

# Concentration and Commodification: The Political Economy of Postindustrialism in America and Beyond

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## Introduction

In the past decades, two features of the American political economy have been at the heart of policy and political debates - growing income inequality and growing regional inequality. The period since the 1980s witnessed a dramatic reversal in the post-war fall in inequality, with a rising of share of income earned by the wealthiest Americans (Piketty and Saez 2003). Before taxes and transfers, the incomes of the top 1% of American now constitute over 20% of total income, with close to half of all income earned by the top 10% of earners.<sup>1</sup> Inequalities in income mirror inequalities in other domains: education, health, and happiness (Case and Deaton 2015).

At the same time, growth, especially in the most innovative industries, has been increasingly concentrated in urban areas (Moretti 2012). The century long trend of regional income convergence across US states and labor mobility among them, has weakened since the 1980s (Ganong and Shoag 2017). Geographic inequalities between superstar cities and older industrial regions have intensified, in turn, creating gaps in housing prices (and wealth) between those in the most desirable cities, towns and even neighborhoods and the rest (Ogorzalek). Figure 1 shows the increasing concentration of innovation in a few key areas. Using data on usage patents from the United States Patents and Trademarks Office, we can see that one metro-region - the San Jose-Santa Clara area, home of Silicon Valley - dominates.<sup>2</sup> While the dominance of Silicon Valley in US innovation is no surprise, its magnitude is staggering. In 2016 the Santa Clara area was home to only 6 out of every 1000 Americans, but filed 100 out of every 1000 patents, with a corresponding to 450% increase in house prices since 1995 - more than double the national average.<sup>3</sup>

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<sup>1</sup> <https://wid.world>

<sup>2</sup> The eight regional areas shown here are the top 'core based statistical areas' by patenting over the 1990-2016 time period.

<sup>3</sup> <https://fred.stlouisfed.org/series/ATNHPIUS41940Q>.

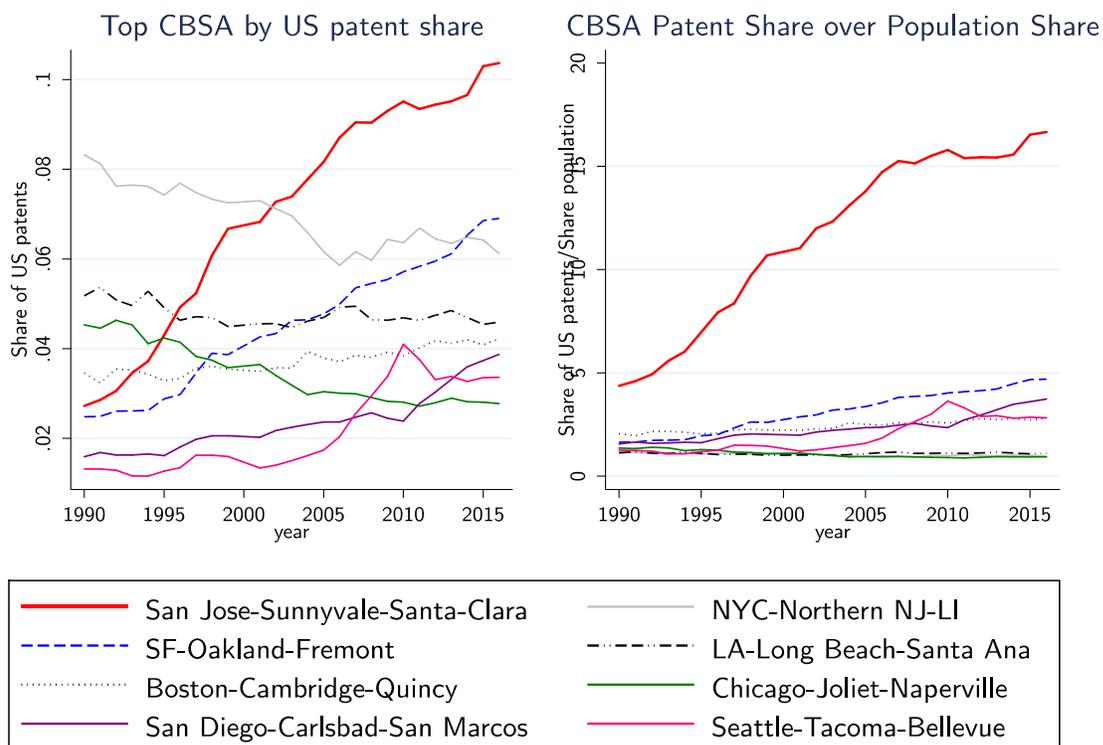


Figure 1: Patent Shares by US Core Based Statistical Area

While countless observers have described - and often bemoaned - the surge in income and geographic inequality in the United States, the causes of these shifts are a matter of debate. Some argue that rising inequality is the dark side of technological development, a necessary counterpart of the turn towards a knowledge economy (Kwon 2016). In particular, the rise of industrial sectors with heavy investments in so-called 'intangible assets' intensifies rising inequalities among people, firms and regions (Haskel and Westlake 2017).

We argue that the varied experiences of other industrialized nations suggest that public policies remain important. The knowledge economy, without policy intervention, has a tendency to accentuate regional and income inequality, by *concentrating* the gains of growth in particular firms located in particular places. At the same time, as access to this 'economic tournament' is dependent on expensive education or housing, the well-being of citizens in multiple spheres is increasingly *commodified*. Policies can lean into, or against, these inequality-producing economic trends.

A first set of policies can reduce - or enhance - the commodification of education, health, and housing, shaping how far the inequalities produced by the growing knowledge economy affect citizen well-being in the labor market. Spending on services like universal (higher) education and affordable housing detaches access to the best jobs from family income; whereas labor protection, universal health care, and support for childcare can fundamentally reshape the nature of the economic tournament, potentially giving workers more collective power in the labor market. More generally, a larger fiscal presence tempers inequality. But

governments can also lean towards commodification - privatizing education and health markets or subsidizing (typically regressively) credit markets in housing.

A second set of policies look to shape the structure of the market itself. Policymakers can choose to intensify *concentration* of the gains of economic growth among a few groups of people, firms and places, by channeling further resources to booming areas and away from those 'left-behind,' by keeping a light touch on competition laws, and by loosening labor laws. Or they can push away from these concentrations of gains by subsidizing and investing in declining regions, actively reallocating productivity gains across firms, and strongly enforcing competition law and labor regulations.

American governments have largely made the choice to sail with the winds of the knowledge economy, amplifying concentration and commodification. Governments across the industrialized world have made different choices. Why have American policy makers adopted fewer policies of de-commodification or de-concentration?

There is much work on American social policy, law, economic regulation, structural racism, and urban governance, many represented in this volume, which looks to explain the structure and limits of the American state. In this chapter, we focus on just one facet, the way the formal electoral institutions and the constitutional structure shape outcomes (Rodden 2019; Iversen and Soskice 2019, Hacker and Pierson 2010).

We argue that in both Europe and the United States political parties face distinct challenges in addressing the new forms of inequality created by the knowledge economy. The geographic basis of the US electoral system places limits on the viability of coalitions of voters seeking to both decommodify and deconcentrate policies. While new left voters in nearly all countries include high-skilled urban voters, the extent to which voters in new innovative sectors both support redistribution and vote for the left varies. Ironically, in contrast to many European countries, a decommodifying knowledge economy coalition, which includes knowledge economy workers, *does* exist in the US. Both high- and low-income voters in knowledge intensive sectors are supportive of decommodifying policies, whereas in Europe these groups are more divided. In both cases, these voters are more tepid towards deconcentration.

However, both the electoral system, and structural racism (see Thurston) that frames many decommodifying policies as supporting the urban minority poor, mean that the increasing reliance of US Democrats on cross-class urban coalition - and the Republicans on the cross-class exurban and rural coalition - has led to both greater partisan polarization around decommodification and less extensive investment in deconcentrating policies. When combined with institutional fragmentation that allows mobilized actors to block many nationally decommodifying policies (Kelly and Morgan, Thelen and Rahman) the result is more varied local pockets of decommodification and weaker overall regulation, industrial policy, and place-based policies than elsewhere.

The next section examines the structural economic and social transformations of the knowledge economy and their heightening of individual and regional inequality. We show that at the aggregate level these choices have played out differently in the US and Europe, in part due to the structure of political coalitions and their ability to enact policy. We then

argue that governments can respond either by changing the degree of commodification or concentration produced by these shifts. We then turn to the politics of these shifts.

## Structural Shifts in the Knowledge Economy: The Rise of Intangibles

Scholars working on comparative political economy have provided deep accounts of how postindustrial transformations have put pressure on traditional labor market institutions. Early work examined how slowing productivity growth in the emerging service sector (Iversen and Wren 1998), growing complementarity of technology and high-skilled work (Goldin and Katz 2009; Boix 1998), and a more limited revenue raising capacity of the state (Beramendi and Rueda 2007) collectively produced greater wage inequality and new constraints on policymakers.

