European Journal of Political Economy 76 (2023) 102234

Contents lists available at ScienceDirect

European Journal of Political Economy

journal homepage: www.elsevier.com/locate/ejpe

Clientelism and fiscal redistribution: Evidence across countries

Andreas P. Kyriacou

Departament d'Economia, Universitat de Girona, Campus de Montilivi, 17003, Girona, Spain

ARTICLE INFO

JEL classification:
D31
D72
H11

Keywords:
Clientelism
Fiscal redistribution
Transmission channels
Public goods

ABSTRACT

This article marshals empirical evidence from a cross-section of up to 87 countries to consider the impact of clientelism on fiscal redistribution in the form of direct taxes and public transfers. Clientelism may directly undermine fiscal redistribution towards poorer individuals because their political support is cheaper to buy, political patrons will limit redistribution to keep clients dependent and, moreover, will eschew fiscal policies that target broad categories of citizens based on explicit criteria, and favor instead private benefits that they can disburse to individual clients with a relatively high degree of discretion. The empirical analysis controls for a range of potentially confounding covariates, explores various transmission channels and accounts for the real possibility that more extensive redistributive programs may undermine the strength of clientelism. The results strongly suggest that clientelism is inimical to income redistribution towards the poor through taxes and transfers and, moreover, identify reduced public good provision as one indirect channel through which clientelism may undermine fiscal redistribution.

1. Introduction

Clientelism describes a relationship whereby a citizen or group of citizens (the clients) offer political support to politicians (the patrons), in exchange for benefits that include cash, consumer goods, services (including preferential access to public services and interventions with the public administration on one's behalf), and public sector jobs (see, for example, Kitschelt and Wilkinson, 2007; Hicken, 2011). Clientelistic redistribution implies a relatively high degree of discretion on the part of political operatives over disbursement, and the expectation that recipients will reciprocate with their political support.

The redistributive effect of clientelistic politics is an open question in the literature. Clientelistic politics can, potentially, lead to progressive redistribution because political patrons have an incentive to target poorer voters. Assuming a diminishing marginal utility of income, the poor gain more than the wealthy from a given clientelistic redistribution of resources (see for example, Calvo and Murillo, 2004). Another way of capturing poorer voters' responsiveness to (private) clientelistic benefits, is by assuming that they have shorter time horizons. Scott (1969, p.1150) explains:

> "Perhaps the most fundamental quality shared by the mass clientele of machines is poverty. Machines characteristically rely on suffrage of the poor and, naturally, prosper best when the poor are many and the middle-class few … Poverty shortens a man's time horizon and maximizes the effectiveness of short-run material inducements. Quite rationally he is willing to accept a job, cash or simply the promise of assistance when he needs it, in return for his vote and that of his family."

In line with the expectation that poorer voters will be targeted, Breeding (2011) collected data from voters in and around Bangalore in the Indian State of Karnataka and found that voters with less monthly income reported receiving campaign gifts more than those

E-mail address: andreas.kyriacou@udg.edu.

https://doi.org/10.1016/j.ejpoleco.2022.102234
Received 4 December 2021; Received in revised form 9 March 2022; Accepted 22 April 2022
Available online 28 April 2022

with higher incomes (see her Table 1 on page 73). Harding (2008) exploits data from the Afrobarometer survey covering a sample of sub-Saharan countries to show that after controlling for a range of country-level and individual-level variables, poverty was a strong positive predictor of the probability of being offered private benefits in exchange for political support. Stokes et al. (2013) employ survey data from Argentina and report that around 60 per cent of all benefits went to the poorest 35 per cent of voters, 35 per cent went to the middle 40 per cent and only 5 per cent of benefits accrued to the richest 25 per cent of voters.

However, there are also reasons to expect clientelism to directly undermine the extent of redistribution to poorer individuals. First, a diminishing marginal utility of income also means that it is potentially cheaper for patrons to target poor people (Hicken, 2011). Consistent with this, Breeding's (2011) list of campaign gifts in India are of modest monetary value: "consumer items (e g, cycles, sewing machines, sarees, stainless steel dabbas), ration cards … and other private benefits such as money for school fees" (p.73). Similarly, Stokes et al. (2013) state that their evidence from Argentina and Venezuela indicates that "discrete individual benefits of low monetary value prevailed" (p.160).

