rise of the populist movement and second through realignments of traditional parties, its political impact is amplified.

A model developed by Acemoglu, Egorov, and Sonin (2011) demonstrates this process. They found that when left-of-center voters perceive elites to be right-leaning, it is advantageous for moderate politicians to adopt populist left-wing rhetoric to signal they are not of the right. Conversely, the same process occurs on the other side of the political spectrum, exacerbating polarization. Under the right conditions, this may push the party system to the verge of collapse (Pappas 2013). These processes converge to create what Mudde (2004) refers to as a populist 'zeitgeist'. While that term is used somewhat inflammatorily and is subject to dispute (Rooduijn, Lange, and Brug 2012), the prevailing sentiment of shifting public opinion on populism seems anecdotally poignant.

This political context warrants a further investigation of populism's causes. Given the lack of empirical investigation into its economic origins, this paper investigates the political effects of income inequality. When large segments of the population perceive themselves to be on the losing end of modernization and globalization, they become increasingly skeptical of the income gains of other members of society. This leads them to resent the elites that uphold the rules and institutions that currently govern liberal democratic politics; the same rules they find to be disadvantaging them.

After gathering country-level panel data compiled from the Standardized World Income Inequality Database, Eurostat, OECD, World Bank and the European Social Survey (ESS) for 16 European countries between the years 2002 and 2014, income inequality is regressed on a populist sentiment index created by using the responses to the ESS. This is done while controlling for other factors. As new technology, labor trends, and global market integration are likely to exacerbate income inequality, it becomes increasingly important to anticipate the potential political outcomes.

## **II. Theory**

Theoretical clarifications of the definition of populism are not offered in this paper. Many have labored over this, turning conceptual discussions into semantic ones. It would be an oversight, however, not to summarize the various proposed typologies. Though no consensus exists, this paper attempts to declutter previously proposed definitions to find one that is widely accepted. This is necessary to establish a foundation from which variables can be operationalized.

The debate over definitions and approaches has created room for academics to establish "his/(her) own definition of populism, according to the academic axe (she)/he grinds" (Wiles 1969: 166). In efforts to avoid being too exclusive when describing such a diverse political phenomenon, its meaning has been diluted to a catch-all term that denotes any combination of appealing to the masses and demagoguery. Frustrated by the "mercurial nature" (Stanley 2008) of the debate, some have even gone as far as to reject the term completely (Collovald 2004).

This poses an existential question for this paper. One solution is to focus on the gaps in the literature. This research addresses three of them as highlighted by Gidron and Bonikowski (2013): (1) an analysis of populism's economic causes is largely restricted to Latin America and scarcely applied to Europe, (2) such analyses of European populism are confined to right-wing manifestations and have excluded the recent emergence of left-wing populism, (3) micro-level analyses of individual populist inclinations are scantily employed. By designing a framework using survey data that represents both left and right-wing populism and then regressing inequality data onto it, all three of these areas will be enriched.

### **A. Who is a Populist?**

Often, in public debate, detractors use the term 'populist' pejoratively to refer to the primal politics of the Stammtisch (pub table). This sort of political appeal is said to target the gut intuitions of the so-called commoner while disregarding empirical observations. Through simple and direct language, populists harness these emotions to galvanize support.

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Despite this antagonistic view, there is a grain of truth to its understanding of populism's relation to politics. The one area of consensus among academic definitions is its Manichean division of the world into the people and the elites. In this divide, populist leaders are "of the people, not of the system" (Taggart 1996). Put succinctly, populism pits the powerful against the people (Judis and Teixeira 2002). Other scholars echo this sentiment as being fundamental to all populist movements (Canovan 1981, Ionescu and Gellner 1969).

It is imperative to this study to build a definition from this area of consensus. To guide this endeavor, this paper adopts Sartori's (1970) approach of establishing minimal definitions for political science terms. Minimal definitions are those which include only the necessary and sufficient attributes of a concept, thus creating the most inclusive definition possible while preserving its analytical utility. Such a method has been employed by de la Torre (2000), Hawkins (2009, 2010, 2012), Kazin (1995), Art (2011), Pankowski (2010), Stanly (2008), Jagers and Walgrave (2007), Mudde (2007), Kaltwasser (2012), and Ramirez (2009).

Building on Freedman's (1996) "thin-centered ideology" or bundle of interrelated ideas that comprise a political logic, this paper uses Mudde's (2004, 543) minimum definition of populism as "an ideology that considers society to be ultimately separated into two homogeneous and antagonistic groups, 'the pure people' versus 'the corrupt elite', and which argues that politics should be an expression of the *volonté générale* (general will) of the people". Prior to the arrival of the populist leader, this *volonté générale* is suppressed by elites who wish to deprive the "sovereign people of their rights, values, prosperity, identity, and voice" (Albertazzi and McDonnell 2008, 3). Thus, populists employ a form of antagonistic gamification in which they manufacture zero-sum payoff structures to determine winners and losers.

According to this definition, populism juxtaposes two ideologies: elitism and pluralism. Elitism is populism's inverse. It shares a dualistic worldview but defines the people as amoral and the elites as the only ones capable of exercising political power justly. On the other hand, pluralism, rejects the dualism created by populists. Its principal tenant is society's heterogeneity. Therefore, encapsulating a diversity of interests among varied actors into a single term, "the pure people", is an impossible feat. Doing so, according to pluralists, is an oversimplification.

Deliberately absent from this definition are mentions of specific programs and social bases to avoid being overly constrictive. This flexibility encapsulates the chameleonic nature of populism (Taggart 2000). The thinly ideational nature of populism means that to gain legitimacy, it must co-opt established doctrines like liberalism, nationalism, conservatism, federalism, and socialism (Albertazzi and McDonnell 2008).

A less convincing conceptualization of populism is the political mobilization school of thought which has narrow applicability outside of its region of origin: Latin America. These definitions place greater emphasis on policy initiatives and programmatic characteristics (Acemoglu et al. 2011; Madrid 2008; Weyland 2001). Variants of this school of thought examine similarities in the ways in which these movements organize themselves (Jansen 2011; Levitsky and Roberts 2011). This paper rejects this definition for the same reason as Mudde and Kaltwasser (2012). It is unclear whether mobilization is an element or consequence of populism. Furthermore, Panizza (2005) and Raadt et al. (2004) object to its use of party ideologies which confines populism to specific areas on the political spectrum. Through a text analysis of party manifestoes of six

Western European right-wing populist parties, they identify four distinct types of appeals to “the people:” ethnic-nationalist, civic, collectivist, and particularistic.

These considerations justify the use of Mudde’s (2004) Goldilocks definition; it is not too constraining nor too expansive. Additionally, it places equal weight on supply and demand factors. For these reasons, similar definitions have been used by many scholars including Albertazzi and McDonnell (2008), Canovan (2004), Hawkins (2009, 2010), Mudde (2007), Pauwels (2011), Rooduijn and Pauwels (2011), and Stanley (2008). Its application is particularly strong in Europe, and more specifically, among the right-wing parties that constitute the majority of European populist movements since the 1980s (Art 2011; Berezin 2013; Betz 1994; Betz and Immerfall 1998; Carter 2005; Ignazi 1992; Ivarsflaten 2007; Kitschelt and McGann 1995; Koopmans 1996; Mudde 2007; Norris 2005).

## **B. Elite vs People**

The division between *elites* and *the people* is normative. Not only are the two groups different, but *the people* are ethically superior. Their ideas are moralistic not programmatic (Wiles 1969). The moral compass in this divide lays with the people (*vox populi vox dei*) in what Taggart (2000, 95) refers to as “the heartland, in which, the populist imagination of a virtuous, and unified population resides”. The operative word is imagination. A demonstrative example of such people could never exist. Rather, it is a mythical exemplar of what the populist promises to attain. In many ways, the construction of a populist’s people is analogous to Anderson’s (1991) understanding of the nation. Both are bordered and sovereign “imagined communities”. To create the heartland, populists polarize new issues along which original political identities form.

An additional essential element of the populist heartland is its finite nature. Definitionally, its membership is limited. Populist propaganda sections off a homogenous sub-set of the population who deserve citizenship in the heartland: hence, its contrasting nature with pluralism (Mudde 2004; Pasquino 2008). Ironically, though homogeneity is assumed, it is rarely properly defined (though it is commonly tied to Christianity according to Betz and Meret (2009)). Populists prefer to rely on *ex negativo* differentiations; the heartland is everything elites are not.

Characteristics of the elite are explicitly articulated by the populist leader. They are accused of being arrogant, incompetent, selfish, and alienated from the people (Barr 2009; Canovan, 2002; Laclau, 2005; Mudde, 2004; Weyland, 2001). In ignoring the will of the people, they cater to special interest groups like bankers, businesses owners, ethnic and religious minorities, and immigrants.

Judis (2017) uses this framework to make a distinction between left- and right-wing populism. Left-wing populism is dyadic placing the people (working class) against the elite (the one percent, corporations, and political establishment). This form of populist thinking is prevalent in Latin American and Southern Europe which are situated on the economic periphery with capital and trade account deficits. By contrast, right-wing populism is triatic; the people are pit against the elite and a supposedly coddled third group, typically welfare recipients, immigrants, minorities. Mudde and Kaltwasser (2011) differentiate dyadic and triatic structures as “inclusionary” and “exclusionary”. The political logic in each form is the same. The difference is which groups fall on either side of the elite-people divide.

### **C. Populist Value Proposition**

Populists embark on a three-pronged mission. They seek to provide answers to “what went wrong; who is to blame; and what is to be done” (Betz and Johnson 2004, 323). To these questions, they respond with reductive and common-sense solutions (Pankowski 2010). These answers are (1) government and democracy, (2) elites and others, and (3) the people must gain a voice through a populist leader (Albertazzi and McDonnell 2008).