By the turn of the twenty-first century, however, instead of a uniform increase in the returns to skills, employment growth in many labor markets was most pronounced at the top and bottom end of the service sector. Eckert, Ganapati, and Walsh (2019) argue that workers in 'skilled tradeable services' (lawyers, financiers, programmers) found new information technologies allowed them to serve a far larger market. Next to a boom in these high skilled service jobs lay growing demand for lower-paid personal services. A new wave of scholarship looked to explain these trends, arguing that changes in technology and trade dramatically reshaped occupational task structures and the demand for particular skills; the result being a general 'hollowing out' of demand for mid-skilled manufacturing and service jobs (Goos, Manning, and Salomons 2009; Autor, Levy, and Murnane 2003). These shifts created new political dynamics, with electoral and producer group divides not just across the service and manufacturing sectors but within them (Kitschelt and Rehm 2014; Thelen 2014, Huber and Stephens 2014).

However, the rapid increase in earnings at the top end of the labor market, and the concomitant rise of super-star firms and cities, has raised new questions for scholars of post-industrialism. Understanding both income and regional inequality requires understanding growing variation in productivity growth across firms *within* the same sectors and across individuals with *similar* levels of skills (Andrews et al. 2015; Song et al. 2018). Indeed, the booming innovative sectors in the US have been accompanied by growing market concentration, gaps between leader and laggard firms, rising firm markups, and declining worker mobility and a weakening of labor power (Akcigit and Ates 2019). Political scientists have moved away from a singular emphasis on skills and occupational task structures to argue that the intersection of political institutions and technological developments underpin market power and corresponding distributive outcomes (Hacker and Pierson 2010).

To understand these shifts, we argue it is useful to conceptualize the knowledge economy in terms of the outputs of production as well as in terms of skills as inputs to production. These outputs increasingly involve commodified 'intangible' assets – managerial processes, branding, and intellectual property – which are co-produced through the skills of employees and a legal and policy framework (Haskel and Westlake 2017). The way that the gains of the knowledge economy are distributed then, is a function of both technological shifts and how the institutional environment allows actors to capture its gains: e.g. by exercising

monopsony power over employees (Naidu), capturing rents or limiting competition (Schwartz) or outsourcing production (Weil 2014).

We develop these claims below to argue that a) the shift towards intangibles is central to understanding the contemporary dynamics of growth in the knowledge economy but that b) while the rise of intangibles creates new tradeoffs, their very nature suggests that public policies remain crucial for shaping inequality outcomes.

## Intangibles and Inequality

As the name 'intangibles' suggests, these are investments made by firms into assets that cannot be easily measured or even directly observed. Tangible assets are forms of physical capital: plants (the buildings and machinery that make up production factories), commercial land holdings, materials from production inputs, and held inventory of final outputs.

Intangible capital refers to value that firms hold that cannot be reduced to these types of physical investments. Corrado et al. (2016) argue that it embodies three particular qualities: computerized information; innovative property; and economic competencies. Computerized information includes software purchases and in-house development along with the value of firm-held databases. Innovative property includes research and development, design, mineral exploration, financial innovation, and artistic originals. Economic competencies include advertising, market research, owned and purchased organizational capital, and training. As Corrado et al. (p.78) note, what these all have in common is that they 'enable knowledge to be commercialised.'

Many of these forms of intangible capital seem rather ethereal. A brand is largely based on reputation, which can be fragile. Regulatory arbitrage is generally time-limited in well-functioning democracies. Even research and development is only profitable when protected through intellectual property law. But intangibles have many advantages. Once a firm has invested in the fixed cost of developing a brand, a patent, or a form of management, it can scale it up almost for free - there are minimal variable costs. This situation in turn permits intangible-intensive firms to dominate markets rapidly, acquiring near-monopoly status, oftentimes on a global level.

Figure 2 draws on the INTAN-INVEST dataset to illustrate gross investment in intangibles as a proportion of overall gross value added for the United States and nineteen European countries between 1995 and 2016 (Corrado et al. 2016). It shows that the United States is a relative leader in intangible investments, hovering at around fifteen percent of GVA. It is joined, and indeed led by, a number of other countries, including Sweden, Finland, France, Denmark, Ireland, and the UK. By contrast, both the major exporters of Continental Europe, Austria and Germany, and the Southern and Eastern European countries, have substantially lower levels of intangibles investment.

What are the consequences of these shifts? We examine in turn: (a) within-country geographical inequality, (b) inequality among firms even in the same sector, and (c) inequality in the labor market more generally.

The rise of intangibles has the potential to produce a surge in *geographical inequality*, as particular city-regions reap the lion’s share of the spoils of high-end service and technology sector growth. The value of intangibles-intensive firms comes from their stock of human capital and internal processes. The high-skilled workers and firms that employ them, tend to congregate in a select group of city-regions: New York, the Bay Area, London. They do so in part because the value of intangibles depends on human relationships - legal, governmental, marketing, entertainment and so on - creating some advantage to agglomeration. However, they also do so for sociological reasons. Rising high-skilled female labor force participation has made the issue of ‘co-location’ for dual-earner couples (and the need for manageable commute times) an increasingly important component of residential choices (Costa and Kahn 2000; Iversen and Soskice 2019). Thus, ironically, the rise of intangibles, in pushing up house prices in favored urban areas, has a striking impact on the distribution of the very tangible asset of housing.

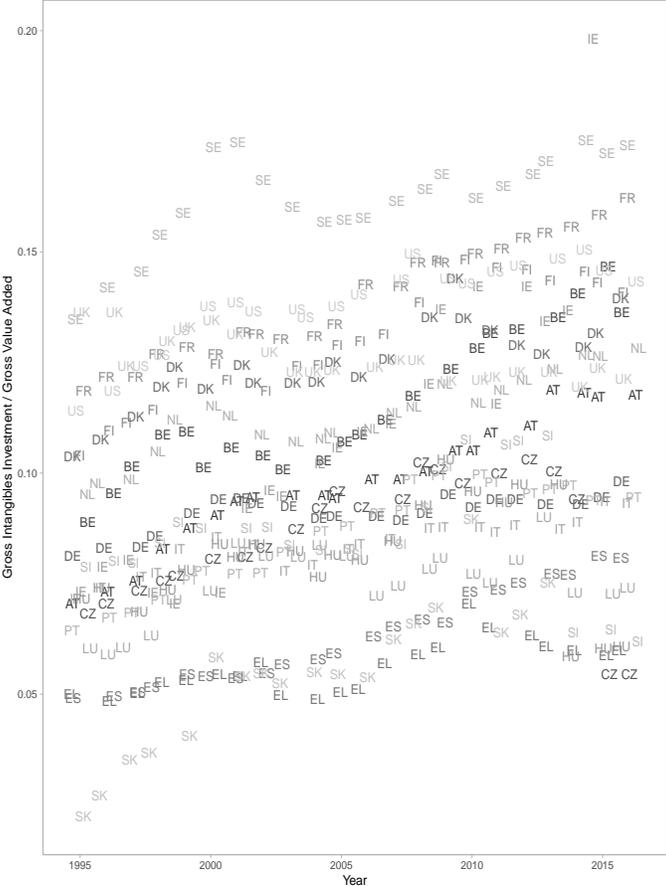


Figure 2: Gross Investment in Intangibles: 1995 to 2016

The rise of intangibles contributes to another key shift in the postindustrial economy: the growth of between firm differences in productivity, profitability and compensation. Recent work by in the US (Song et al. 2018), in Germany (Card, Heining, and Kline 2013), and the OECD (Tomaskovic-Devey et al. 2020) has found increasing differences among firms in the same sector in terms of productivity, pay, and performance. Song et al. (2018) argue that

2/3 of the rise of variance in earnings in the United States occurred due to rising differences between firms in earnings, as opposed to those in management or other positions within a firm being paid more. OECD work shows that the gap between highly productive ‘frontier’ firms (those in the top 5 or 10%) and all others is growing globally, as is the survival of ‘zombie firms’ with low productivity (and often correspondingly low wages) (Andrews, Criscuolo, and Gal 2016). These trends are not exclusive to intangible heavy sectors, but slower rates of diffusion of technology and practices across firms and the rise of dominant super-star firms, often follows from both the commodification of particular forms of know-how and limits on its diffusion.

Finally, intangibles affect labor market inequality more generally. The geographic and firm concentration discussed above have consequences for individual level inequality, creating gaps between labor market insiders and outsiders enhanced by extensive ‘fissuring’ of production (Weil 2014). Labor market fissuring refers to the consequences of almost-complete outsourcing of the supply chain. Information technology has made it possible to automate human resources functions, allowing the outsourcing of commodifiable low-skill tasks such as cleaning, security, data entry. At the other end of the labor market, firms reliant on intangibles require few workers, but the human capital of those highly-paid workers - in combination with ICT - is crucial for the creation and maintenance of their value.