Second, despite the relative cheapness of targeting poorer voters, clientelistic parties competing for votes may target voters based on other characteristics such as loyalty or the extent to which they are pivotal or swing voters thus potentially channeling resources away from those most in need. Markussen (2011) uses survey data from southern India where local government politicians and officials have a degree of discretion when assigning Below Poverty Line (BPL) cards giving individuals access to subsidized food and housing and free hospital care (see also, Besley et al., 2007). He finds that while poverty increases the probability of being assigned a card, after controlling for this effect, so too does membership of the ruling party. He concludes that "[i]f the benefits from a poverty alleviation program are targeted to members of the ruling party rather than to the poor, the program will not be effective in reducing poverty and improving intra-village distribution." (p.1736). Stokes et al.'s (2013) survey evidence from Argentina, Venezuela, Mexico and India shows that clientelist parties tend to favor loyalists foremost, swing voters next and opposition supporters least. Importantly, the data from Argentina and Venezuela allows the authors to confirm the bias towards loyal voters even when restricting the sample to lower-income recipients to account for the possibility that loyal voters largely overlap with lower income ones (see Stokes, 2009 for a review of work focusing on Latin American countries indicating that clientelistic parties will tend to target loyalists or swing voters).

Third, clientelism may directly limit redistribution programs favoring poorer citizens because political patrons have an interest in keeping their clients dependent. In her analysis of clientelism in the Italian city of Palermo, Chubb (1981) shows how the Christian Democratic Party provided nonmonetary benefits to the poorer classes (such as issuing construction and commercial licenses, non-enforcement of laws and interventions with the bureaucracy), and argues that it was in the interest of the party to keep its constituents poor and dependent. Alston and Ferrie (1999) focus on the U.S South in the 1930s and describe the patron-client relationships between wealthy white landowners on the one hand, and poor mostly black agricultural workers on the other. Landowners provided benefits to workers – including protection from violence, protection from capricious local and state law enforcement and judicial systems, old age assistance, unemployment insurance and medical care, – in exchange for loyal labor services. Importantly, the economic elites employed political power to undermine the extension to the South of federal social security programs and programs regulating farm workers, because it would have undermined their hold on workers. Anderson et al. (2015) explain how local patrons – wealthy landowners in the Indian state of Maharashtra – offer insurance to workers – for example, covering medical expenses, loss or damage of assets, employment sickness shocks to an earner, – in return for political support in local elections. Their empirical evidence indicates that they then use their political control of local governance to undermine centrally mandated initiatives in the form of programs directly targeted to individuals below the poverty line, non-targeted programs available to all but mostly used by the poor, and employment guarantee schemes guaranteeing public-work related work at the statutory minimum wage. They argue that political patrons purposely weaken these programs to keep their workers cheap and compliant.

In this article, I will consider the impact of clientelism on fiscal redistribution to the poor in the guise of direct taxes and cash or near cash transfers. Arguably, fiscal redistribution through taxes and public transfers will be weaker in societies where clientelism is stronger. One reason is simply that a diminishing marginal utility of income implies that any clientelistic benefits obtained through the tax and transfer system will tend to be modest. Another reason is, again, the incentive of political patrons to undermine the breadth and application of public welfare schemes to keep their clients dependent. A third reason why clientelism may hollow-out the welfare state has to do with targeting but is distinct from the incentive to favor loyalists or swing voters. Instead, the basic insight is that the degree of discretion available to political patrons regarding direct taxes and transfers is relatively limited since public tax and transfer schemes tend to target broad categories of citizens based on explicit criteria. This undermines the capacity of patrons in clientelistic systems to target individuals or small groups with private benefits in exchange for their political support and, consequently they will tend to eschew such general rule-based policies (Kitschelt and Wilkinson, 2007). Ultimately, this will weaken progressive redistribution through the tax and transfer system. Consistent with this, Stokes et al. (2013) draw from the historical experience of Britain and the United States and argue that it was only after the demise of clientelism in these countries, due mostly to economic development driven by industrialization, that welfare states took root there (see also, Fukuyama, 2014).