The crux of convincing the public on the third answer is the populist’s accessibility. They must position themselves as a political outsider. This is best achieved by engaging in the politics of redemption (as opposed to pragmatism) through “man-in-the-street communication styles” (Canovan 1999). They “aim to crush the Gordian knots of modern politics with the sword of alleged simple solutions” (Bergsdorf 2000, 624).

Populists are reformist, not revolutionary, by nature. They do not wish to change the people, only the representation of their ideas and values within the hierarchy of the system (Canovan 1999). Underpinning this, is the assumption that the people are sovereign and must govern themselves. This explains why populist appeals are the most effective on the never enfranchised and recently disenfranchised. The reactive nature of the heartland requires a leader to energize it. It is reluctantly political, wanting leadership rather than participation (Ignazi 1992). Thus, they are particularly “liable to the politics of personality, not key values (Taggart 2000). Political entrepreneurs can exploit this environment (Pappas 2012). Combining redemptive politics with a “now or never” sense of impending crisis is a potent strategy of populists.

### **III. Why care about Populism?**

Until now, this paper has provided a positivist account of what populism is. In this section, this paper takes a step further and present a normative explanation as to why it warrants study. By adopting the method of minimal definitions, this paper provides the most conservative estimate of its effect on democratic institutions and norms, the economy, and foreign policy using a cost-benefit analysis.

One criticism of paying attention to populist movements focuses on its ephemeral nature. Studies show that populist movements tend to fade quickly (Taggart 2004). This should not be interpreted as evidence of the self-correcting nature of political systems, however. Instead, it may reflect the political system’s vulnerability to populism. This fleeting nature is, in part, due to the incorporation of populist ideology into mainstream parties through realignment (Fella and Ruzza 2013, Laclau 2005). These realignments provide evidence for the imprint left by populism “on important political phenomena” (Hawkins 2010, 49). Hence, the duration of populist movements cannot be used to refute their importance.

#### **A. Democratic Institutions and Norms**

Democracy and populism have a peculiar relationship. Over the years, scholars have debated characterizing it as a specter or shadow of democracy. Ionescu, Ghita, and Ernst Gellner (1969, 1), open their book by calling populism “the specter that is haunting the world”. Some years

later, this sentiment was echoed by Adriti (2004). Canovan (1999) rejected this outlook preferring to call it “a shadow cast by democracy itself”.

This debate is a byproduct of the internal contradiction of democracy; it enshrines both majoritarian rule and constitutional protection of the rights of the minority. If we were to use Dahl’s (1971) definition of polyarchy as a system which allows citizens to formulate their preferences, signify them to fellow citizens, and have them equally weighted in the conduct of government, the conclusion would be that populism is democratic. Moffitt (2010), Postel (2007), Tännjö (1992), and Urbinati (1998) support this belief.

Populist ideology’s “claim to legitimacy rests on the democratic ideology of popular sovereignty and majority rule—that is a return to a ‘true’ democracy led by ‘the people’ and not by professional political elites” (Canovan 1999). It gives voice to underrepresented, marginalized groups, mobilizes excluded sections of society, increases democratic accountability, and bridges ideologies to create broad social and political coalitions (Kaltwasser and Mudde’s 2012). According to Urbinati (1998), populism helps rebalance the distribution of political power among established and emerging social groups. In cruder terms, populists are like “awkward dinner guests” that get drunk and ask inappropriate questions which may point to important hidden problems (Moffitt 2010). This is why Lacla (2005) concludes that populism is the “sine qua non” of democratic political engagement.

For every way populism supports a healthy democracy, there is another way in which it undermines *liberal* democracy (Zakaria 2003). It uses popular sovereignty to circumvent checks and balances, caters to majoritarian rule, establishes new political cleavages between populists and non-populists, moralizes politics making consensus near impossible, and contributes to plebiscitary transformations which gives power to unelected bodies<sup>2</sup> (Canovan 2002; Kaltwasser 2013; Mény and Surel 2002; Mudde 2007; O’Donnell 1994; Pappas 2013; Plattner 2010). It is no wonder why populism flourishes when democratic institutions and legitimacy are at their weakest. This can cause institutional erosion that ushers competitive authoritarian regimes (Levitsky and Loxton 2012).

In short, populism is both “corrective and threatening to democracy” (Kaltwasser and Mudde’s 2012). It contains both plebiscitary and participatory linkages; the former circumvents institutions whereas the latter supports them (Barr 2009). The debate surrounding populism and democracy, therefore, rests upon its relationship to *liberal* democracy. This paper submits that because of the unambiguous undermining of liberal democracy by populism, its overall effect on democracy is negative.

## **B. The Economy**

The populist record on economics is likewise ambiguous. In theory, this is expected given its lacking specific programmatic components. In practice, however, the economic outlook is dismal on aggregate. Latin American history best encapsulates this. There, the stages of economic populism were as follows: (1) vindication of initial diagnosis through early success of accelerated growth and redistributed income, (2) bottlenecking as the currency overvalues and the economy overheats, (3) the bubble bursts causing shortages, inflation, capital flight, and real

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wage depression, (4) a new government needs to perform orthodox stabilization (Bitar 1986; Dornbusch and Edwards 1991).

During the First Wave of populism in the 1940s, the approach to economics was characterized by an emphasis on growth and income distribution (Dornbusch and Edwards 1991; Sachs 1989). Fiscal and monetary restraints, the risks of inflation, and the response of economic agents to aggressive nonmarket policies were all disregarded. A similar chain of events occurred in the Third Wave with Evo Morales in Bolivia and Hugo Chavez in Venezuela. By contrast, the Second Wave, featured leaders like Collor de Mello in Brazil, Fujimori in Peru, and Menem in Argentina who are best labeled as neo-populists: political entrepreneurs who combined a populist style with a neoliberal economic agenda (Roberts 1995; Weyland 1996).

The European experience is mixed. Parallels with Latin American neo-populists are found in Austria with Jörg Haider and the FPÖ (Höbelt 2003; Jungerstam-Mulders 2003) whereas experiences that match the First and Third Waves are present in Greece with Syriza. Many populist parties, particularly those on the right, have no economic agenda (Eatwell 2003). They are neither neoliberal nor statist (Mudde 2007: chapter 5). An example of this is the FN under the first Le Pen in France which was neoliberal in disguise (Mudde 2007: chapter 5). It adopted a neoliberal ideology to undermine the predominate left-leaning agenda of mainstream parties.

In general, populist parties are vulnerable to financial market disturbances, trade protectionism, and poor intertemporal decision making. Given their anti-institutional outlook and desire to reinstitute the status-quo as they define it, increased uncertainty causes financial market disturbances. Trade protectionism is a natural offshoot of a preference toward prioritizing the heartland's welfare. Lastly, the urgency with which problems are presented distorts intertemporal considerations. The present is weighed heavily as short-term gains are prioritized over long-term losses. Overly expansionary policies are the consequence.

### **C. Foreign Policy**

A common thread among populists is a stress on sovereignty (Dodson and Dorraj 2008). Just as they hope to maximize the people's sovereignty within domestic institutions, they too wish to replicate that on the international level. Like national elites, international bureaucrats are disdained. The European Union is an easy target (Hayward 1995). Legitimate accusations of democratic deficiency are easy ideas onto which populists latch to gain credibility (Moravcsik 1998). Couple that with the logical step from the creation of a bordered, exclusive heartland to virulent nationalism, euro-skepticism is expected (Berezin 2004; Cuperus 2003; Ehrke 2002). In right-wing contexts, this nationalistic fervor amounts to nativism and xenophobia as well as resistance to American involvement and sympathy towards Russia (Liang 2007).

## **IV. Causes**

### **A. Causes of Populism**

The causes of a multifaceted political movement are likely to be diverse and plentiful. A web of social, political, and economic factors intersects to contribute to the trend of rising populism. Despite much being written on the subject, there is a disconnect in the current conversation. The

two primary explanations, cultural backlash model and economic grievance model, are often presented as opposing views. This paper aims to remedy this by developing a combined, empirically-based model on the causes of populism. Additionally, this paper argues that income inequality is the primary variable of interest in the economic grievance model.

Schelder (1996, 297) suggests anti-establishment complaints should not be dismissed “*a priori*”. Engaging in this line of thought, we must ask if the political establishment has become more corrupt or removed to warrant the recent rise of populist parties. While corruption undoubtedly exists, there is little evidence that it is on the rise (Mudde 2004). Turning our attention to the second question, there is evidence to suggest that politicians have become more sociologically similar and moderate which renders segments of the population more ideologically removed from their politicians (Katz 1996). Before conceding this point, we must also consider that the electorate has followed the same trajectory (Norris). Given these realizations, we must turn our attention to indirect causes that alter the opportunity structures in which these claims could gain legitimacy.

Causal theories can be divided into three categories. Adopting insights from market dynamics, political scientists divide these causes into supply (party pleas, political leaders) and demand factors (voter values/public opinion). The third casual category involves changes to the governing rules of electoral politics (i.e. expansion of suffrage, campaign finance rules). This investigation focuses on the most dynamic piece of the equation: demand-side factors. When social cleavages first form, movements in political ideologies and collective identification proceed party adjustments and organizational expression. For this reason, examining demand factors gets at the root of the issue. The literature proposes two primary demand-side causal theories. Traditionally, the cultural backlash model has been the dominant one applied to Europe. However, since the Financial Recession, economic grievance theories have grown in application.

## **B. Cultural Backlash Model**

A well-documented trend in Western democracies is a secular decline in partisan attachments and ideology (Rejai 1971; Thomas 1980). This “political malaise” is manifest in falling voter turnout, declining party membership, and in survey data citing an apathy and distrust of politics and politicians (Albertazzi McDonnell 2008).

According to Lipset and Rokkan (1967), political attachments are formed as parties grasp onto social cleavages. They identify four primary cleavages (center-periphery, church-state, rural-urban, and class) in European society which resulted from two profound societal shifts: the national revolutions and the Industrial revolution. Satiation of the voter supply through stagnate suffrage expansion and enshrinement of electoral systems are argued to have frozen the party system.