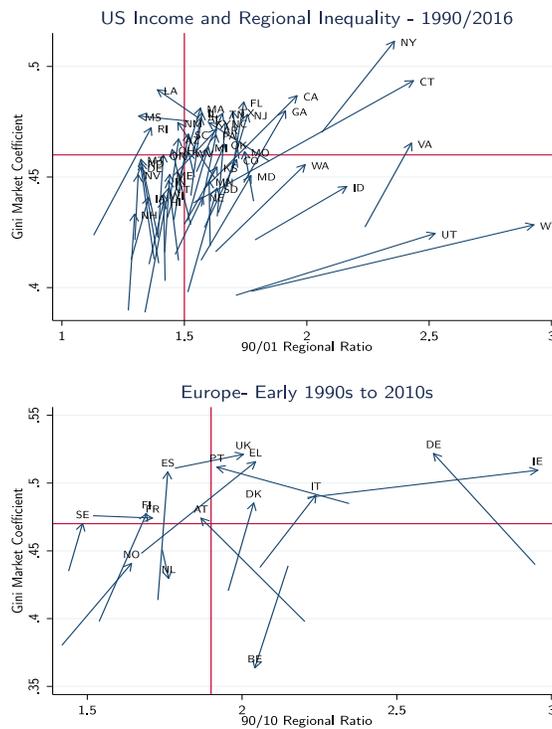


Figure 3: Income Inequality and Regional Inequality By State

How extensively have these potential dis-equalizing effects been? Figure 3 shows the trends in income and regional inequality for both the US states and a range of European countries. The y-axis shows on each graph shows a measure of the Gini coefficient of household income before taxes and transfers at the US state level (top figure) or European country level (bottom figure).<sup>4</sup> The x-axis of each figure shows a measure of regional dispersion.

The top figure examines regional dispersion *within* US states. For each US state, we rank order its counties by average county-level income and compare the average income of the county that contains the 10th percentile to the average income of the county containing the 90th percentile. To measure regional dispersion within European countries we use a similar method for NUTS3-regions. These regions are much larger than most US counties but are the smallest consistent unit across Europe. Here we use GDP per capita, rather than average income, as the latter is not available.<sup>5</sup>

Figure 3 suggests two things. First, there has both been a nearly universal increase in the pre-tax and transfer gini-coefficient across US states and European countries from 1990 to 2016, with more a varied path in terms of regional inequality. Second, substantial cross-national and cross-state variation in the level of both types of inequality remains.

How do these patterns connect to intangibles? The American states demonstrate a general rise in regional inequality along with a uniform rise in income inequality. The states seeing large increases in regional inequality are some of the states most associated with expansion of investment in intangibles and the rise of mega-cities: New York, Washington, California, and Virginia. These states that were already more unequal in the 1990s and have tended to become more so over time. Relatively few states have seen a decline in regional inequality, those that have tend to be states with less knowledge economy growth rather than an obvious strategy of dispersing growth: Mississippi, Louisiana, New Mexico, and Kentucky (see Grumbach, Hacker Pierson).

Among European countries we see rather different trends. Once again, there is a relatively uniform increase in income inequality. Despite these common increases, among the intangible intensive countries – the US, UK, Sweden, Denmark, France and Ireland – we see wide variation in outcomes. Regional dispersion in incomes appears related to the highly market-driven rise of high-skill service cities such as in Paris, Dublin and London. Stockholm, Copenhagen and Helsinki are as dominant in their national contexts, but the structure of their national welfare states redistributes more growth outwards (discussed below) and also

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<sup>4</sup> For the US, these data come from the US census and and current population survey <https://www.census.gov/topics/income-poverty/income-inequality.html>. For Europe they come from Solt's Standardized World Income Inequality Database <https://fsolt.org/swiid/>

<sup>5</sup> The US data comes the US census for 1990 and 2000, and the American Community Survey 5 year estimates for 2016. The European data come from the Cambridge Econometrics Regional Economic Database.

reduces the translation of the growing pre-fiscal inequality shown here into as extensive of a post-tax and transfer inequality.

The less intangible intensive economies also exhibit variation. The decline in regional concentration in Germany and Austria is striking, and related diffuse overall economic strategy emphasizing manufacturing as opposed to concentrated high-skill services. However, longstanding regional differences remain strong in the economies of Greece and Italy, which have faced economic stagnation in recent years.

To see more directly look at these relationships, Figure 4 demonstrates the average country-level relationship since 1995 between intangible investment and these two forms of inequality. Each country's average is denoted by its three-letter country code and these country codes in turn are shaded according to their average level of spending on social policies during the same period, with darker shades denoting higher spending.

In aggregate there does not appear to be any cross-sectional pattern between investment in intangibles and either form of inequality. Yet when we subdivide countries into those with lower or higher levels of social spending than twenty percent of GDP (roughly the median level), we see that whereas for low spenders, higher investment in intangibles appears associated with higher pre-tax and transfer income inequality for the country as a whole and higher inequality across regions, the reverse is true for the group of higher spenders.

Although inequality is rising everywhere, there is no determinative relationship between the rise of the knowledge economy and inequality outcomes. In aggregate, social spending appears to moderate the relationship between investment in intangibles and higher income and regional inequality. In order to understand why this is the case, we turn to theorizing these policy choices.

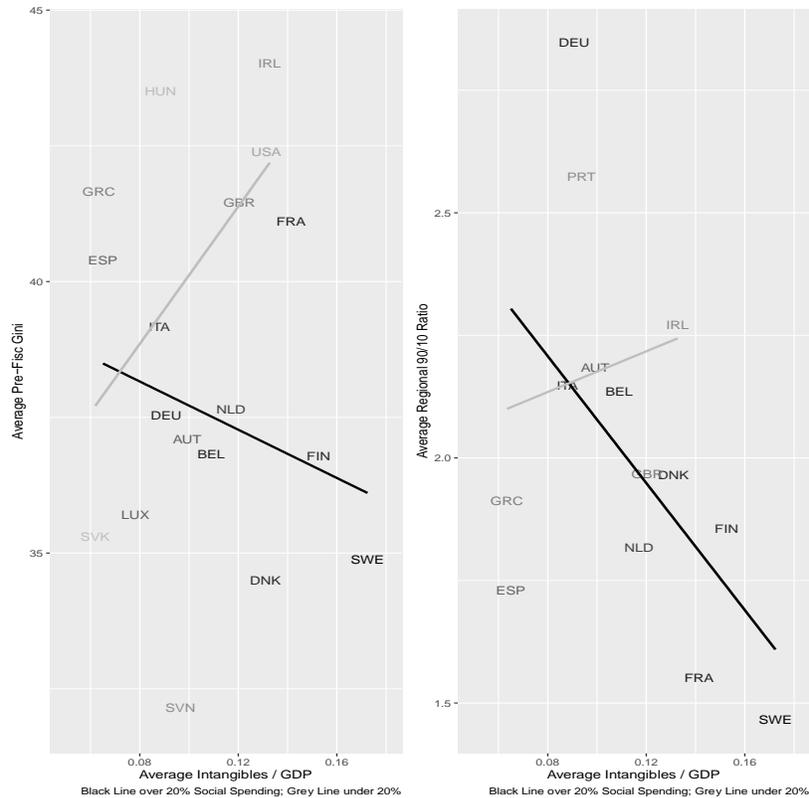


Figure 4: Intangibles and National / Regional Inequality

## Policy Choices

The rise of intangibles tends to generate inequality. However, this process does not follow mechanically from technology. Policies matter to the way skills, and the value of intangibles, are commodified, the collective power of labor, and the way growth is dispersed across place.

In this section we argue that the inequality producing aspects of intangible production in knowledge economy can be moderated or accentuated in three ways. First, by *limiting* the development of the knowledge economy. While supporting intangibles may bring greater inequality and new policy challenges, limiting them can threaten economic stagnation. Where the knowledge economy develops, countries therefore face the question of whether to try and curb such inequalities by altering the access and functioning of the labor market through *decommodifying* policies, or reshaping production itself through *deconcentrating* policies. Both decommodifying and deconcentrating policies involve substantial financial or regulatory outlays.

## Limiting

The knowledge economy is not destiny. Even if most countries consume the products of the knowledge economy, that does not imply they will produce them. Indeed, if the structure of

intangible investment means that only a few firms dominate international markets, it may not even be possible for all countries to have a meaningful presence in such production.

Other forms of production still generate revenues and growth. As we showed above, many Continental European economies continue to maintain successful high-end manufacturing sectors. However, outside of these high-skilled export-oriented economies, abandoning the knowledge economy risks long-run economic stagnation.

Despite these risks, many countries lack the basic investment and regulatory structures needed for the development of high-skilled services. And that choice may be partially deliberate. Where professional services are extremely strongly regulated - indeed captured by domestic insiders - it will be difficult to develop new providers serving a global market. Services are often more regulated than manufacturing production - from German retail laws to the proliferation of well-paid and protected public notaries across France and Italy.

There is no single necessary nor sufficient set of reforms that will produce a surge in investment in intangible capital. However, typically to produce high-skilled globally traded services, countries must deregulate aspects of their financial and professional service sector, and adopt a mass higher education that facilitates the emergence of 'global universities.'

## Commodification

Presuming governments facilitate the rise of a knowledge economy, they may do so in ways that lean into or push against the *commodification* of wellbeing: the degree to which citizens' income and well-being is dependent on access to high quality employment.

The question of how labor market and welfare institutions shape the commodification of labor, and the connection between these institutions and labor's collective power, has long been at the heart of scholarship on welfare institutions. Esping-Andersen (1990) popularized the concept of 'decommodification,' the ability of workers to secure a standard of living outside of dependence on the labor market. Knowledge economy production tends to both magnify the commodification of skills and commodify previously non-commodified (or less commodified) factors. Intangible assets involve, in part, the commodification of 'ways of interacting' - managerial competences and government relations and the protection of property rights over objects that previously lacked any status as property - for example, information on consumer behavior, or friendship networks. Put differently, they pull more and more forms of well-being into dependence on the market. What policies and institutions can affect this trend?