To explore the impact of clientelism on fiscal redistribution I will turn to a cross-country sample of up to 87 countries. In the past, a cursory look at cross-country data led Kitschelt and Wilkinson (2007, p.332) to state that "among post-industrial capitalist democracies, those with higher levels of clientelism do not exhibit … smaller redistributive social programs", and "[a]mong less developed countries, there also appears to be only a modest, if any correlation between clientelism and income inequality". These authors base this on "impressionistic bivariate observations and comparisons" (p. 333), and acknowledge the need for multivariate econometric analysis. This article undertakes just such an analysis.

On the way, I control for a range of potentially confounding covariates and account for reverse causality or the real possibility that the extent of fiscal redistribution can impact on the strength of clientelist politics. Moreover, I explore a range of variables that a reading of prior work suggests may act as mediators linking clientelism indirectly to fiscal redistribution namely, programmatic

politics, tax evasion, governance quality, public good provision and public employment. The results strongly confirm the direct negative impact of clientelism on fiscal redistribution and suggest lower public good provision as one indirect channel through which clientelism may undermine the progressive redistribution of income through the tax and transfer system.

2. Data and empirical method

To measure clientelism I turn to Duke University's Democratic Accountability and Linkages Project (DALP) that conducted expert surveys on a range of political party attributes during the years 2008 and 2009 (Kitschelt, 2013). These include questions on the degree of effort – on a four point scale ranging from a negligible effort or none at all, to a major effort, – exerted by candidates and parties to attract voters by promising a range of selective benefits including: 1) consumer goods; 2) material advantages in public social policy schemes; 3) preferential access to employment in the public sector or in the publicly regulated private sector; 4) preferential access to government contracts or procurement opportunities or; 5) influence or promise to influence the application of regulatory rules issued by government agencies (including more lenient tax assessments and audits). The indicator I employ is one that sums the scores on each of these questions weighted by party size and as such is increasing with the strength of clientelism. Countries on the low end include Canada, Norway, and Denmark. Countries around the mean are Thailand, Serbia, and Peru. Countries where clientelism is very strong include Mongolia, Senegal, and the Dominican Republic. Fig. 1 displays the distribution of clientelism across countries.[1]

To measure fiscal redistribution, I follow previous work and employ two indicators namely absolute redistribution (Gini market income – Gini disposable income) and relative redistribution that divides the above difference by the Gini of market income (see, among others, Houle (2017); Kyriacou et al. (2018) and citations therein). The inequality data comes from Solt (2020) who clarifies that what separates market income from disposable income are direct taxes, government cash or near cash benefits (including non-contributory pensions, disability assistance, family and child allowances, unemployment benefits, food stamps and other vouchers), and private transfers such as gifts, alimony, or assistance from nonprofit organizations. Private transfers are completely overwhelmed in their effect on the Gini by public transfers thus validating the use of the resultant redistributive indicators as measures for government fiscal redistribution. For the purposes of the study here, the important thing to note is that direct tax and transfer policies target broad categories of citizens, and their application follows specific criteria identifying contributors (on the tax side) and recipients (on the transfer side) – mostly by way of means-testing or universal benefits in the case of the latter (see for example, Tabor, 2002; Joumard et al., 2012).[2]

In practice, the absolute and relative redistribution measures are very similar as attested by the very high correlation between them in my sample (0.989 with a p-value of zero). This said, according to the absolute redistribution indicator, redistribution is highest in Sweden, Hungary, and Germany and around the average in Brazil and South Africa. Based on the relative redistribution measure, redistribution is highest in Sweden, Finland, and Denmark and around the mean in Georgia and Uruguay. Both measures assign the lowest level of redistribution to Ukraine, Indonesia, and Tanzania and, moreover indicate that in these last three countries as well as Honduras and Bolivia government redistribution increases inequality (that is, both indicators have negative values for these countries). Fig. 2 shows the distribution of relative redistribution around the world – an image that is almost identical to that obtained when