Populist parties represent a thawing of the system in response to the formation of a new transnational cleavage (Hooghe and Marks 2016). Catalyzed by the failure of social democracy to transition to a post-industrial economy, society has been split (Cuperus 2003; Ehrke 2002). Ingelhart (1977) was the first to call attention to this trend. He saw the establishment of the Green and New Left parties as a type of “silent revolution”. In the post-war decades, Europe experienced a period of unparalleled peace and prosperity. Young Europeans no longer needed to



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worry about physical and material security. Satisfying the bottom rungs of Maslow's hierarchy, the youth at the time turned their attention upward toward nourishing a need for belonging and self-actualization. Their concerns became post-material in nature, instead focusing on identity. Concentrated in well-educated youth, the movement championed human rights, equality, and environmental issues while espousing progressivism, cosmopolitanism, and multiculturalism.

Compounding this trend was the end of the Cold War and the integration of Europe. Democracy lost the enemy against which it could morally differentiate itself. Consequentially, political critiques turned inward. The newly expanding European Union with its underdeveloped institutions became a magnet for these criticisms originally from the New Left, but later the Far-Right. Expanding media coverage and university access demystified public office (Mudde 2004). Growing numbers of university educated citizens were empowered to voice their opinion on elected officials (Norris 1999). The decentralization of the media industry through individualized content enabled fringe movements to seize on the discontent (Axford 1998; Mazzoleni 2008; Mény and Surel 2000, Ch. 2). Incentive structures remain such that there is an inverse relationship between the cost and quality of journalism. Therefore, despite a higher educated populace, susceptibility to misinformation and propaganda persists. Disinformation favors actors such as populists that do not hold themselves to the same standards as others.

The rise of the populist right is the backlash to this movement. Whereas the Green and New Left movements were a "silent revolution", the populist right is a "silent counter-revolution" (Ignazi 1992, 2003). A similar psycho-social analysis reveals the perceived isolation felt by the "silent majority" of the populist heartland. These are "hard-working, slightly conservative, law-abiding citizens, who, in silence but with growing anger, see his/(her) world being 'perverted' by progressives, criminals, and aliens" (Mudde 2004, 557). Empirical analysis of the Chapel Hill Expert Survey supports this characterization. Populist voters were found to be significantly older, less educated, low-skilled, more religious, male, and more likely to be of a majority ethnic group (Ingehart and Norris 2016; Kriesi 1999).

Immigration activates this resentment. Post-War Europe experienced four waves of immigration. In the wake of the war, money from the Marshall plan poured into Europe to aid reconstruction. The resulting economic boom depleted the male labor supply creating labor shortages. Guest workers from Spain, Italy, and Greece filled this gap. Well-distributed economic growth suppressed immigrant resentment. Gradually, xenophobic attitudes surfaced over time. Decolonization prompted migration toward former metropolises with South Asians going to the United Kingdom and North Africans going to France. After 1989, Eastern European and Balkan emigrants replaced asylum seekers as the main source of immigration. This remained true until the Refugee Crisis of 2015 precipitated by the Syrian War.

Confronted with difference, allusions to Samuel Huntington's Clash of Civilizations hypothesis became increasingly poignant. Ivarsflaten (2007) found that immigration was the only concern mobilized in all successful right-wing populist movements in Europe in 2002. The fear is that native Europeans are demographic losers through immigration. Immigrant birthrates which outpace that of their native-born counterparts will alter the ethnic, religious, and cultural makeup making future European society unrecognizable. Right-wing populist parties often justify these concerns with the encroachment of "radical Islam" and the demographic transition toward

becoming “Eurabia” (Moïsi 2007). Questions pertaining to definitions of citizenship and entitlement to state resources ensue.

### C. Economic Grievance Model

Underlying identity claims are economic trends. The intuition behind economic grievance theory is that economic insecurity and the ensuing perception of being forgotten fuels disdain for political elites and institutions. These conditions create a populace “susceptible to the anti-establishment, nativist, and xenophobic scare-mongering exploited by populist movements, parties, and leaders, blaming ‘Them’ for stripping prosperity, job opportunities, and public services from ‘Us’” (Inglehart and Norris 2016). It is likely that economic policies have indirectly reinforced populist sentiment by bolstering labor mobility and promulgating supranational governance (Andersen et al 2017).

Take the issue of immigration. Concerns of demographic transition are largely dependent on the perceived economic impact of migrants on local workers. Populists strive to depict this relationship combatively. According to this view, natives and migrants are in competition in the labor market with the latter suppressing the former’s wages and employment opportunities (Anderson et al 2017). The state is seen as unfairly privileging immigrants by acquiescing to their lower tax contributions and higher welfare consumption. Constructing this image of financial prosperity and solidarity among the working class is essential for populists to shift the narrative away from humanitarian pleas for accepting immigrants. If economic incentives motivate migrants, they argue moral concerns are mitigated when compared to migrants expelled from their country by war and persecution.

Many studies support the economic grievance model. Swank and Betz (2003) found that growing immigration and international trade are positively correlated with support for right-wing populist parties in Western Europe during 1981-1998. A third variable, robustness of the welfare state, influenced the strength of the correlation. Trade integration had comparable effects on German populism and areas within the United Kingdom most negatively affected by economic globalization exhibited higher support for the “Leave” vote (Dippel, Gold, and Hebllich 2015; Arnorsson and Zoega 2016; Colantone and Stanig 2016).

From a historical perspective, there is a strong claim that economic trends influence populist thinking. During the initial emergence of populism in American, Russian, and later Canadian agrarian communities, new technology precipitated a fall in agricultural prices. This coincided with the First Wave of Globalization. Capital, goods, and services crossed borders at rates never before seen. Market integration and industrialization led to the unintended consequence of income inequality. By 1910, the top decile of European households controlled almost 90 percent of all wealth and more than 45 percent of all income (Piketty 2014). Not long after, all European nations except for Britain responded with import protection (Bairoch 1972). Agricultural tariffs were raised, and immigration was restricted supported by a swelling populist sympathy.

Populism entered dormancy in the wake of the defeat of Fascism in World War II and, in light of the Holocaust, was highly stigmatized. Trounced by the strength of social-democratic systems, populism awaited a crisis to re-emerge. While the OPEC crisis reintroduced populism, it did not proliferate until the Financial Crisis of 2007. Austerity measures and structural reform, the

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largest of its kind since the Great Depression, applied pressure to already weak economies and required citizens to shoulder the burden. Economists project a loss of 20 percent of GDP in the developed world by 2020 compared to pre-Crisis expectations (Wolf 2016). Perceptions of economic health affect people's political opinions (Cordero and Simón 2016). As expected, the populace responded with rage, accusing elected officials of reckless behavior and incompetence (Kindelberger and Aliber 2005). Satisfaction with the functioning of democracy and parliament declined dramatically (Armingeon and Guthmann 2014). Disenchanted voters found solace in fringe movements (Funk et al 2015; Kriesi 2016). Moreover, the Financial Crisis heightened inequality. Excluding France, inequality has risen across the developed world over the past four decades with the sharpest increase caused by austerity programs during the Crisis (Wolf 2016). Pappas and Kriesi (2015) show notable rises of populist vote share in Central and Eastern Europe and the Mediterranean and mixed results in the North. These vote shares back the notion that the Financial Crisis catalyzed support for populist parties.

Inequality may not be a necessary or sufficient condition for populist movements, but it is nevertheless an important one. Satisfaction is derived relatively. When two conditions are perceived to be true, (1) others are reaping the economic benefits of globalization and (2) you are excluded from those benefits, it is easy to see why a change of course is deemed necessary and blame is placed on "corrupt" elites for allowing it to happen. Inequality, therefore, begets socio-political instability and leaves space in the political landscape for populist contenders (Alberto and Perotti 1996).

On a micro-level, inequality adjusts the decision-making nexus of voters. Downs (1957) applied economic insights of cost-benefit analyses to voting decisions. Electors cast votes for the party which maximizes their expected utility relative to other parties. A fundamental insight from this model is the forward-looking behavior of constituents. Unlike in the United States, the European welfare state has partially subdued inequality. Nevertheless, there are growing concerns about its sustainability (Esping-Anderson 1990; Piketty 2014). Among other factors, an aging population places immense strain on public spending. Therefore, even if inequality is currently abated, future expected increases can affect voting decisions today.

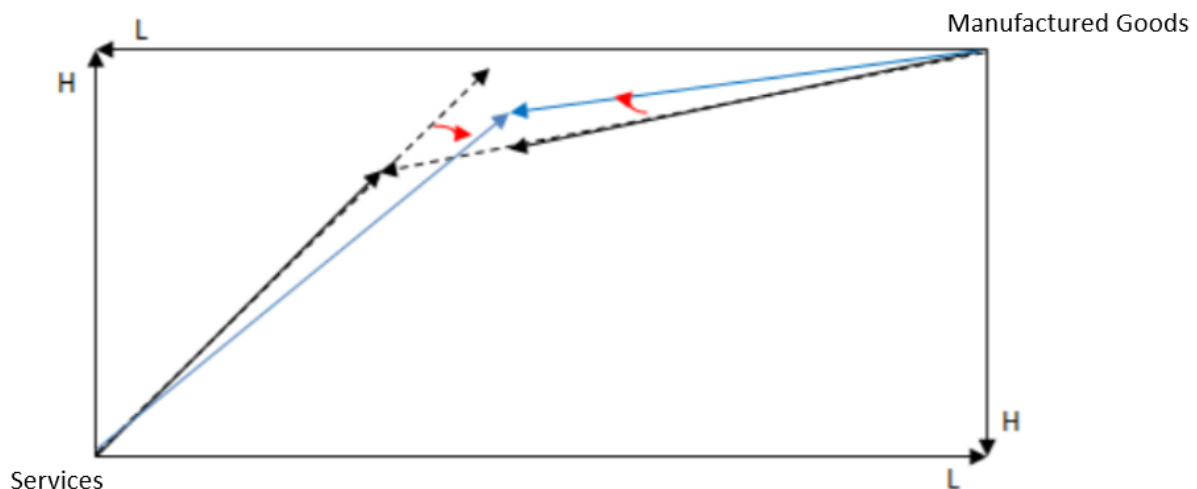
Downs' cost-benefit voting analysis can be applied individually (often referred to as pocketbook voting) or sociotropically. Pocketbook voting is more straightforward. This approach to voting considers the costs and benefits faced by a specific voter. Using this to explain populist sentiment has mixed results. According to Inglehart and Norris (2016, 3), though "populist parties did receive significantly greater support among the less well-off...populist voting was strongest among the petty bourgeoisie, not unskilled manual workers...and...populists received significantly less support among sectors dependent on social welfare benefits as their main source of household income and among those living in urban areas". A possible explanation for this inconclusive finding is that populist supporters vote sociotropically. The difference with this approach is that the cost and benefits are broadened to a national level. In this line of thought, voters are concerned with whatever makes their country best off and are sensitive to concerns even if they are not directly affected. Using income inequality as a variable instead of specific individual economic situations (like having been unemployed or receiving welfare) captures a sociotropic voting framework.