First, citizens' ability to acquire the skills and cultural capital that determine success in the knowledge economy is increasingly important. Where access to education is related to one's own existing income - or family income - the educational structure magnifies these inequalities. This combines with an ever-greater commodification of place. Since high-end service jobs have tended to concentrate in major cities, the skyrocketing value of property in those cities can limit access to these booming markets (Hsieh and Moretti 2019).

Where the market fully decides access to education or housing, then access to the best jobs is itself commodified. Governments can decommodify this access, through both transfers and

in-kind benefits that support education and housing. For example, where the government controls the provision of higher education or subsidizes (often fully) tuition, a greater number of citizens will find themselves able to access the paths to the elite jobs associated with the knowledge economy. Governments can also provide public housing or subsidized public transit, that make it possible for a wider range of citizens to live in the booming cities. These 'pre-distribution' policies decommodify aspects of the acquisition of skills and regional mobility needed to take part in the market.

Second, de-commodifying policies can shape nature of the labor market, not just access to it. Union organization, collective wage bargaining and other labor rights and protections produce wage compression - at least across unionized workers. Hope and Martelli (2019) show that the inequality-increasing impact of knowledge economy production is lower where labor organization is stronger. Not least, these institutions enable workers to bargain more effectively for a higher labor share of earnings, limiting monopsonistic practices (Naidu).

Finally, more traditional de-commodifying policies look to remove some domains of well-being from market forces. Where the welfare of citizens is more market-dependent, increasingly unequal market incomes will refract into other forms of inequalities. Where good quality health insurance is dependent on one's job and earnings, differences in job quality translate into differences in access to health, further limiting workers.

These three domains of de-commodification are often reinforcing. Overall levels of redistribution will reduce the dependency of citizens on their precise position in the knowledge economy, and since they compress post-tax wage distributions. They may further reduce the ability of the wealthy to bid up the prices of positional goods, including housing and education (Ahlquist and Ansell 2017).

As is well known, the US welfare state is particularly commodifying on all three dimensions - housing and education is largely market based, with even public universities charging high tuition; private sector unions are relatively weak and limited (Hertel-Fernandez) and unemployment and work-based benefits (with the exception of social security) are limited and variable in many states; and finally, the US has neither fully universal affordable health insurance nor subsidized childcare, an exception among advanced industrial countries. Access to the market, performance in it, and the determinacy of the market for individual well-being are all more commodified in the US; and with the important exception of some recent legislation - like the Affordable Care Act - much of the direction of policy at the state and national level has been towards enhancing all three forms of commodification.

## Concentration

While policies of commodification shape the connection between the labor market and individual well-being, government policies can also affect the structure of the market itself. Intangibles can contribute to concentration in market structures: the growing tendency for a few firms, regions, and indeed individuals, to disproportionately benefit from production in the knowledge economy.

Governments have a variety of policy and institutional tools that can alter the concentration of production in the knowledge economy. We examine in turn (i) industrial and competition policy and (ii) regional development policies.

Industrial and competition policy refers to the ways in which governments shape, regulate, or actively interfere in product markets. As Schwartz (Chapter X) argues the legal infrastructure underpinning intangibles, particularly the system of patenting, has been crucial shaping their evolution (see also Pistor 2019). Gutiérrez and Philippon (2018) further point to the structure of competition policy, arguing that a key difference in firm concentration between the United States and Europe is a more aggressive pro-competition policy under the aegis of European Union. They further argue that where regulatory institutions do exist in the United States, firms have mobilized to capture many areas in order to bolster their market position. As Thelen and Rahman argue (Chapter X), business has often used the American court system to achieve both collectively and individually favourable outcomes.

Another broad strategy for changing concentration is more active government industrial policy. Here governments support, subsidize, or protect particular industries. Industrial policy does not necessarily reduce concentration - as traditional funding of 'national champions' in some European countries demonstrates. Moreover, the subsidization of weaker firms in order to reduce concentration can allow capture by larger firms. Industrial policy can, though, channel resources to industries that invest in tangible capital, indirectly reducing concentration by diversifying production. The subsidization of intangible intensive could also de-concentrate, if support is targeted to smaller firms in new sectors (e.g. green energy).

The second set of policies affecting the concentration of production are regional policies. Policies that directly transfer resources from the wealthier to poorer region deconcentrate the gains of growth. Many governments passively enact such policies through national taxation and redistribution - i.e. the decommodifying policies discussed above. Even federal states such as the United States create de facto interregional transfers through programs such as Social Security. With that said, there is substantial variation. Federal political institutions are likely to increase concentration if poorer regions are unable to access tax revenues collected and dispensed at the subnational level (Beramendi, 2012). More direct regional funding, through specific infrastructure policies (constructing roads, railways, and ports), regional development grants, or siting key public services in less wealthy areas, can be used to channel investment outside of core cities. For instance, the European Union spends around one third of its revenues on inter-regional transfers for the development of poorer regions (albeit from a limited budget). But governments may also end up favoring core regions, particularly if they coincide with the capital city, thereby accentuating concentration.

## **The Politics of Concentration and Commodification**

Why do some countries end up responding to the challenges of the knowledge economy with decommodifying or deconcentrating policies while others let the forces of commodification

and concentration rip? In this section we turn to the demand side of politics, examining how the knowledge economy affects the type of political coalitions that can emerge. We argue that the electoral institutions in the US have tended to limit a dually redistributive decommodifying and deconcentrating electoral coalition. When combined with a number of veto points (Kelly and Morgan) and strong judiciary (Thelen and Rahman) that empower interest groups as 'repeat players', the result is uneven and locally set decommodifying policies and limited deconcentration.

A range of recent scholarship conceptualizes how structural changes in knowledge economy labor markets have reshaped the coalitions that underpin them. Iversen and Soskice (2019) (see also Soskice), argue that the urbanized nature of production in the knowledge economy limits capital mobility and means that governments retain substantial tools to redistribute wealth. However, whether these materialize, depends on the preferences of middle-income voters. 'Inclusionary' coalitions between high and low skilled workers become more challenging as these groups increasingly meet different economic fates. In majoritarian electoral systems, or in countries like Germany, where centrist parties can govern without the left, the low skilled are often excluded. While this work explains the persistence of a long-standing outcome – a weaker welfare state in the US –it leaves a puzzle. Middle class urban voters are often heavily supportive (in surveys) of redistribution, rather than pushing against it. Why, given this potential base of support, does more extensive decommodifying policy not emerge?

A second answer, also emphasizing the intersection of the electoral system with knowledge economy growth, comes from Jonathan Rodden. Rodden (2019) argues that cities 'lose' precisely because of the concentration of left voters in them, meaning that progressive voters are unable to form broader alliances with centrist voters in suburbs and rural areas for spending. The result is an underrepresentation of left policies nationally, and an underinvestment in urban infrastructure. However, cities, and the booming sectors in them, have largely been winners in a range of areas – from competition policy to trade policy through to their relative autonomy on zoning.

We build on this work to argue that the combination of structural economic changes and electoral systems is central shaping redistributive coalitions in the electorate. We argue that economic policy preferences are multi-dimensional, involving preferences over both decommodification and deconcentration, meaning that voters can support one without supporting the other. Both decommodifying policies and deconcentrating policies affect both income and regional inequality; however, decommodification is more visibly linked to the former and deconcentration to the latter.

As Rodden (2019) argues, a key feature of electoral systems lies in how they structure the geographical nature of coalition-building. In majoritarian systems, like the US, wealthy individuals, who are a numeric minority, are split across different geographic areas. This situation means that it is more difficult to band together as a class in electoral politics (they can through interest groups). Instead, they must cut deals with other groups in the same geographic areas in order to win particular seats. Where varying groups of voters relatively evenly spread across constituencies, then, as in Iversen and Soskice's (2019) classic model

center-left and center-right parties emerge, that represent coalitions of middle with higher and lower income voters.

As regional economic fates diverge, the relative importance of coordinating by region can change. Where new groups of higher skilled voters are concentrated in cities, they may prefer to coalesce with lower-income voters in supporting decommodifying policies than with other high and middle-income voters outside the urban core demanding deconcentrating policies. In other words, they prefer intra-regional redistribution to inter-regional distribution (Beramendi 2012). Support for minimum wages, investment in education, and other services, may appeal to conditional altruism in the face of negative externalities to inequality (Rueda and Stegmuller 2019) but also may follow in part from more cultural liberalism and the link between 'first' and 'second' dimension issues. The same dynamics hold outside of cities, where poorer citizens may be mobilized on cultural or nationalist dimensions to oppose redistribution to the cosmopolitan cities and their ethnically diverse inhabitants.

Since urban elites in intangibles-intensive sectors have been the core beneficiaries of the rise of the knowledge economy, their particular choice between alliances dependent on decommodification versus those dependent on deconcentration are important. In majoritarian systems like the US they need to ally with other residents of major cities in order to secure representation - this means a center-left alliance in the cities. By contrast in systems with proportional representation, both relatively wealthy and relatively poorer citizens can ally with others in their class in different regions, without having to cut a deal to win a particular region as they might in a majoritarian system.