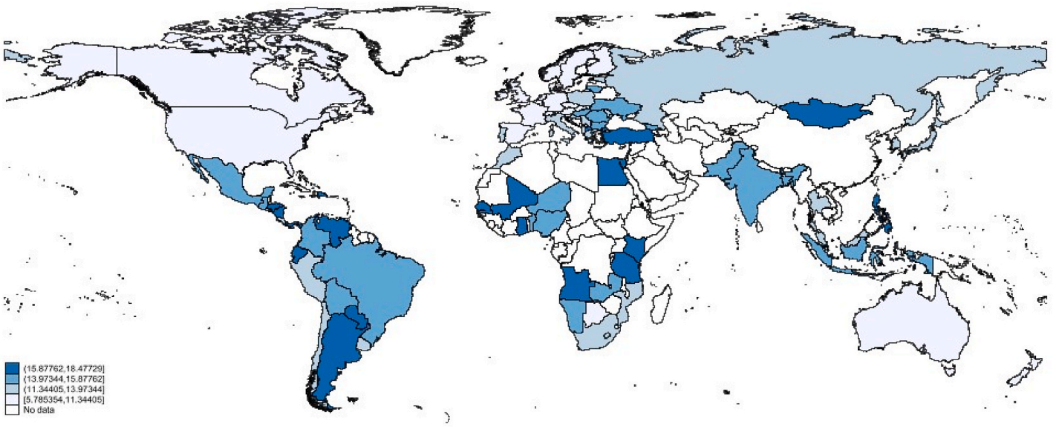

Fig. 1. Clientelism around the world.

[1] For definitions and sources, the descriptive statistics. and the sample and country codes, see Appendices A and B and C respectively. All the time variant variables employed in the study are for the year 2009 or, if unavailable, the closest year to it. There is no substantive change if instead average values over 2008–2009 are used.

[2] Solt (2020, p. 6, fn. 13) explains that because of data limitations, these redistributive indicators exclude indirect taxes, public services, and indirect government transfers such as price subsidies.

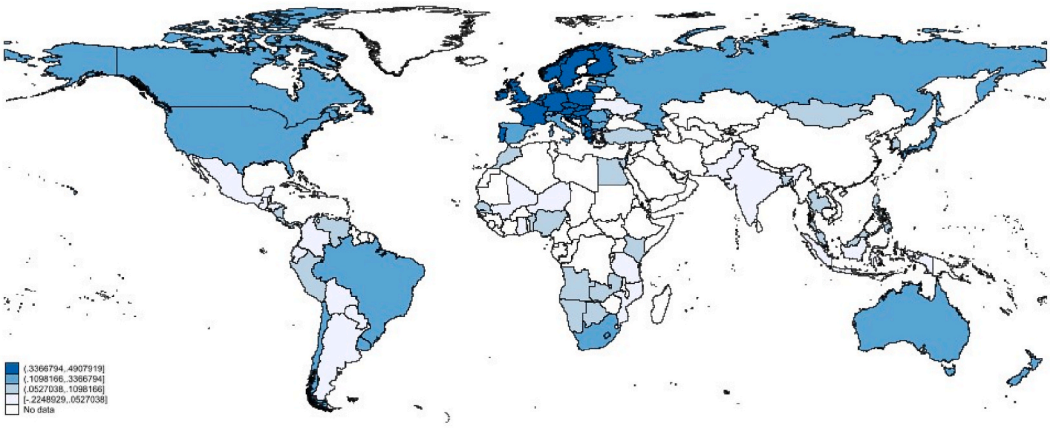

Fig. 2. Relative redistribution around the world.