## D. Roots of Inequality

Globalization is a double-edged sword. Its benefits, explained by principles such as comparative advantage, are enshrined in classical liberal economic dogma. Less acknowledged are its costs. Inherent in this is state-level inequality<sup>3</sup>. Unless corrected, inequality seems to be a direct outcome of global integration in developed countries.

The Stolper-Samuelson theorem (1941) modifies the Heckscher–Ohlin model to demonstrate this outcome. In a model with two goods, two factors of production, and full inter-sectoral mobility, trade increases total welfare (Rodrik 2017). However, the owners of the factors used intensively in the importable good are necessarily worse off by trade. Graphically, this can be demonstrated by the Edgeworth box below which shows the allocation of high (H) and low (L) skilled labor in a two-sector developed economy (**Figure 1**). The slope of the arrows which intercept at the labor equilibrium represents the relative employment of high and low skilled labor of each sector. After introducing an exogenous shock, in this case foreign trade, the price of the internationally-demanded exchanged good (i.e. services) rises relative to the other (i.e. manufactured goods). As the price rises, so does output. Resources in that country’s economy are reallocated towards the more productive sector at the expense of non-traded sector (Laffineur 2017).

**Figure 1: Stolper-Samuelson Edgeworth Box**



It is noteworthy that the losses to real earnings are absolute, not relative, regardless of consumption preferences. When contextualized in developed regions such as Europe, the theory predicts there will be at least one factor of production employing low-skilled labor that is unambiguously harmed by trade liberalization.

Though this is a simplified model, its results are corroborated frequently by econometric analysis of real trading partners. Studies of NAFTA show that, while overall participating countries experienced net gains, losses were concentrated on a minority of US workers (Caliendo and Parro 2015; Hakobyan and McLaren 2016). Similar generalizable results were found in a seminal

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paper by Krugman (2008) which demonstrated significant distributional effects of trade by virtue of exchange rates. Strong currencies induce inequality by favoring importers at the expense of exporters (Rossi and Galbraith 2016). In the case of the Eurozone, this has sharp effects. Germany's competitiveness inflates the value of the Euro harming the export-driven industrial sectors across the continent.

The trade-induced collapse of the manufacturing industry played a large role in the repudiation of the Transatlantic Trade and Investment Partnership, Transpacific Trade Partnership, and the Comprehensive Economic and Trade Agreement. In anticipation of a reversion to protectionism, the IMF's World Economic Outlook for October 2016 acknowledged the importance of compensating those who lose from freer trade (IMF 2016, p. 87). Rodrik's trilemma in international political economy explains this outcome. Democracy, national sovereignty, and economic integration are mutually incompatible; only two out of three are possible simultaneously (Rodrik 2007). Complete economic integration is only achieved once all cross-border transaction costs are eliminated. However, the independent policies of nation-states produce these costs by "generating sovereign risk, creating regulatory discontinuities, preventing global regulation, and rendering a global lender of last resort inconceivable" (Rodrik 2007).

Financial liberalization yields similar results. Increased investment in capital-intensive factors of production drives down costs and promotes competitiveness. Workers in capital-intensive industries experiences increases in wages relative to their labor-intensive counterparts. Looking at 224 instances of capital account liberalization, Furceri et al. (2017) found a statistically significant and long-lasting decline in the labor share of income and corresponding increases in the Gini coefficient of income inequality and in the shares of top one percent, five percent, and 10 percent of income. Worse yet, labor, the immobile factor, is most susceptible to tax burden and economic shocks. These results hold when applied both to Europe and to developing countries, albeit, with heterogeneity in the degree of inequality (Basu and Guariglia 2007; Herzer and Nunnenkamp 2013).

Echoing Marx's *Das Kapital*, Piketty (2014) presents a dismal diagnosis of capital's distributional effects. Rebuking the Kuznet's Curve which suggests a U-shaped relationship between income level and inequality, he shows that the ratio of wealth to income is rising in all developed countries and will almost certainly continue to do so. The growth rate of wealth, historically around five percent, is greater than the growth rate of GDP, meaning the rich keep getting richer. Savings rates increase with income creating a vicious cycle. In time  $t$ , a wealthy person receives five percent returns on their wealth. In time  $t+1$ , their larger wealth prompts them to save more thus increasing their absolute gains on five percent returns. Projecting into the future, their gains continue to amass.

Labor trends are equally disconcerting. Proliferation of information technology, beginning with the introduction of the personal computer, segmented the labor market by education. Those with higher education saw their productivity soar in the new knowledge economy. The resulting skill premiums from a strong and persistent growth in demand favoring higher education contributed to a trend of skill-biased technical change (Acemoglu 1998; Autor, Katz, and Krueger 1998). This trend is consistent across the developed world (Berman, Bound, and Machin 1998). Technology has the potential to be even more destructive. Automation is a substitute to labor inputs (Hemous and Olsen 2013). Improvements to artificial intelligence have the potential to

render entire industries devoid of significant labor inputs. Other notable labor market trends are the decline in labor force participation from hysteresis effects of the Financial Crisis and decreased upward pressure on low-skill wages resulting from an increased labor supply due to outsourcing and global supply chains.

Once again, in addition to the positivist question, we must pose a normative one: is inequality bad? After all, why should the losses of a few outweigh the aggregate welfare gains? Sen (1979) convincingly argues for the importance of equality of opportunity, not outcome. Yet, Chetty et al (2014) shows that inequality of outcome often stems from inequality of opportunity. For the purposes of this paper, inequality is undesirable inasmuch as it causes a reversal of fortunes through populist upheaval. Reducing inequality provides a crucial hedge against this happening. Furthermore, the correlation between income and political power raises concerns about its compatibility with democracy (Sitglitz 2012).

## V. Methodology

This study uses panel data collected from several sources including the European Social Survey, the World Income Inequality Database (WIID), Eurostat, OECD, and the World Bank. This data represents 16 countries over seven time-periods spanning 12 years from 2002 to 2014 totaling 112 observations. The primary variables of interest are the dependent variables—populist sentiment (*populist\_index*), left-right political ideology (*lrscale*)—and the independent variables Gini coefficient (*Gini*) and income share of populist susceptible communities (*D2D4*).

Since social phenomena are noisy and multi-causal, several control variables were included to avoid omitted variable bias. These variables fit into one of two groups based on the major theories explaining the causes of populism. There is the Economic Grievance Model which states that economic characteristics are the motivating factors behind populism. This would include variables GDP through Labor Force Participation. The rest would fit into the Cultural Backlash Model which attributes changes in populism to socio-political factors. Descriptions for all the variables can be found in **Table 1** and summary statistics in **Table 2**.

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**Table 1: Data Description**

Code	Description	Scale	Continuous/Discrete	Source
populist_index	Composite Index based on responses to ESS	-2 – 2 (most–least populist)	Continuous	ESS
lrscale	Placement on “left”/ “right” political scale	0 – 10 (“Left” – “Right”)	Discrete	ESS
Gini	Income Inequality Measure	0-100	Continuous	World Income Inequality Database
D2D4	Income share as percent of Deciles 2-4	0-100	Continuous	World Income Inequality Database
GDP	Annual percentage real growth rate of GDP at market prices in local currency	Unbound	Continuous	World Bank
Trade	Sum of exports and imports as share of GDP	Unbound	Continuous	World Bank
FDI	Net inflows of investment to acquire >10% voting stock in an enterprise in a foreign economy	Unbound	Continuous	World Bank
Unemployment	Share of labor force without work but seeking employment as percent	0-100	Continuous	World Bank
Labor Force Participation	Proportion of population 15+ that is economically active	0-100	Continuous	World Bank
Corruption	Corruption Perceptions Index	0-100	Continuous	Transparency International
Education	Percentage of adult population that completed tertiary and upper secondary education	0-100	Continuous	OECD
tvpol	How much of your time watching television is spent watching news or programs about politics and current affairs?	0-7 (30-minute increments)	Discrete	ESS
clsprty	Is there a political party you feel closer to than all the other parties?	1= yes 2= no	Discrete	ESS
stflife	How satisfied are you with your life as a whole?	0 – 10 (“dissatisfied”– “satisfied”)	Discrete	ESS
rlgdgr	How religious would you say you are?	0 – 10 (“not”–“very”)	Discrete	ESS
brncntr	Were you born in [country]?	1= yes 2= no	Discrete	ESS
gndr	Gender	1= male 2= female	Discrete	ESS
agea	Age of respondent, calculated	18+	Discrete	ESS