Thus, the nature of electoral and other political institutions shapes the viability of various coalitions over decommodification or deconcentration. A simple corollary of these possible coalitions is that the voting patterns should follow institutional incentives. In majoritarian countries, the urban intangibles-employed rich will coalesce with poorer urban voters and vote for the center-left. By contrast, in proportional countries, an inter-regional alliance of the rich is possible, and these same voters will be attracted to the center-right.

We assume further that voters partly form their preferences over policy considering the possibility of actually achieving these policy goals given institutional constraints. We expect that in majoritarian systems, wealthy voters in intangibles-intensive sectors and locations will be more interested in decommodifying policies based on an urban coalition with poorer voters than in deconcentrating policies that lead to inter-regional distribution. In proportional systems, a cross-regional alliance of the well-to-do means these same intangibles-employed urban rich will be much less supportive of decommodification.

An example of the way that the regional divides play out in US can be seen clearly in Figures 5 and 6 comparing voting by type of area in the US and a composite of the proportional systems in Europe.<sup>6</sup> These figures show disaggregated voting for left-wing parties (coding

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<sup>6</sup> The data come from a number of national sources, drawn together with support from the ERC project SCHOOLPOL 759188. This dataset measures national-level election results at the level of local area units (LAU), the base unit for European geographic hierarchies, with

the Democrats as left-wing) in the US and the proportional systems of the EU-15 (excluding the UK, Ireland, and Luxembourg and including Norway and Switzerland) since the early 1990s. The figures break localities (US counties, municipalities in Europe) into five geographic types: rural, medium sized areas, metropolitan areas, suburbs of major cities, and major cities).<sup>7</sup>

In both cases, left support is becoming more urbanized, but the gaps are much larger in the US. As the knowledge economy has developed, the political preferences of major cities have diverged rapidly away from other areas - moving strongly to the left, such that Democrats win two thirds of votes in counties based in major cities but just a third in rural areas. That gap was less than ten percent points in the early 1990s.

Within European countries, the gradients vary, with some remaining relatively non-existent (the Southern European countries), others looking more “American” in the growth of an urban-rural gradient (e.g. Switzerland). In most, there is an intermediate position, where traditional social democrats continue to mobilize voters in towns and in some cases rural areas, but surging support for Green parties in urban areas mean that left voting is becoming more urban (e.g. Austria, Germany, the Netherlands). Take one well known example of left dominance, Sweden. In the early 1990s, in the country, the Social Democrats (SAP) polled 46% and other left parties an additional 9%, with the SAP polling 34% in major cities and other left parties 12%. In the late 2010s, the SAP fell to 31% in the countryside and 24% in major cities, with other left parties continuing to poll 9% of the country-side but rising to 17% of urban vote.

These results show that the electoral system is not determinative, non-economic issues often motivate vote choices (Kitschelt and Rehm 2014), and the cultural sorting of skilled workers into cities can create geographic polarization even without a majoritarian electoral system (Maxwell 2019). Nonetheless, historically, as the Swedish pattern demonstrates that places with larger welfare states had left parties a greater depth of support outside of urban areas and have maintained this support more extensively over time, and these differences continue to matter today (Rodden 2019).

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the exception of Greece (NUTS3) and Portugal (Concelho). In the US data is gathered at the county level in the US using the County Presidential Election Returns 2000-2016 from the MIT election data, and David Liep’s election database for the earlier years.

<sup>7</sup> This draws on the OECD functional urban area classification. Major cities are defined as the core areas - city and inner suburbs - of major cities, suburbs are the outer areas of the same unit, metropolitan areas - both core and suburb - are included as cities, medium sized areas are combined with towns not classified by the OECD.

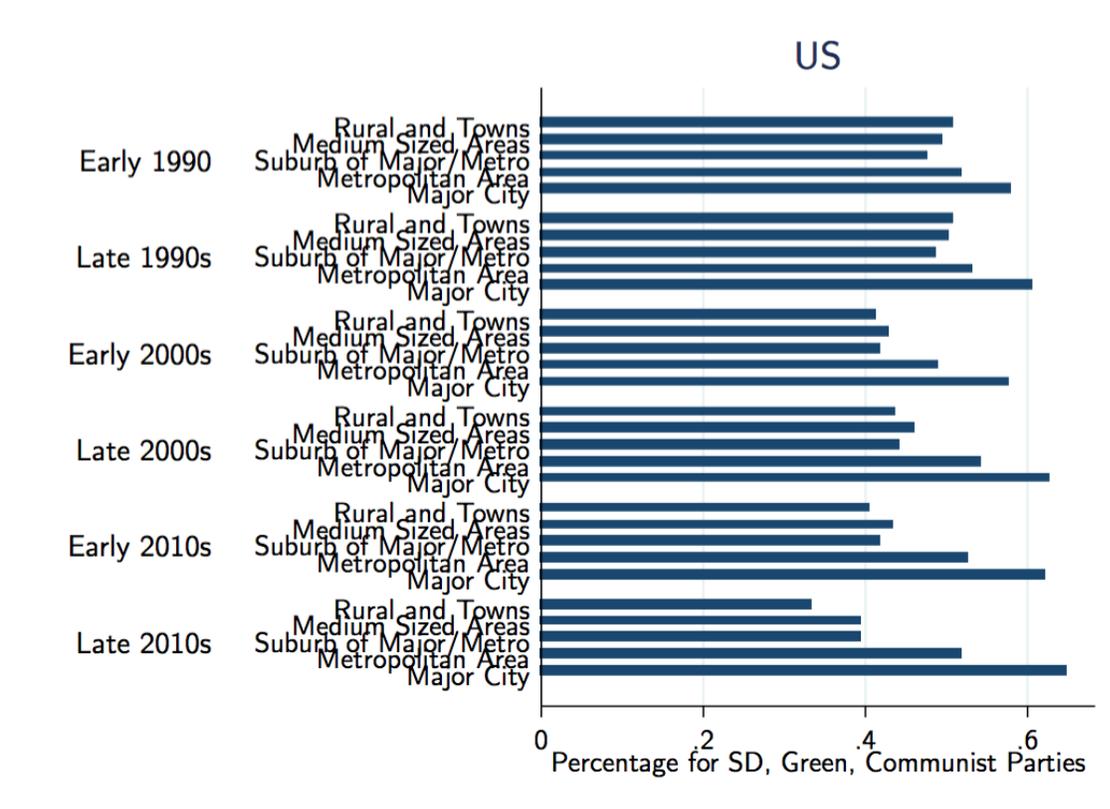


Figure 5a: Voting for the Democratic Party and Rural-Urban Divides

In order to test these claims more systematically, we turn to the individual level. We hypothesize that high-income individuals who work in intangibles-intensive sectors and live in urban areas should behave differently across these environments. In majoritarian countries they should ally with the urban / intangibles poor and be more supportive of decommodifying policies, less supportive of deconcentrating policies, and more likely to vote for the left. By contrast in proportional systems we expect the alliance of urban/intangibles rich and urban/intangibles poor to be much weaker. However, in these latter areas, the urban, suburban and rural middle and lower-income voters have more capacity to align.