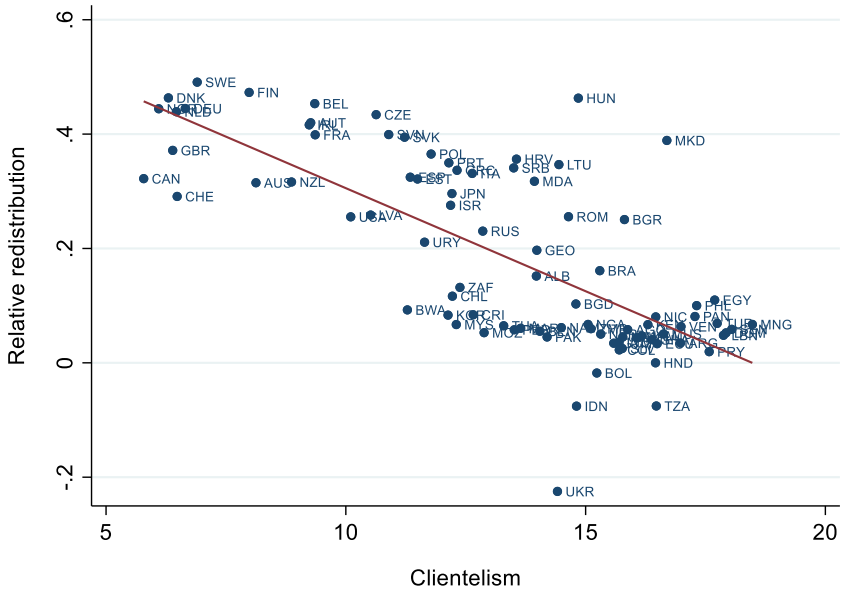

Fig. 3. Clientelism and relative redistribution.

instead mapping absolute redistribution.

A first approximation of the link between clientelism and fiscal redistribution can be seen in Fig. 3. The relationship is clearly negative as attested by a simple correlation coefficient of −0.7288 (p-value of 0). Although not shown, the figure that emerges when employing the absolute redistribution measure is very similar (correlation is −0.7227 and statistically significant at the highest level).

Fig. 3 is silent on the effect of potentially confounding variables or the direction of causality. To address omitted variable bias, I control for real GDP per capita, the level of democracy, market inequality, ethnic heterogeneity, economic growth, the share of the population 65 years of age or older, the degree of urbanization and legal origins. Moreover, I always include regional fixed effects (following the World Bank's regional classification).

GDP per capita is potentially an important covariate because wealthier countries have more resources to redistribute through the tax and transfer system (Houle, 2017) and because relatively wealthier voters are less likely to sell their votes in return for selective benefits (Scott, 1969; Stokes et al., 2013). Controlling for democracy is justified by the possibility that the nature of both clientelism and redistributive politics is likely to vary with the level of democracy. Hicken (2011) states that in democracies clientelism is a tool for generating political support while in autocracies it, moreover, aims for "political subservience". Acemoglu et al. (2015) explain that redistribution in autocracies may be targeted towards different groups with the objective of increasing regime stability while in democracies, it is driven by the demands of the median voter as suggested by Meltzer and Richard (1981), the efforts of economic elites to undermine redistributive pressures, or the efforts of the middle class to redistribute income towards themselves and away from the relatively wealthy but also the relatively poor. Closely related, controlling for market inequality allows us to approximate the

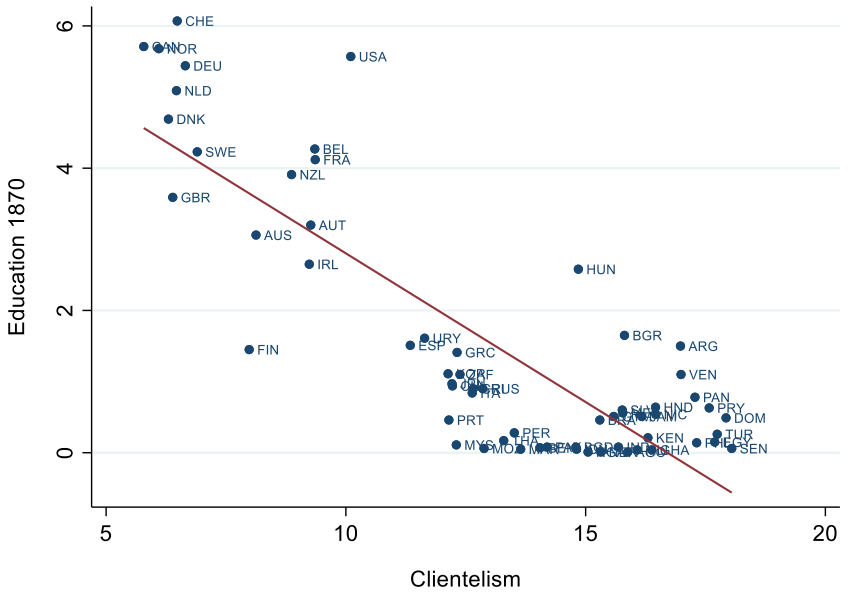

Fig. 4. Clientelism and historical education.