**Table 2: Summary Statistics Table**

Variable	Observations	Mean	Standard Deviation	Minimum	Maximum
Country1	112	8.5	4.630	1	16
Year	112	2008	4.018	2002	2014
populist_i~x	112	0.000	0.979	-1.938	2.077
lrscale	112	5.094	0.367	4.395	5.973
Gini	112	28.724	3.817	22.5	37.8
D2D4	112	19.071	1.643	15.2	21.9
GDP	112	-0.070	2.754	-10.065	9.639
Trade	112	97.998	38.749	49.663	209.657
FDI	112	6.091	9.390	-16.071	51.625
unemployment	112	7.821	4.107	2.55	24.787
laborForce~n	112	60.147	4.784	48.906	68.709
corruption	112	74.884	14.386	35	97
clsprty	112	1.484	0.122	1.231	1.773
tvpol	112	1.974	0.234	1.463	2.426
stflife	112	7.172	0.818	5.310	8.571
rlgdgr	112	4.629	0.781	3.172	6.534
brncntr	112	1.086	0.049	1.010	1.257
gndr	112	1.526	0.032	1.458	1.612
agea	112	47.910	2.115	42.194	53.977
education	109	28.957	7.541	9.418	42.217

### A. Inequality

In discrete sets of values represented by a function  $I(x)$  where  $x = \{x_1, x_2, \dots, x_n\}$  and  $x_i$  represents an individual economic agent, inequality distributions can be compared using four principles (Ray 1998). The *Anonymity Principle*, expressed by  $I(P(x)) = I(x)$  where  $P(x)$  is a permutation of  $x$ , states that the entity which possess a given income is irrelevant. This allows distributions to be reordered without altering their inequality measures. The *Population Principle*, expressed by  $I(x \cup x) = I(x)$  such that  $x \cup x$  is the union of  $x$  with itself, states that the number of entities included in a set does not affect its distribution. Therefore, cloning entire population distributions has no effect on inequality. The *Relative Income Principle*, as expressed by  $I(\alpha x) = I(x)$  where  $\alpha$  is both positive and real, states that the entire distribution can be scaled up or down without affecting inequality. Lastly, the *Pigou-Dalton Transfer Principle* that regressive transfers increase inequality while progressive ones decrease it. Supposing two sets  $u = \{u_1, u_2, \dots, u_n\}$  and  $u' = \{\alpha + u_1, -\alpha + u_2, \dots, u_n\}$  where each entity is ordered by ascending value and  $\alpha$  is both real and positive, than  $I(u) > I(u')$  (Dalton 1920).

Moreover, inequality distributions can be compared graphically using Lorenz Curves (Lorenz 1905). These curves first arrange individuals in ascending order and then graph the percentage of the total ( $Y$ ) the individual's value ( $y$ ) constitutes relative to the individual's share of the total number of entities ( $N$ ). When envisioning a box superimposed onto  $x$  (cumulative percentage of population) and  $y$  (cumulative percentage of total value) axes each scaled zero to 100, a perfectly egalitarian distribution would be the diagonal (used interchangeably with  $45^\circ$  line) of the box. Conversely, a perfectly unequal distribution in which one entity encompasses the total value of the set, would be represented by the bottom triangle. All other curves fall somewhere in between.



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When comparing two curves, the Lorenz Criterion states that if the Lorenz curve for distribution B lies nowhere above and somewhere below the curve for A, then B is more unequal than A. But, if the two curves cross indicating a combination of progressive and regressive Pigou-Dalton transfers, no conclusions can be drawn about their inequality comparisons. The Gini coefficient remedies this dilemma by halving the relative mean absolute difference of each individual entity compared to all others. Numerically, this is shown by:

$$G = \frac{\sum_{i=1}^n \sum_{j=1}^n |x_i - x_j|}{2 \sum_{i=1}^n \sum_{j=1}^n x_j} = \frac{\sum_{i=1}^n \sum_{j=1}^n |x_i - x_j|}{2n \sum_{i=1}^n x_i}$$

Graphically, it is the area between the 45° line and the curve (A) divided by the total area below the 45° line (A+B). A little algebra reveals that  $G=2A$  where  $G$  is the Gini Coefficient.

There are many methods of calculating inequality based upon the available data. This paper uses the Gini Coefficient because it is Lorenz-consistent, widely available, and the most commonly used (De Maio 2007). That said, it is not without shortcomings. It fails to discriminate between Lorenz curves with the same area. In other words, it does not account for the location of inequality across an income distribution. Previous literature (Inglehart and Norris 2016) suggests that this may overlook a critical characteristic of the relationship between inequality and populism. They found that it was not the poorest members of society that were most likely to vote for populist parties, but rather members of the petty bourgeoisie and working class. Whereas the Gini Coefficient overlooks them, decile data showing the income share of specified deciles of the population does not. This type of data adds a qualitative aspect to this empirical approach. The combination of both measures is a new way to approach inequality.

So far, this discussion has been framed abstractly to discuss the mathematical measurement of the inequality of values. When applied to economics, these values can take several forms, predominately consumption, wealth, or income. Consumption measures quality of life whereas income and wealth measure economic power because they consider savings and capital accumulation respectively. For this reason, inequality increases across the three (Piketty 2014). Wealth is both the most unequal and the most permanent. Its stagnancy complicates its use for this study which only spans 12 years. Instead, income inequality, the most used metric, is used (DeSilver 2015). Income inequality is consistent with wealth inequality on the poles, though this relationship diffuses in between (Kennickell 2009). It is even more highly correlated with consumption (Attanasio, Hurst, and Pistaferri 2012).

Additionally, income can be measured both before (gross) and after tax (disposable). Because of Europe's progressive tax schemes, disposable income is a more accurate reflection of inequality as experienced by the people. Consequentially, this is the type of income inequality data was gathered. Missing data on the Gini coefficient was filled by extrapolating values from trendlines. The mean value of the collected Gini coefficients is 28.7, the standard deviation 3.8, and the range 15.3 (**Table 2**). The decile measure was calculated by summing the total income of households falling in the second through fourth deciles of a country's income distribution, and then dividing that by the total household income of the country to determine their income share.

The average value for the included entities is 19 with a standard deviation of 1.6 and a range from 15.2-21.9 (Table 2).

## B. Populist Index

There are many reasons to use survey data rather than voter data. Logistically, voter data introduces the added complication of selecting a stratum—local, regional, national, or supranational. Populist parties have different organizational strategies that are better-suited for success in specific levels of governance. A strong illustration of this is the difference in UKIP’s electoral success in the British and European parliaments. In the national parliament, UKIP constitutes a mere three of 1437 representatives in the House of Commons and Lords. Yet, they are the largest bloc of British representatives in the European Parliament at 24 of 73.

Furthermore, there is a lack of consistency between election frequencies across countries. There is also the question of which type of voter data to use. Traditionally, voter data is assumed to be electoral data. However, as shown earlier, the plebiscitary bias of populist leaders introduces an additional type of voter data: referendums. Returning to the United Kingdom as an example, the “Brexit” referendum results differ from that of the parliament.

Conceptually, voter data has severe shortcomings. Operationalizing it requires declaring certain parties “populist”. Doing so overlooks realignments by mainstream parties which adopt populist rhetoric and ideas. For instance, in the Netherlands, Prime Minister Rutte was able to divert popularity from his challenger, Gert Wilders, by shifting right on the issues of multiculturalism and immigration. Secondly, there are high levels of abstention amongst those susceptible to populism (Guiso et al 2017). This creates a selection bias problem when using voter data.

The aforementioned pitfalls of voter data are absent in survey data. Of the numerous survey databases, the European Social Survey (ESS) is best suited for this study because it maximizes the number of European countries and years represented. Samples for this survey are selected randomly out of all people over the age of 15 years regardless of language, nationality, or citizenship. The minimum ‘effective achieved sample size’ is 1,500 surveys in countries with populations exceeding two million or 800 in countries with a population of less than two million. This ensures that the survey sample is representative of the European population. The ESS is a frequently used in research ranging from intergenerational educational mobility and procedural justice theory to social capital and attitudes toward immigration (Schuck and Steiber 2017; Hough, Jackson, and Bradford 2013; Card, Dustmann, and Preston 2005, Halman and Luijckx 2006).

Increasingly, other scholars investigating populism take advantage of this resource. Cordero and Simón (2016), Dustmann et al (2017), Ivarsflaten (2007), and Inglehart and Norris (2016) all used ESS data, though primarily by constructing probit models as opposed to panel regressions. Following their lead, a set of questions which exposes populist sentiment was identified. These questions are listed in **Table 3**. Several of the questions were selected based off the findings of Dustmann et al (2017). They observed a strong correlation between whether an individual voted for a populist party and his/her distrust of the national parliament, European parliament, and European integration.