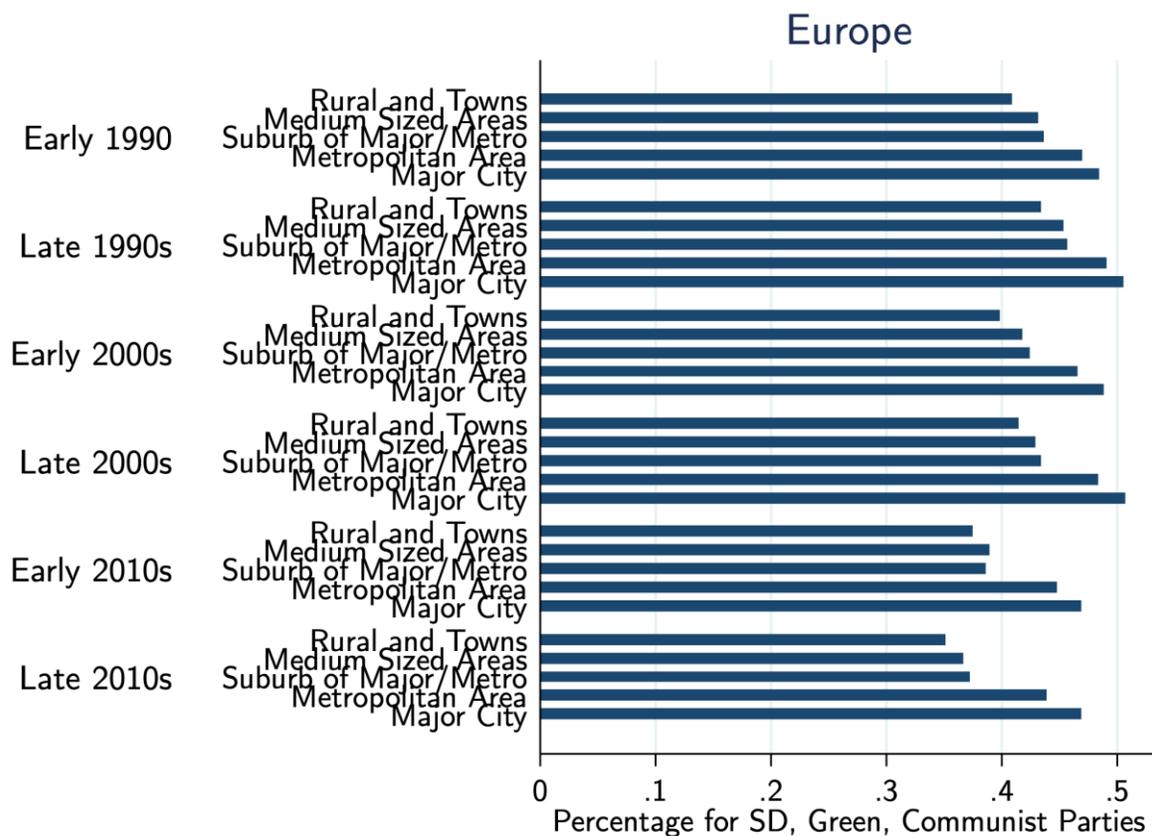


Figure 5b: Voting for Left Parties and the Urban Rural Divide in Europe

We test these claims first with the 2016 Cooperative Congressional Election Study conducted in the United States and several waves of the European Social Survey conducted between 2002 and 2016 with fifteen Western European countries included. In both cases we focus our analysis on the preferences of groups defined first by their income and by the industry they work in, specifically how intangible intensive it is. Our interest in particular is in whether high income groups behave differently when they work in high or low intangibles industries, and in the gap between high- and low-income individuals working in the same sector, across sectors defined by their intangible-intensiveness.

### CCES 2016

We begin with the Cooperative Congressional Election Survey taken before the 2016 Presidential Election, which provides excellent data on household income and on the industrial sector of employment. It also has a number of questions that help us measure attitudes towards decommodification and (less precisely) deconcentration.

The intangible measure is similar to that used earlier at the national level but now captures investment in intangibles as the % of value added in each industry, measured by 1-digit NACE (Rev-2) codes taken from the INTAN-INVEST dataset. The CCES uses a 23 point scale that corresponds closely to NAICS (North American Industry Classification System) - we

match this to the INTAN-INVEST coding. We have data on intangibles-intensiveness for sixteen sectors, however, we have to drop those for which there is no data largely due to measurement issues for the intangibles variable - these are real estate, public administration, education, and health/social work. Thus, our analysis is limited largely to the private sector and excludes individuals employed in private education or health companies, as well as real estate. We also limit our analysis to individuals who are currently employed.

We use a measure of household income that is a sixteen point index from under \$10,000 to over \$500,000. In a number of models we interact this variable with the intangible-intensiveness of an individual's industrial sector. We include dummies for education level (below high school, high school, some college, 2 year degree, 4 year degree, postgraduate), gender, and children living at home and we also include an age variable. In all our analyses we include dummies for the state in which the individual lives and we cluster standard errors at the state level.

Table 1 has six models, each examining a different dependent variable. Models 1 and 2 examine an item asking people how they would wish to balance the federal budget - through raising taxes, cutting defense spending, or cutting domestic spending. Our interest is in where they rank the latter option, since this option most directly connects to decommodification preferences. We recode this variable such that 0 means ranking domestic spending cuts lowest as a priority and 2 means ranking domestic spending cuts as the highest priority. Models 3 and 4 examine the probability of supporting the repeal of Obamacare - another decommodifying policy (albeit with important regionally redistributive effects). Models 5 and 6 examine the probability of supporting greater spending on highways and infrastructure - a potentially deconcentrating policy since much of this spending would connect regions. Finally, Models 7 and 8 examine vote intention - specifically whether the respondent intended to vote for Donald Trump in the 2016 election. Odd numbered models enter the intangible-intensiveness of the respondent's sector directly whereas even-numbered models also include the interaction of intangible-intensiveness with household income.

Our interest is in whether high-income people in intangibles-intensive sectors behave differently from those in tangible-intensive sectors and whether a potential decommodifying 'coalition' between rich and poor is more likely in intangibles-intensive sectors.

	Cut Spending	Cut Spending	Repeal OC	Repeal OC	Infrastru cture	Infrastru cture	Vote Trump	Vote Trump
Intangible Share	-0.371 (0.138)	0.409 (0.263)	-1.107 (0.189)	0.415 (0.507)	-0.047 (0.267)	0.666 (0.623)	-0.780 (0.322)	0.254 (0.532)
Family Income	0.013 (0.002)	0.027 (0.004)	0.015 (0.005)	0.043 (0.011)	0.011 (0.006)	0.024 (0.012)	0.031 (0.004)	0.049 (0.010)
Inc*Intangibles		-0.101 (0.026)		-0.197 (0.065)		-0.096 (0.083)		-0.132 (0.067)
Age	0.002 (0.000)	0.002 (0.000)	0.008 (0.001)	0.008 (0.001)	0.016 (0.001)	0.016 (0.001)	0.031 (0.001)	0.031 (0.001)
Female	-0.062 (0.011)	-0.062 (0.011)	-0.180 (0.026)	-0.181 (0.026)	-0.365 (0.032)	-0.365 (0.032)	-0.393 (0.034)	-0.394 (0.033)
Children	-0.098 (0.013)	-0.097 (0.013)	-0.351 (0.038)	-0.350 (0.038)	0.200 (0.036)	0.201 (0.036)	-0.146 (0.052)	-0.146 (0.052)
Constant	1.283 (0.041)	1.183 (0.043)	0.991 (0.095)	0.794 (0.113)	0.689 (0.158)	0.598 (0.194)	-0.765 (0.131)	-0.898 (0.137)
Observations	23385	23385	23648	23648	23610	23610	19847	19847

Table 1: CSES 2016

We begin by examining Models 1 and 2 with preferences over cutting domestic spending. Model 1 shows that while higher income households prefer cutting spending to lower income households, people working in intangibles-intensive sectors are less supportive of making domestic spending cuts. Model 2 shows that this effect is largely driven by high-income households. This can be seen in Figure 6a. The intangible-intensiveness of a respondent's industry is negatively associated with supporting for cutting domestic spending among high income households (those with household incomes between \$150,000 and \$200,000), whereas for low-income households (\$20,000 to \$30,000) there is no relationship evident. Among those employed in the sectors most dominated by intangible investment, the spending preferences of high- and low-income individuals is indistinguishable. In other words, in such sectors - and the places where these individuals live - a decommodifying coalition is viable.

Models 3 and 4 show a similar story in terms of support for repealing Obamacare. Once again, it is high-income people who are most affected by the intangible-intensiveness of their industry of work. And again we see a potential coalition for decommodification (relatively lower support for repealing Obamacare) between high and low income people in intangibles-intensive sectors in Figure 6b.

Models 5 and 6 examine support for highways and infrastructure spending - a policy that is more deconcentrating than decommodifying. Here we see a different pattern - high income people become marginally *less* supportive of this deconcentrating policy when they work in

intangibles-intensive sectors, though their preferences remain similar to low-income people in those sectors. This pattern can be seen in Figure 6c.<sup>8</sup>

Finally, Models 7 and 8 look at Trump vote intention. Here we see that high-income people in intangibles-intensive sectors are much less supportive of Donald Trump - indeed, their preferences are similar to those with low incomes, regardless of sector. Figure 6d demonstrates this pattern.

To summarize, our analysis of the CCES provides some support for the claim that high-skilled workers in the intangibles sector are more likely to favor decommodifying policies that benefit low-paid workers in their own industries / regions than they are deconcentrating policies that have wider geographical spread. Arguably this has shaped the new coalition of support that the Democrats rely on in elections, though its concentration in urban areas may be politically inefficient (Rodden 2019).

Beyond these divides based around geography and production, decommodifying policies are further undermined by other features of American politics. First, the racialized nature of American politics makes decommodification difficult – low-income white rural voters have often balked at redistribution perceived to benefit urban minorities (Thurston). Second, the status quo bias of the US political system, with its myriad legislative and judicial veto points, means that even should a decommodifying coalition emerge, it may struggle to convert political demand into supply (Kelly and Morgan).

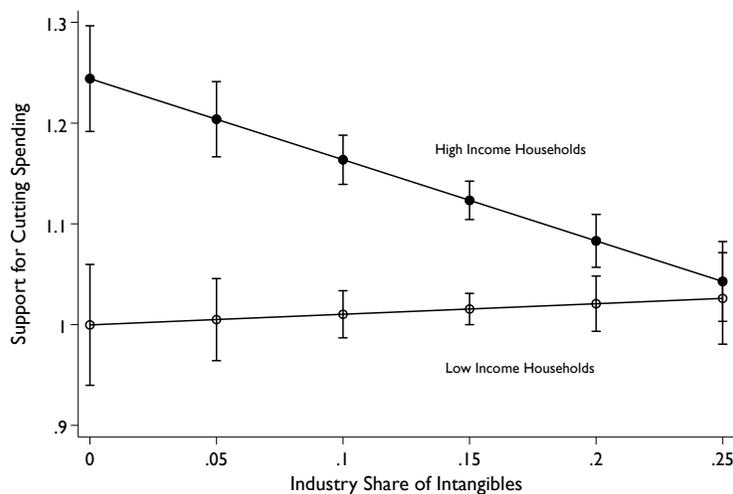


Figure 6a: Intangibles, Income, and Preferences about Cutting Domestic Spending

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<sup>8</sup> The effect is even stronger if we use log intangibles as opposed to the non-logged figure.