competing interests of these social groups at the same time as it helps account for the fact that a greater degree of economic inequality will buttress the asymmetric social relationships on which clientelism thrives (Scott, 1972).[3]

I, moreover, control for ethnic heterogeneity on the strength of the argument that it makes it more difficult for redistributive coalitions to emerge (Alesina et al., 1999; Alesina and Glaeser, 2004), and because it can boost clientelism since ethnic identification can both increase the likelihood that voters will support co-ethnic political patrons and facilitate clientelistic targeting by the latter (Kitschelt and Wilkinson, 2007). I account for economic growth because the business cycle is likely to affect redistributive demands and the budget constraint (Houle, 2017). I control for the share of the population 65 years of age or older since in countries with comprehensive public pension systems, retirees have negligible market income, thus increasing market inequality and, consequently, exaggerating the redistributive impact of the welfare state (Huber and Stephens 2014). I also control for the degree of urbanization because the greater anonymity of cities, together with the secret ballot, may undermine vote buying (Stokes et al., 2013). Finally, I include legal origins since legal traditions may capture the interventionist nature of states and, specifically, the possibility that redistribution may be greater as we move from common law to civil law and, finally, to Soviet legal traditions.

Reverse causality is another concern. The strength of broad-based redistributive programs is likely to weaken clientelist politics since it will tend to reduce the demand of specific material and non-material benefits by voters (Bardhan and Mookherjee, 2017). In relation to this, Frey (2019) exploits evidence from Bolsa Familia, a conditional cash transfer program in Brazil, aimed at the extremely poor and designed to prevent capture by political intermediaries. He finds that redistribution weakens support for clientelistic parties and argues that this is because it reduces poverty thus reducing poor people's dependence on political patrons. To account for reverse causality, I employ TSLS regressions. As an instrument for clientelism I use the mean number of years of education in 1870. These range from as low as 0.01 years in Angola, Niger, and Nigeria to 6.07 years in Switzerland. Uslaner (2017) has convincingly argued that historical mass education increased the employment options available to individuals and, as a result, reduced reliance on personal patron-client networks. The proposed instrument is strongly and negatively correlated with clientelism as reflected in Fig. 4 and the simple correlation of −0.8371 and a p-value of 0. Of course, a valid instrument must also satisfy the exclusion restriction and I will come back to this below.

3. Results

Table 1 displays the main results. The first two columns are OLS while the latter two are TSLS employing education in 1870 as the instrumental variable. First, a word on the control variables. The positive and statistically significant association between market inequality and redistribution is in line with Meltzer and Richard's (1981) argument that higher inequality should engender

[3] Controlling for market inequality is standard in the empirical literature explaining fiscal redistribution as measured here (see, for example, Mahler et al., 2014; Houle, 2017; Pleninger and Sturm, 2020). Omitting it from the models does not change the results. Inequality can feed clientelism from another, more micro-economic perspective. Pellicer (2009) argues that in high inequality settings, the relatively poor can respond by either mobilizing with other underprivileged voters to demand redistribution or enter patron-client relationships to obtain private benefits. The first option suffers from Olsonian (1965) collective action problems since mobilization is privately costly (including the opportunity cost of lost private benefits), but the potential benefits are non-excludable to free riders. These problems do not emerge in the second case thus making it more likely.

Table 1
Clientelism and fiscal redistribution.

Dependent variable	Absolute redistribution	Relative redistribution	Absolute redistribution	Relative Redistribution
	(1)	(2)	(3)	(4)
	OLS	OLS	TSLS	TSLS
Clientelism	−0.0044**	−0.0117***	−0.0118***	−0.0271***
	(0.0019)	(0.0040)	(0.0039)	(0.0078)
GDP per capita (log)	0.0033	0.0247	0.0048	0.0186
	(0.0081)	(0.0213)	(0.0111)	(0.0235)
Democracy	0.0007	0.0011	0.0001	0.0003
	(0.0015)	(0.0033)	(0.0012)	(0.0026)
Market Gini	0.373***	0.654**	0.239**	0.216
	(0.113)	(0.324)	(0.0943)	(0.192)
Ethnic heterogeneity	−0.0423*	−0.0933*	−0.0450**	−0.0881*
	(0.0220)	(0.0488)	(0.0213)	(0.0463)
GDP growth	0.0012	0.0041	−0.0015	−0.0027
	(0.0013)	(0.0035)	(0.0011)	(0.0025)
% Elderly	0.495***	0.974***	0.412***	0.827***
	(0.139)	(0.294)	(0.145)	(0.308)
Urbanization	−0.0001	−0.0572	−0.0312	−0.0927
	(0.0346)	(0.0908)	(0.0505)	(0.107)
N	87	87	61	61
adj. R^2	0.837	0.804	0.853	0.843
1st stage F statistic			22.8546	22.8546