**Table 3: Populist Index**

Code	Description	Question	Scale
trstprl	Trust in country's parliament	<b>All rounds:</b> Using this card, please tell me on a score of 0-10 how much you personally trust each of the institutions I read out. 0 means you do not trust an institution at all, and 10 means you have complete trust. Firstly... ... [country]'s parliament?	0 (no trust) -10 (complete trust)
trstlgl	Trust in the legal system	<b>All rounds:</b> Using this card, please tell me on a score of 0-10 how much you personally trust each of the institutions I read out. 0 means you do not trust an institution at all, and 10 means you have complete trust. Firstly... ... the legal system?	0 (no trust) -10 (complete trust)
trstplt	Trust in politicians	<b>All rounds:</b> Using this card, please tell me on a score of 0-10 how much you personally trust each of the institutions I read out. 0 means you do not trust an institution at all, and 10 means you have complete trust. Firstly... ... politicians?	0 (no trust) -10 (complete trust)
trstep	Trust in the European Parliament	<b>All rounds:</b> Using this card, please tell me on a score of 0-10 how much you personally trust each of the institutions I read out. 0 means you do not trust an institution at all, and 10 means you have complete trust. Firstly... ... the European Parliament?	0 (no trust) -10 (complete trust)
trstun	Trust in the United Nations	<b>All rounds:</b> Using this card, please tell me on a score of 0-10 how much you personally trust each of the institutions I read out. 0 means you do not trust an institution at all, and 10 means you have complete trust. Firstly... ... the United Nations?	0 (no trust) -10 (full trust)
stfeco	How satisfied with present state of economy in country	<b>All rounds:</b> On the whole how satisfied are you with the present state of the economy in [country]?	0 (not satisfied) – 10 (completely satisfied)
stfgov	How satisfied with the national government	<b>All rounds:</b> Now thinking about the [country] government, how satisfied are you with the way it is doing its job?	0 (not satisfied) – 10 (completely satisfied)
stfdem	How satisfied with the way democracy works in country	<b>All rounds:</b> And on the whole, how satisfied are you with the way democracy works in [country]?	0 (not satisfied) – 10 (completely satisfied)
ipudrst	Important to understand different people	<b>All rounds:</b> Now I will briefly describe some people. Please listen to each description and tell me how much each person is or is not like you. Use this card for your answer.  It is important to her/him to listen to people who are different from her/him. Even when she/he disagrees with them, she/he still wants to understand them.	0 (similar) – 6 (dissimilar)

The questions used to construct the index strongly overlap with those used by Inglehart and Norris (2016) in their cultural attitudes model. The difference is that their investigation was confined to right-wing populism, whereas this paper includes manifestations from across the political spectrum. For this reason, questions of immigration attitudes and authoritarian values were dropped. In addition, four questions were added including trust in the legal system and the country’s parliament, satisfaction with economy, and the importance of understanding different people. These get at the divide between those in charge (elites) and the perceptions of their constituents (the people) as well as the degree of heterogeneity in their outlook.

After aggregating the responses to mean scores for each country and year, each question was weighted using a factor analysis. This compensates for a lack of a direct measure of populism (“Handout” 2007). The solution to this conundrum is to investigate indirect measures, in this case the nine survey questions identified, through a factor analysis.

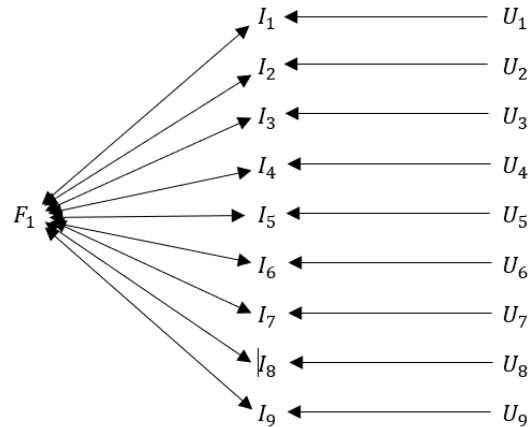
This factor analysis is confirmatory in nature. The purpose is to confirm the explanatory power of the latent variable(s)/(factors), in this case “populist sentiment”, which are the underlying determinants to the survey question responses. Variations in these factors’ influence on the indicator variables informs the weights assigned to the indicators. The equation below demonstrates the formula for combining the weighted indicators to form the Populist Index, where  $\omega$  is the weight each score is given,  $\gamma$  is a random term, and the index is a linear combination of the indicators:

$$\begin{aligned} Populist_{it} = & \omega_{trstprl,it}trstprl_{it} + \omega_{trstlgl,it}trstlgl_{it} + \omega_{trstplt,it}trstplt_{it} \\ & + \omega_{trstep,it}trstep_{it} + \omega_{trstun,it}trstun_{it} + \omega_{stfeco,it}stfeco_{it} \\ & + \omega_{trstep,it}stfeco_{it} + \omega_{stfgov,it}stfgov_{it} + \omega_{stfdem,it}stfdem_{it} \\ & + \omega_{ipudrst,it}ipudrst_{it} + \gamma_{it} \end{aligned}$$

For every indicator, there are multiple underlying determinants which can be grouped into factors and unique variables. The heuristic below (**Figure 2**) displays this decomposition.

Unique variables are those which determine the value of only one indicator. The equation for which is  $U_i = 1 - h^2$  whereas  $h^2$  (the squared multiple correlation coefficient–SMC) represents communality or the amount of variation due to a common factor. This is determined by squaring the loadings and then summing across all factors. The purpose of this analysis is to ascertain how much each underlying determinant contributes to the indicator.

**Figure 2: Factor Decomposition**



To do so, an iterated principal factor analysis which includes assumptions reflected by the data was performed. Namely,  $SMC < 1$  which excludes a principal components analysis. The data is not normally distributed which excludes a maximum likelihood principal factor analysis. Additionally, the iterated principal factor analysis computes a first factor that explains as much of the common variance as possible. This method is useful in confirmatory analyses which seek to test a hypothesis. In this study, that factor, and the one and only of interest, is “populist sentiment”.

**Table 4** below shows the results of this analysis. The eigenvalues are the percentage of total variation in the variables explained by the factor. The percentage is converted into a value by dividing by the number of variables. The “Proportion” column shows the amount of variation in the data explained by each factor.

**Table 4: Factor Analysis**

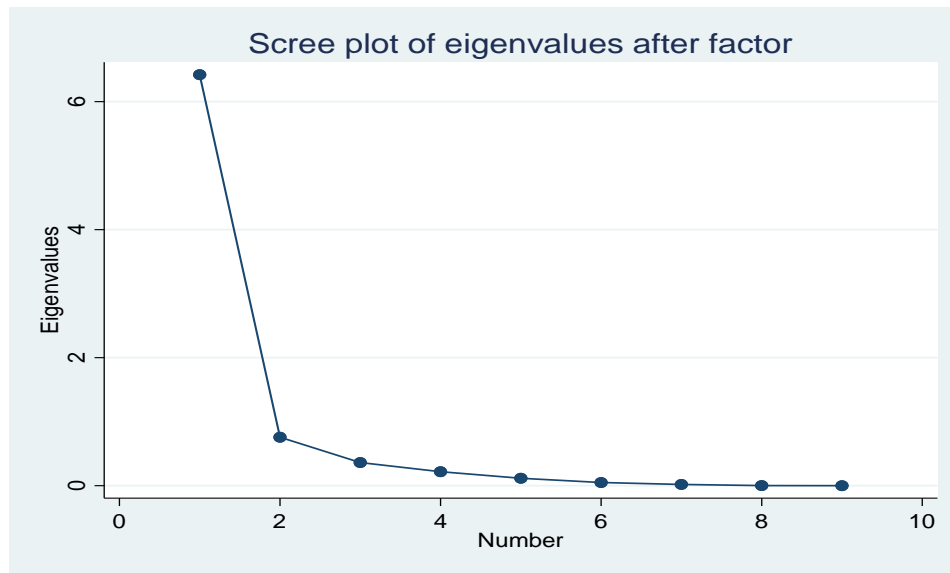
Factor analysis/correlation			Number of obs = 111	
Method: iterated principal factors			Retained factors = 8	
Rotation: (unrotated)			Number of params = 36	
Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	6.422	5.665	0.808	0.808
Factor2	0.757	0.395	0.095	0.904
Factor3	0.361	0.144	0.045	0.950
Factor4	0.218	0.102	0.027	0.977
Factor5	0.116	0.067	0.015	0.991
Factor6	0.049	0.030	0.006	0.997
Factor7	0.020	0.018	0.003	1.000
Factor8	0.002	0.002	0.000	1.000
Factor9	-0.000	.	-0.000	1.000
LR test: independent vs. saturated: $\chi^2(36) = 1376.45$ Prob> $\chi^2 = 0.000$				

All variables receive a “factor loading” on each factor. The factor loadings are the correlation coefficients between the indicator and the index with stronger correlations having an absolute value closer to one. To improve the fit, the factors were rotated. This maintains the relative

relationship between variables constant while adjusting the orthogonal factor axes to a more optimal position. Optimality is where each variable loads onto one factor as highly as possible while affecting the loadings of the second factor as little as possible.

There are two methods to select the factors of interest: Scree Plot test and Kaiser test. The Scree Plot test, the results of which are displayed on the graph below, is descriptive. Using this graph, it states that the relevant factors must include those which lay before the flattening of the curve. Looking at the graph (**Figure 3**), Factor 1 and maybe Factor 2 pass this criterion.

**Figure 3: Scree Plot Test**



Next is the Kaiser test. The criterion for passing this is an eigenvalue greater than 1. Only Factor 1 with an eigenvalue of 6.42 passes. Therefore, this is the factor of interest.

Using the Cronbach test to establish a level of certainty that the variables included in the index calculation relate to the factor reveals a scale reliability coefficient (also referred to as the interitem reliability scale) of  $\alpha = 0.95$  which is well above the .7 benchmark. The scale reliability coefficient has a range of  $-\infty$  to 1 with a higher number indicating a stronger correlation.

To find the predicted value of the Populist Index, the analysis multiplies the actual value for all the variables by the regression coefficient created from the factor loadings. The formula for a univariate regression coefficient is as follows:

$$\hat{\beta}_1 = \frac{\sum(X_i - \bar{X})(Y_i - \bar{Y})}{\sum(X_i - \bar{X})^2}$$

In this equation, the numerator is the covariance between the independent and dependent variables. In other words, it is the factor loadings. The denominator is the variance of the indicator in question. The outcome of this process was generating a new variable out of the

previous nine titled Populist Index which is used as the dependent variable in the regressions show in the section below (“Handout” 2007). The Populist Index, as shown by **Table 2**, is rated on a scale of -2 to 2 with a standard deviation of roughly 1 and a mean centered around zero. Because of the phrasing of the survey questions, the more *negative* the number, the more populist the sentiment.