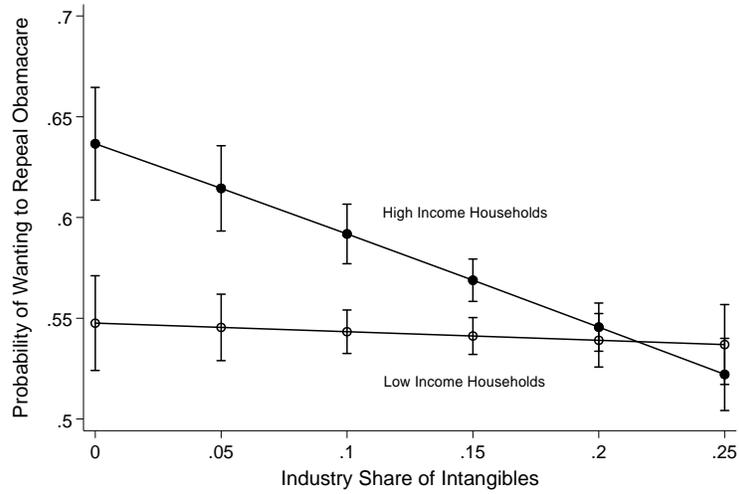


Figure 6b: Intangibles, Income, and Preferences about Repealing Obamacare

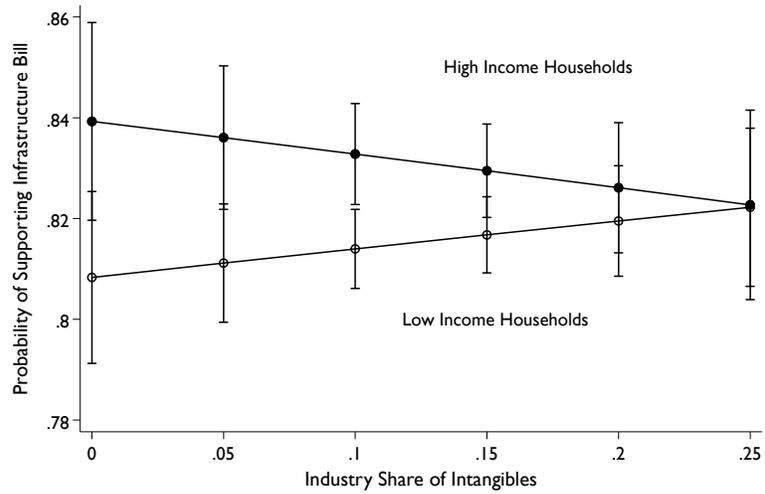


Figure 6c: Intangibles, Income, and Preferences about Increasing Infrastructure Spending

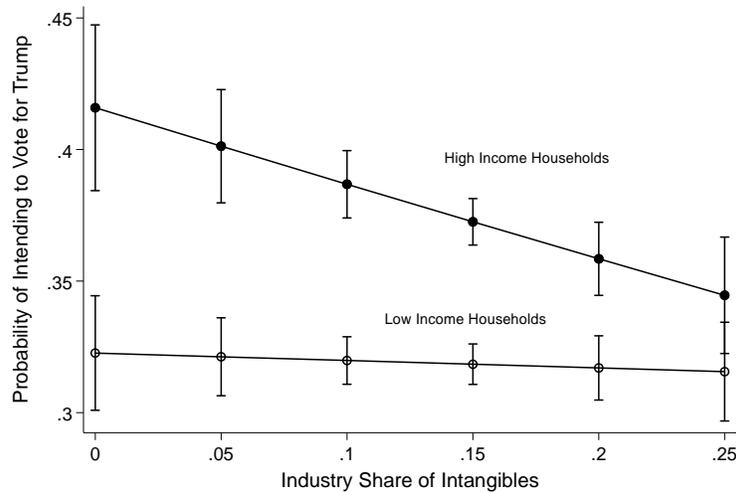


Figure 6d: Intangibles, Income, and Voting Intention

## European Social Survey

We now turn to the European Social Survey (ESS), one of the only cross-national surveys with detailed industry and occupational data. Although we lack enough national variation to talk meaningfully about how existing policies of deconcentration and decommodification might offset these structural forces, we are in these analyses able to identify how the rise of intangibles and global labor markets shape the attitudes of citizens to such policies and to different political parties.

When examining the ESS we find very different patterns to the US. In Europe, by and large, the winners of the rising knowledge economy - those in intangible-intensive sectors or those more driven by international labor markets for skilled human capital - are actually the least supportive of redistribution (decommodifying policies) and are inclined to vote for the right. In the US by contrast this group were relatively supportive of decommodifying policies and unsupportive of the political right.

Instead, in Europe this group's political preferences are much more similar to other wealthy people in different sectors and regions than they are to low-income workers in their industry or region. We argue that this is in part a consequence of different electoral systems. Since proportional systems allow the rich to pool their votes across districts, wealthy workers in intangibles-intensive sectors and regions have no need to develop an urban support coalition with poorer voters. Hence, they will be less supportive of decommodifying policies and more supportive of right-wing parties than in the American context

The intangibles measure is the same as for the CCES (intangible share of sector in a given country in a given year) but we log it because it is right-skewed across countries and time. Results are very similar with the non-logged version. Thus, the first core variable is the log of intangibles as a share of value added in industry  $i$  in country  $j$  for year  $t$ . Again, because data on intangibles-intensiveness is limited to the private sector we exclude public sector workers and those in education, health, and real estate.

We start in Table 2 by estimating linear probability models for support for redistribution - a measure of base support for less commodifying policies for EU-15 countries<sup>ß</sup>. For each model we include controls for age, education (a dummy for no secondary and a dummy for a college degree), gender, having children and having a working spouse. All models are restricted only to those in the labor force. Income is measured as the in-sample percentile of the income distribution. As income is measured as net family income, to measure individual income, Model 2 is estimated using only those with no working spouse (single respondents and core breadwinners). Model 2 is estimated with fixed effects for industry. Our main interest is in the interaction of income with the intangibles variable.

	Redist	Redist	Redist	Vote CR	Vote CR	Vote CR
Age	0.001** (0.000)	0.001 (0.001)	0.001** (0.000)	-0.136*** (0.044)	-0.192*** (0.071)	-0.153*** (0.044)
Female	0.055*** (0.008)	0.055*** (0.009)	0.059*** (0.008)	0.004 (0.003)	0.007** (0.003)	0.004 (0.003)
Degree	-0.091*** (0.012)	-0.086*** (0.012)	-0.088*** (0.012)	0.181** (0.081)	0.140* (0.073)	0.177** (0.074)
No Secondary	0.021 (0.014)	0.031 (0.020)	0.019 (0.014)	-0.373*** (0.097)	-0.306** (0.137)	-0.400*** (0.084)
Partner Works	0.016 (0.010)		0.015 (0.010)	-0.002 (0.030)		-0.007 (0.028)
Children	-0.005 (0.006)	-0.006 (0.010)	-0.006 (0.006)	0.055 (0.050)	0.029 (0.061)	0.047 (0.050)
Income	-0.085** (0.034)	-0.069* (0.034)	-0.097** (0.036)	-0.214 (0.229)	0.065 (0.295)	0.165 (0.197)
Intangibles	0.038*** (0.007)	0.031** (0.011)	0.035*** (0.011)	-0.564*** (0.097)	-0.479*** (0.078)	-0.310*** (0.113)
Inc* Intangibles	-0.067*** (0.012)	-0.062*** (0.019)	-0.058*** (0.012)	0.465*** (0.126)	0.393*** (0.138)	0.286** (0.112)
Constant	-0.091*** (0.012)	-0.086*** (0.012)	-0.088*** (0.012)	0.404 (0.295)	0.201 (0.284)	0.680** (0.302)
Industry Dummies	N	N	Y	N	N	Y
Observations	54,032	25,883	54,032	51,124	24,328	51,124

*Table 2: European Social Survey: Support for Redistribution*

Model 1 in Table 2 shows that exposure to intangibles has a positive direct effect on support for redistribution, but a negative interactive effect with income. This latter effect holds up when limited to primary earners only (Model 2) and when industry dummies are included

(Model 3). Substantively, this effect is large. Figure 7a shows the predicted probability of supporting redistribution, drawn from Model 1. High income people in high-intangibles industries are much more likely to be skeptical of redistribution than are high-income in low-intangible industries and indeed than low income people in high-intangible industries. In other words, whereas in traditional sectors that had low levels of intangibles, the redistributive preferences of high- and low-income individuals are remarkably similar, in industries characterized by high levels of investment in intangibles, there is a huge redistributive preference divide between workers with different incomes. The winners of the rise of intangibles are particularly unfavorable towards redistribution.