Notes: Robust standard errors in parentheses. *p < 0.1, **p < 0.05, ***p < 0.01. All regressions include a constant, Soviet, Scandinavian, German, and French legal origin dummies and regional fixed effects (not shown). Mean years of education in 1870 is the instrumental variable employed in the TSLS regressions.

redistributive demands from the relatively poor. The negative association between ethnic heterogeneity and redistribution is in line with the expectation that heterogeneity undermines support for redistributive programs. Finally, the positive association between the share of the elderly and redistribution is as expected since the former will tend to exaggerate the degree of redistribution. Although not shown, the results also indicate that those countries with a Soviet legal tradition tend to redistribute more than those who have a common law tradition (the base category).

Turning now to the variable of interest, the results clearly show that clientelism is negatively associated with absolute and relative redistribution (OLS regressions 1 and 2) and this association is causal or, in other words, clientelism will tend to undermine redistribution (TSLS regressions 3 and 4). Reassuringly, the F statistic from the first stage regression confirms the strength of the chosen instrument since it is considerably above Staiger and Stock's (1997) recommended critical value of 10. Moreover, the larger point estimate corresponding to clientelism in the TSLS regressions (compared to the OLS estimate), is consistent with the expectation that extensive fiscal redistribution may mitigate clientelism.

Clientelism thus undermines fiscal redistribution through taxes and transfers. But beyond the robust statistical significance of the relationship, is the effect of economic or practical significance? As a first approximation, focusing on the point estimates in regressions 3 and 4, the results suggest that a one standard deviation increase in the clientelism measure will reduce redistribution by 0.0395 or more than 50 per cent of a standard deviation of the absolute redistribution measure (regression 3), and by 0.0907 or almost 55 per cent of a standard deviation of the relative redistribution indicator (regression 4).

To further pursue the issue of economic significance, Fig. 5 displays predicted relative redistribution when holding all the covariates at their means. It shows that, all other things equal, going from a clientelist score of around 6 (say Norway) to 12 (Poland, South Korea or Portugal) implies a reduction of relative redistribution from 0.3742 to 0.2117 (0.1625 points) which is approximately the difference in relative redistribution between Sweden on the one hand and Italy or Greece on the other. Although not shown, in the case of absolute redistribution, doubling the clientelism score from 6 to 12 reduces absolute redistribution by 0.0707 points, which is the difference in redistribution between Sweden on the one hand and Serbia or Poland on the other. Or that between Uruguay and Nicaragua or Zambia.

4. Robustness analysis

To pursue the robustness of the empirical findings presented above, in this section I will consider the impact of clientelism on fiscal redistribution in the presence of additional covariates. One group of covariates refers to additional control variables that can potentially impact on both redistribution and clientelism and, as such, induce omitted variable bias if excluded. Another group of variables are those that can act as transmission channels. Controlling for these variables can reduce omitted variable bias as well as account for alternative and indirect causal pathways through which clientelism can impact on fiscal redistribution through taxes and transfers. Beyond, the consideration of additional covariates I will also further strive to shore up the validity of the instrumental variable employed. For brevity, I only report the results when using the relative redistribution measure but nothing substantive changes when instead employing the absolute redistribution one, unsurprising given their high correlation. I also focus on the TSLS