**C. Spectrum**

The populist sentiment is situated on a left-right political spectrum using responses to the question: *In politics people sometimes talk of "left" and "right". Using this card, where would you place yourself on this scale, where 0 means the left and 10 means the right?* The responses to this question demonstrate that political ideologies are concentrated in the center with a mean of 5.1 and a standard deviation of 0.37 (**Table 2**). The entire range of responses is bound by two points on the 10-point scale.

**VI. Results**

The matrix below (**Table 5**) shows the four regression models that were used: one for each combination of independent variable and dependent variable.

**Table 5: Regression Matrix**

		Independent Variables	
		Gini	Decile Share (2-4)
Dependent Variables	Populist Index	(1) Populist-Gini	(2) Populist-Decile
	Left-Right Scale	(3) Scale-Gini	(4) Scale-Decile

To best control for unobserved individual heterogeneity and, therefore, endogeneity, a fixed effects regression model was employed. Such a technique removes the effect of time-invariant characteristics to assess the net effect of the predictors on the outcome variable (Torres-Reyna 2007). Underlying this is the assumption that each entity’s error term and constant are uncorrelated. When this assumption is broken, random effects are needed. The Hausmann tests for all four models rejected the null hypothesis that the unique errors are correlated with the regressors thereby supporting the fixed effects specification.

Fixed effects regressions use within-entity differences, discarding information about differences between entities (Torres-Reyna 2007). This is done through demeaning which “gets rid of all between-subject variability (which may be contaminated by omitted variable bias) and leaves only the within-subject variability to analyze” (Torres-Reyna 2007). The “within-entity means

for each variable are subtracted from the observed values. For time-invariant variables, demeaned variables will have a value of zero for every case and, since they are constants, they will drop out of further analysis” (Torres-Reyna 2007).

Whereas (entity) fixed effects ( $\alpha_i$ ) eliminate the effect of omitted variables that differ across entities but are constant over time, time fixed effects ( $\lambda_t$ ) control for variables that are constant across entities but differ over time. Using the command *testparm*, a joint test of the null hypothesis that the dummy variables for all years equal zero was run. The null was rejected in only regressions 3 and 4.

For the estimators of a fixed effect regression to be best linear unbiased estimator (BLUE), five criteria must be met. First, the conditional distribution ( $E(u_{it}|x_{it})$ ) of  $u_{it}$  given  $x_{i1}, x_{i2} \dots x_{it}$  has a mean of zero. In other words, the regressors and the error term must be uncorrelated. Both the fixed effects and control variables address this. Second,  $x_{i1}, x_{i2} \dots x_{it}$  and  $u_{i1}, u_{i2} \dots u_{it}$  are independently and identically distributed. Given the random sampling of the ESS survey from a large population, this criterion is satisfied. Third,  $x_{it}$  and  $y_{it}$  have a nonzero finite kurtosis. The summary statistics show that large outliers are absent. Fourth, there is no perfect multicollinearity. Once again, all four models passed the test; all mean VIF scores and condition numbers were below 10 indicating that not only is multicollinearity imperfect, but that it is low. High multicollinearity matters inasmuch as the independent variable is not significant because it inflates variance (thereby also increasing SE) which makes rejecting the null harder. Lastly, the errors for a given entity, conditional on the regressors, must be uncorrelated over time. Autocorrelation (or serial correlation) tends to be less problematic for short time-series like this one (12 years). Nevertheless, heteroskedasticity- and autocorrelation-consistent (HAC) robust standard errors are used to mitigate this risk. Cluster errors yielded similar results but were dismissed because the data sampling was not clustered (McKenzie 2017).

If the previous assumptions hold and it is homoscedastic, the Gauss-Markov theorem proves that the model is BLUE. The modified Wald statistic for group-wise heteroskedasticity in the residuals of a fixed effect regression model yielded significant results in all four models. As mentioned earlier, the HAC robust standard errors adjusted for this heteroskedasticity.

For each regression, four models were computed: 1) a simplified model or base specification featuring the independent variable and dependent variable without controls 2) a model including the control variables testing the Economic Grievance Model 3) a model including the socio-political control variables testing the Cultural Backlash Model 4) a combined model encompassing both sets of controls. The results of all the regressions and models are show in the sections below.

## A. Findings

### Regression 1: Index-Gini

Regression 1 is represented by the following equation

$$\begin{aligned} \text{Populist\_Index}_{it} \\ = \alpha_i + \beta_1 \text{Gini}_{it} + \beta_2 \text{L. 2Gini}_{it-1} + \beta_{3-7} \text{Economic}_{it} + \beta_{8-16} \text{Cultural}_{it} + u_{it} \end{aligned}$$



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where  $\text{Populist\_Index}_{it}$  is the dependent variable and  $i = \text{entity}$  and  $t = \text{time}$ ,  $\beta_1 \text{Gini}_{it}$  is the independent variable,  $L. 2\text{Gini}_{it}$  represents the lagged version of the independent variable,  $\beta_2$  is the coefficient for that independent variable,  $\beta_{3-7}$  are the coefficients for the control variables that comprise of the Economic Grievance Model,  $\beta_{8-16}$  are the coefficients for the control variables that comprise of the Cultural Backlash model, and  $u_{it}$  is the error term.

The Combined model (bolded in **Table 6**) is the one of interest since it addresses omitted variable bias without being redundant. The F-tests reject the null that both the economic ( $\text{prob} > F = 0.002$ ) and the cultural ( $\text{prob} > F = 0.000$ ) sets of control variables have coefficients jointly significantly different from zero, and therefore, must be included in the model. This provides credence to both existing schools of thought regarding the causes of populism but implies that both models together are most predictive of populist sentiment. This finding departs from previous discussions in the literature which tend to be restricted to examining one theory or the other. The relatively high overall adjusted R-squared value (0.57) suggests that the included variables explain much of the variance in populist sentiment.

**Table 6: Lagged Regression 1-HAC Robust**

	Simplified	Economic	Cultural	<b>Combined</b>
Gini	-0.051 (0.0409)	-0.053* (0.0227)	-0.041 (0.0349)	<b>-0.045</b> <b>(0.0279)</b>
L2.Gini	-0.127*** (0.027)	-0.118** (0.032)	-0.111*** (0.023)	<b>-0.104**</b> <b>(0.031)</b>
Economic Controls	No	Yes	No	<b>Yes</b>
Cultural Controls	No	No	Yes	<b>Yes</b>
Observations	96	96	95	<b>95</b>
Overall Adjusted R2	0.21	0.49	0.61	<b>0.57</b>

Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

The  $\beta_2$  coefficient (-0.104) on the lagged Gini variable is statistically significantly different from zero at the five percent level. Interestingly, the statistical significance of the relationship disappears when the variable is no longer lagged ( $\beta_1 = -0.04$ ). This provides insight into how income inequality shapes populist sentiment which can be best explained by the Traffic Analogy. Imagine a driver is sitting in traffic. The lane to their left begins moving. At first, the driver is likely to remain in their lane, taking the left lane's movement as a sign that the congestion is about to end for all lanes. As time passes and their lane remains stagnant, the driver considers

switching. The data suggests a similar response to inequality. At first, inequality is tolerated, but after some time without abating, frustration is channeled through non-traditional politics (populism). Alternatively, it may be that it takes time for peoples to discern differences in income inequality.

Despite a seemingly small coefficient, the results are economically significant as well. The populist index is reverse-scaled meaning that the more negative the number, the stronger the populist sentiment. Considering this, the relationship between income inequality and populist sentiment is positive as was originally hypothesized. To contextualize the magnitude of the relationship, the combined model predicts that a one standard deviation (3.82) increase in the Gini coefficient causes a 0.40-point decline in the populist index, or the equivalent of a 40 percent standard deviation (0.98) change, holding all else constant.

**Regression 2: Index-D2D4**

Regression 2 is represented by the equation:

$$\begin{aligned}
 &Populist\_Index_{it} \\
 &= \alpha_i + \beta_1 Decile_{it} + \beta_2 L.2Decile_{it-1} + \beta_{3-7} Economic_{it} + \beta_{8-16} Cultural_{it} \\
 &+ u_{it}
 \end{aligned}$$

where  $Decile_{it}$  is the decile income share measure and  $L. Decile_{it}$  represents its lagged version. Like Regression 1, the model of interest is the Combined Model (bolded in **Table 7**) as supported by the F-tests which reject the null that both the economic (prob > F = 0.003) and the cultural (prob > F = 0.000) sets of control variables have coefficients jointly significantly different from zero. Once again, this supports the idea that both theories of the causes of populism are jointly explanatory. The relatively high overall adjusted R-squared value (0.60) suggests that the included variables explain much of the variance in populist sentiment.

**Table 7: Lagged Regression 2-HAC Robust**

	Simplified	Economic	Cultural	<b>Combined</b>
D2-D4	0.071 (0.147)	0.116 (0.078)	0.076 (0.095)	<b>0.094</b> <b>(0.082)</b>
L2.D2-D4	0.314* (0.132)	0.290* (0.128)	0.273** (0.089)	<b>0.257*</b> <b>(0.098)</b>
Economic Controls	No	Yes	No	<b>Yes</b>
Cultural Controls	No	No	Yes	<b>Yes</b>
Observations	96	96	95	<b>95</b>
Overall Adjusted R2	0.23	0.53	0.65	<b>0.60</b>

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Standard errors in parentheses

\* p<0.05, \*\* p<0.01, \*\*\* p<0.001

The  $\beta_2$  coefficient (0.257) on the lagged Decile variable is statistically significantly different from zero at the 10 percent level such that a one standard deviation (1.64) increase in it causes a 0.42 increase (or the equivalent of 43 percent of a standard deviation) in the populist index score, holding all else constant. Like the Gini variable, the statistical significance is dependent on the lag reaffirming the idea that populist sentiment builds over time before manifesting. The positive directionality of the relationship between income inequality and populist sentiment is supported by these results which show that as the decile 2 through 4 income share increases (inequality decreases), populist sentiment decreases (remember reverse scoring). Considering Inglehart and Norris' (2016) conclusion that this segment of the population is most susceptible to populism, this model suggests providing economic security can counteract that.