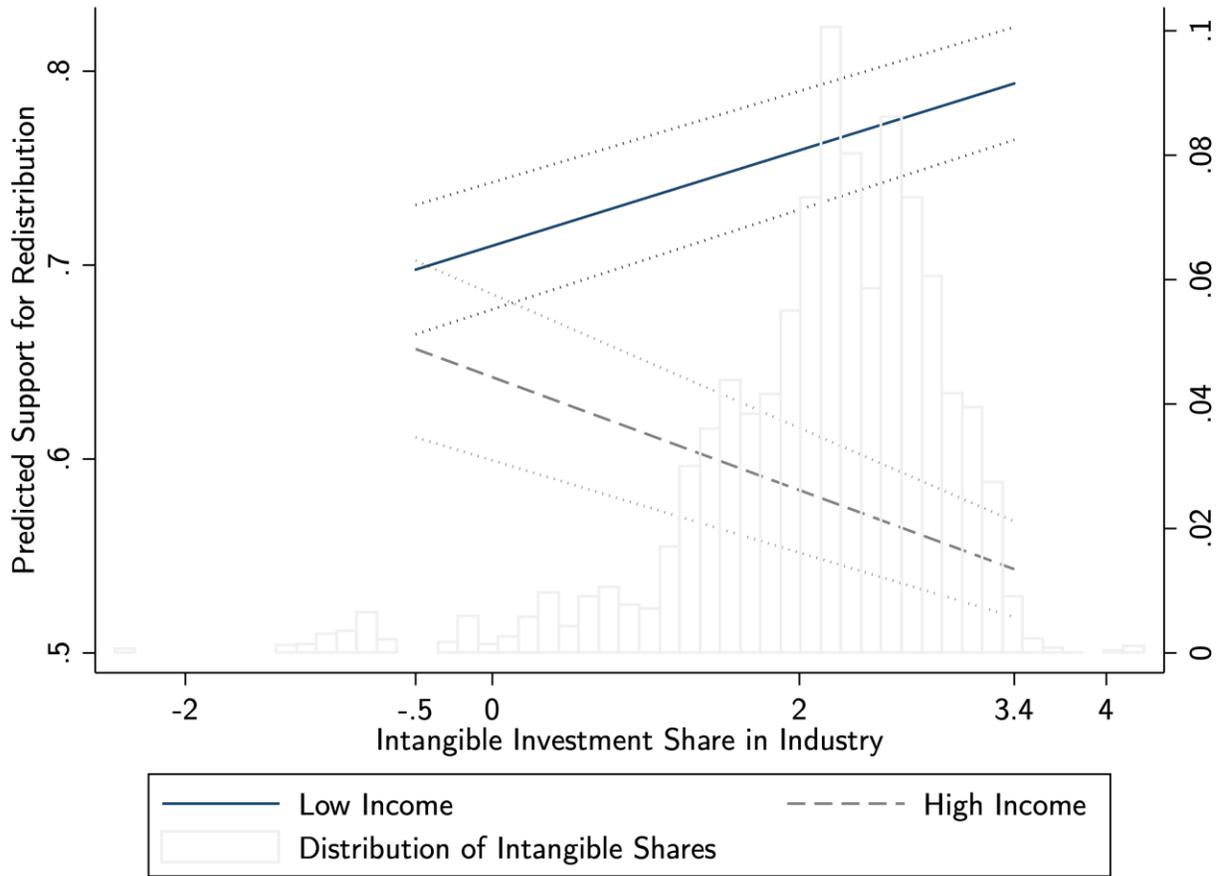


Figure 7a: Predicted Redistribution Support by Income and Industry-Level Investment in Intangibles

The implication is that where individuals are in industries with higher levels of investment in intangibles, their preferences over redistribution are much more greatly shaped by their income than individuals in relatively 'unexposed' industries or occupations. Since the knowledge economy drives both widespread investment in intangibles and appears to be widening intra-occupational wage gaps in America (and indeed elsewhere), we should

expect on aggregate for there to growing divides over redistribution in these booming sectors. The knowledge economy may be underpinning polarization in attitudes to redistribution, despite the more optimistic forecasts in, for example, (Iversen and Soskice 2019).

We see a somewhat similar pattern as regard voting for center-right parties. Again, using the European Social Survey, we run a multinomial analysis of vote choice across 15 countries between 2002 and 2016. While the multinomial model incorporates vote choice across five party families, we present here the results for voting for center-right parties (Liberals, Christian Democrats and Conservative), with the baseline being voting for parties of the left. In sectors with high levels of investment in intangibles, there are large differences between those with high and low income in terms of their propensity to vote for a center-right party. These are especially apparent in the predicted probabilities displayed in Figure 7b. Low income people in sectors with high levels of investment in intangibles are particularly unlikely to vote for the center-right (although those in intangible-light industries are). By contrast high income people in intangible-heavy sectors are not that different from other high-income voters, although they are marginally more likely to vote for a party on the left (not shown).

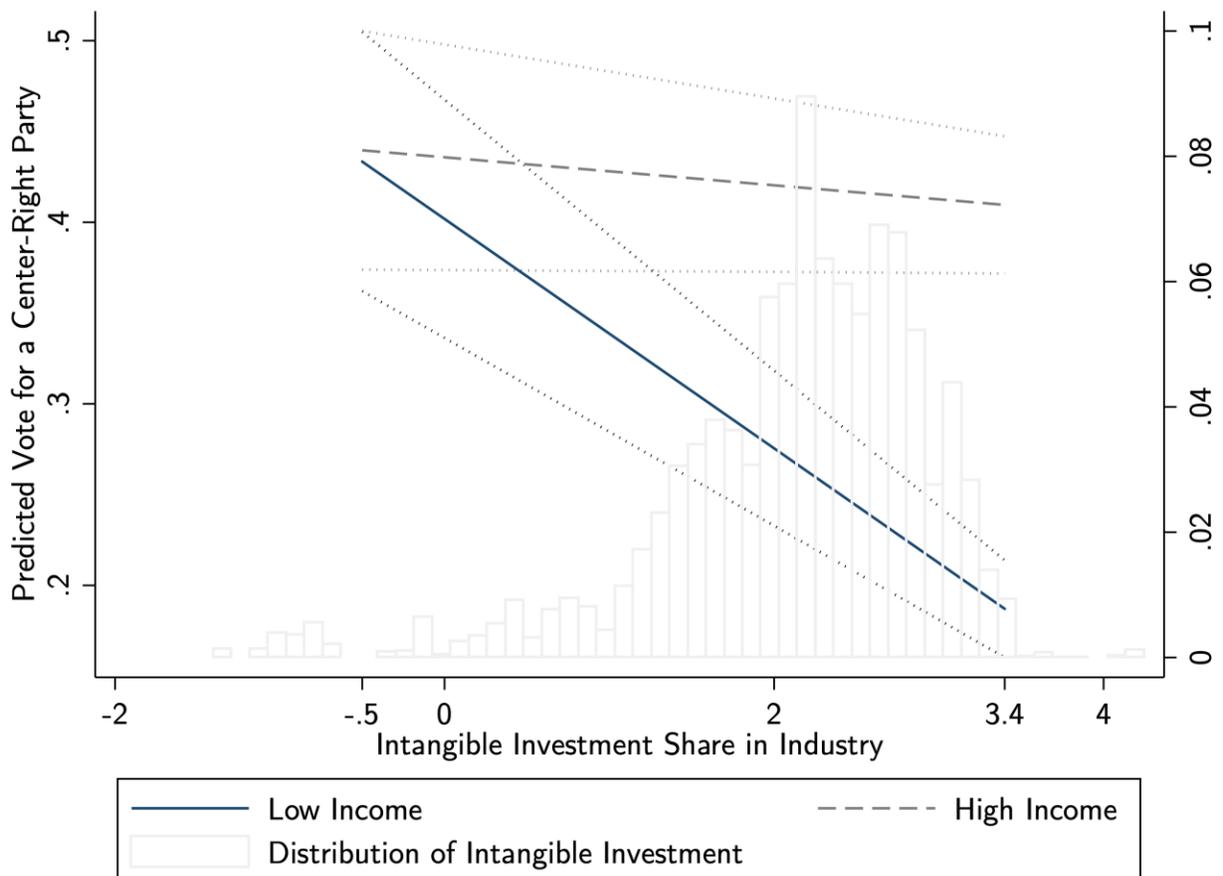


Figure 7b: Probability of Voting Center Right by Industry Intangible Investment and Income

## In Conclusion

In sum, the knowledge economy is almost certainly shaping potential coalitions around policies of decommodification and deconcentration but is doing so differently in America and Europe, in part for reasons related to the different incentives produced by electoral systems. In Europe, because economically disadvantaged groups can make common cause across regions, there is still a clear coalition for policies that are both deconcentrating and decommodifying and which can command majority support. The winners of the knowledge economy may be the 'odd men out' of this array of preferences.

In the US (and also the UK) the geographical nature of the electoral system means groups must ally *within* regions and because the knowledge economy is geographically asymmetrically distributed this means cross-class alliances in areas that specialize in intangible production. The winners of the knowledge economy will ally with low-paid workers in urban areas over decommodifying policies and support center-left parties but will be less keen on deconcentrating policies. The recent experience of the Democrats and the UK Labour Party speak to the proprieties of such an alliance. By contrast the right may end up moving towards deconcentrating policies, such as Boris Johnson's talk of 'leveling up' or Trump's focus on aid to farmers and trade protection.

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