### Regression 3: Scale-Gini

The equation for Regression 3 is:

$$Scale_{it} = \alpha_i + \lambda_t + \beta_1 Gini_{it} + \beta_2 L.2Gini_{it-1} + \beta_{3-7} Economic_{it} + \beta_{8-16} Cultural_{it} + u_{it}$$

where the symbols are the same as those mentioned previously and  $Scale_{it}$  represents the placement on the left-right political scale. In this set of regressions, the cultural model is the most parsimonious. Given the F-tests of the combined model, the null that the cultural coefficients (Prob > F = 0.006) are statistically significantly different from zero can be rejected, but the null for the economic coefficients (Prob > F = 0.352) cannot be. Since the economic controls are jointly insignificant and the coefficient on the Gini variable is relatively constant, then including them in the model is redundant. Consequentially, the model of interest is the cultural one. The implication is that cultural factors inform traditional left-right political ideology. Conversely, political support based on economic factors is performance-driven rather than ideologically-driven. However, it is worth noting that, despite being the highest of the four models, the overall adjusted R-squared is only 0.24, suggesting other factors might influence political ideology.

**Table 8: Regression 3-HAC Robust**

	Simplified	Economic	<b>Cultural</b>	Combined
Gini	-0.029* (0.012)	-0.031* (0.014)	<b>-0.033*</b> <b>(0.0140)</b>	-0.032* (0.012)
L2.Gini	-0.006 (0.008)	-0.002 (0.009)	<b>-0.011</b> <b>(0.010)</b>	-0.006 (0.010)
Economic Controls	No	Yes	<b>No</b>	Yes
Cultural Controls	No	No	<b>Yes</b>	Yes

Observations	112	112	<b>109</b>	109
Overall Adjusted R2	0.07	0.03	<b>0.24</b>	0.17

Standard errors in parentheses

\* p<0.05, \*\* p<0.01, \*\*\* p<0.001

The coefficient for the Gini variable (-0.03) is statistically significant at the 10 percent level. This effect does not hold when lagged implying an immediacy to recalculations in traditional measures of political ideology. It is only when this inequality persists over time do people turn to populist movements. The negative sign on the coefficient means that as inequality rises, the political ideology becomes more left-leaning. This is to be expected as left-leaning parties in Europe are historically more supportive of redistributive policy and strong social welfare. The Cultural model predicts that a one standard deviation (3.82) rise in the Gini coefficient results in a 0.11-point shift to the left of the political spectrum holding all else constant. This is equivalent to a move of about 0.31 standard deviations.

#### Regression 4: Scale-D2D4

The final regression equation is represented by:

$$Scale_{it} = \alpha_i + \lambda_t + \beta_1 Decile_{it} + \beta_2 L.2Decile_{it-1} + \beta_{3-7} Economic_{it} + \beta_{8-16} Cultural_{it} + u_{it}$$

Like Regression 3, the cultural model is the most parsimonious. The economic regressors in the combined model are jointly not significant (Prob > F = 0.200) whereas the cultural ones are (Prob > F = 0.003) and the coefficient on the Decile measure is hardly changed by their inclusion. The overall adjusted R-squared for the cultural model is the highest of the four (0.24) but is still low suggesting other factors might influence political ideology.

**Table 9:** Regression 4-HAC Robust

	Simplified	Economic	<b>Cultural</b>	Combined
D2-D4	0.106 (0.042)	0.107 (0.048)	<b>0.108</b> <b>(0.048)</b>	0.108 (0.043)
L2.D2-D4	0.102 (0.023)	0.101 (0.031)	<b>0.104</b> <b>(0.031)</b>	0.102 (0.036)
Economic Controls	No	Yes	<b>No</b>	Yes
Cultural Controls	No	No	<b>Yes</b>	Yes
Observations	112	112	<b>109</b>	109
Overall Adjusted R2	0.07	0.02	<b>0.24</b>	0.17

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Standard errors in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

The cultural model predicts that a one standard deviation (1.64) increase in the decile two to four income share causes a .18 movement towards the right in the left-right political scale, holding all else constant. In other words, this movement is equivalent to 0.49 standard deviations. A possible explanation of this is that an increase in their economic well-being may reinforce a conservative worldview, however, given the lack of statistical significance, not much can be extrapolated.

### **VII. Conclusion**

In this paper, the relationship between income inequality and populist sentiment in Europe is investigated. In the process, two existing theories of populism, the economic grievance and cultural backlash models, are tested. In doing so, it contributes to the existing body of literature by quantifying populist sentiment through a factor analysis. This index was generated in such a way as to incorporate populist manifestations with various political ideologies: another contribution since most of the prior research focuses on either left-wing or right-wing populism, but rarely both. Furthermore, this study uses aggregated micro-level (survey) data and applies the economic grievance model to Europe, two previously under-researched areas in the field.

This was achieved by first conducting a factor analysis of select responses to the European Social Survey to construct a populist index and, second, by running fixed effect regressions on panel data from 16 European countries over 12 years from 2002 to 2014. In total, four regressions are computed—one with each combination of independent and dependent variable—testing a base specification, the two casual theories of populism, and a combined model. The two independent variables measuring income inequality are the Gini coefficient for each country and the income share of deciles two through four and the two dependent variables were the populist index and self-reported placement on the left-right political spectrum.

As hypothesized, there is a statistically significant positive relationship between income inequality and populist sentiment when lagged and that the combined model was the most appropriate set of regressors. Implicit in this is that if inequality is persistent over time, populist sentiment will likely follow and that it is the outcome of a combination of economic and cultural factors. When changing the dependent variable to the left-right scale, only the coefficient on the Gini inequality measure is significant, but only when not lagged. Additionally, the two measures have conflicting directionality. In these two regressions, only the cultural model is found to be predictive of partisan ideology.

Despite its contributions, this study is not without limitations. Though survey data fixes some of the problems present in voter data, it is not immune to criticism. A primary critique is that it does not distinguish between citizens and residents. Another is that since surveys are self-reported, perceived partisan identifications are highly concentrated toward the center of the spectrum. People tend to overestimate how mainstream and moderate their views are causing survey data to underestimate polarization. Second, given the number of entities, only one lag was possible while maintaining the power of the model. More lags would diminish the number of degrees of

freedom increasing the likelihood of a type two error. Future researchers should consider longer time series. Other areas of potential inquiry would be replicating this study with different inequality measures and using regional-level data rather than national. As society becomes increasingly bifurcated along urban-rural lines, it would be interesting to see if the findings hold on the sub-national level. This paper explains factors behind the formation of political sentiment but does not show how this sentiment gets translated to political mobilization. More research could help illuminate that causal chain.

Potential policy actions that could stem populist sentiment via curbing income inequality need to be explored. Volumes of papers have been published on each of these suggestions. My goal is not to assess the various options but to take stock of the tools at our disposal. The lagged effect of income inequality on populist sentiment demonstrates a need for proactive policy. As a modernizing economy threatens 54 percent of jobs in the European Union due to automation<sup>4</sup>, future strain on the welfare state, and consequentially, rising inequality is likely (Bowles 2014).

Contemporary economic challenges require up-to-date policy infrastructure to handle them. Countries like Finland and regional governments in Ontario and the Netherlands already began experimenting with universal basic income following the advice of Nobel-winning economists Chris Pissarides, Paul Krugman, and Friedrich Hayek. An alternative to universal basic income is adjusting the tax code. Considering the link between income and wealth inequality, Piketty (2014) suggests shifting the tax burden from labor to capital through progressive estate and property taxes. On the other side of the spectrum, Milton Friedman advocated for a negative income tax. But perhaps the most politically pragmatic would be expanding the earned income tax credit which garners bipartisan support and requires the least radical change.

Less drastic welfare reforms include reorienting payment systems from traditional family units toward a system adaptive to 'atypical' family structures and a youth-centric social investment approach (Esping-Anderson 1990; 2009). Current systems heavily bias the elderly at the expense of youth who are ill-equipped for changing markets. In March of this year, France took the lead becoming the first European country to provide public early childhood education as young as the age of three. Investments like these have high long-term returns.

Another option is more prudent liberalization. Rodrik (2017) argues against dogmatic liberalization without considering the tradeoffs. Though integrated markets have increased global welfare, small safeguards against hyper-globalization can be used to hedge against the risk of isolationism. For example, unrestricted capital flows in the euro-era had an ambiguous effect on efficiency (look no further than the misallocation of resources in Spain during the 2000s) but exacerbated inequality. Free trade works similarly. The efficiency gains of trade liberalization have diminishing marginal returns. To the contrary, the redistributive effects "are roughly linear with respect to price changes and are invariant, at the margin, to the magnitude of the barriers" (Rodrik 2017). In other words, as trade barriers are lowered, "the losses of adversely affected groups in per dollar of efficiency gains increase" (Rodrik 2017). A gradual rollback of trade protection could help these groups adjust. Lastly, a potential solution could be further integration in the form of labor mobility. This requires resisting roll backs in labor mobility pursued in response to the Refugee Crisis and opening external borders in addition to internal ones. No one of these suggestions is a silver bullet to the growing threat of populism in Europe. A combination of policy responses addressing both economic and cultural factors is needed. These

actions must be informed by a stronger consciousness around the political effects of income inequality and the characteristics of populist movements.

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## VIII. Notes

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<sup>1</sup> These quotations denote a loose use of this term to be explained later.

<sup>2</sup> Brexit is a prime example of this.

<sup>3</sup> As opposed to inter-state inequality which falls because of the catch-up effect due to varying marginal returns to capital and the non-rivalry of ideas encompassed by the Romer model.

<sup>4</sup> “Threatened” means that the job falls into the high-risk category for computerization as outlined by Frey and Osborne (2013)