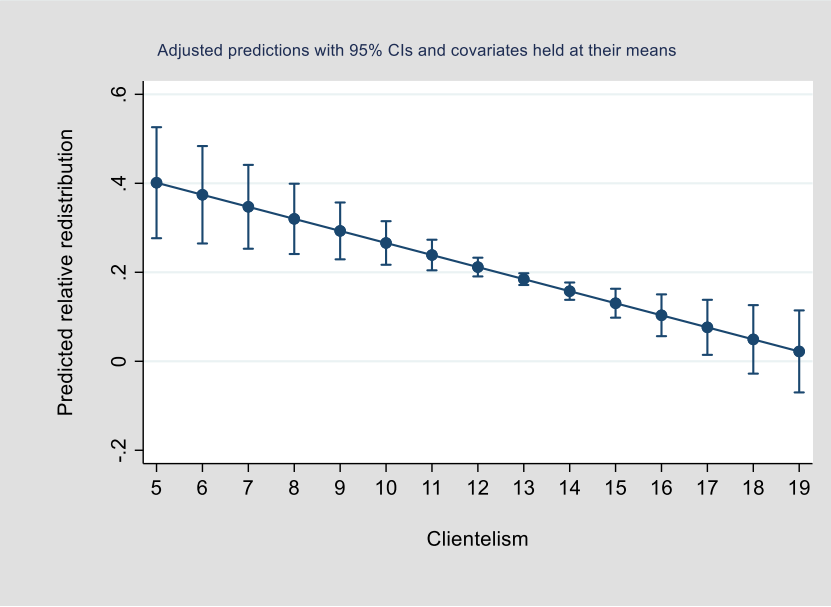

Fig. 5. Predictive margins for various levels of clientelism (relative redistribution).

estimates. The results are maintained with OLS and again, the estimated effect of clientelism is always larger with TSLS.

4.1. Additional controls and instrument validity

Regressions 1 to 8 in Table 2 report the results obtained when regressing redistribution on additional controls potentially impacting on the key variables of interest. The variables are presented according to sample size, from largest to smallest.

In column 1, I control for the possible cofounding influence of different religious denominations, first because Kahl (2005) describes the distinct impact of Catholic and Protestant traditions on the timing and generosity of modern welfare states and second because Kyriacou (2020) argues that compared to horizontal religions (Protestantism), more hierarchical religions (Catholicism, Islam and Christian Orthodoxy) may facilitate social asymmetries of which patron-client relationships are one expression. The share of Protestants and Catholics is positively associated with fiscal redistribution and clientelism continues to impact negatively on it.

In column 2, I return to the DALP which also asks its experts to consider the extent to which political parties strive to attract poor, middle income and wealthy voters with clientelistic promises. I employ measures that aggregate the share of affirmative responses to the country level weighted by party share. The three resultant indicators are strongly correlated with one another (simple correlations range from 0.7266 to 0.8461) suggesting that experts tend to perceive that clientelistic political parties target voter across the income distribution. This said, the results indicate that perceptions of wealthy voters being targeted are negatively associated with fiscal redistribution through taxes and transfers, while the perceived targeting of poor or middle-income voters is not systematically associated with redistribution. On the other hand, the general prevalence of clientelistic politics continues to exercise a negative effect on fiscal redistribution to the poor.

The regression in column 3 accounts for the influence of institutional checks on the strength of the argument that more veto points may lock-in existing redistribution by empowering interest groups against or in favor of welfare programs (Bradley et al., 2003). In column 4 I limit the sample to democracies by excluding those countries with a Polity 2 score equal or below 0 (4 countries). In column 5 I control for the executive branch's ideology ranging from, right, to center, to left, since left-leaning executives are expected to be more redistributive than right leaning ones (Bradley et al., 2003; Huber and Stephens, 2014). The relationship between clientelism and redistribution remains robust.

In column 6, I control for the presence of closed list proportional representation (PR) electoral systems. Accounting for PR systems responds to the insight that they may increase redistribution because they promote center-left government coalitions (Iversen and Soskice, 2009). Moreover, Pellicer and Wegner (2013) provide empirical evidence from Morocco indicating that, compared to majoritarian systems, closed list PR ones tend to harm clientelistic parties. The reason, they argue, is that majoritarian systems provide incentives to cultivate the personal vote since they pit individual candidates against one another. Alternatively, closed list PR systems undermine individual contests and promote party labels thus potentially undermining clientelism and promoting programmatic politics (more on programmatic politics below). Simply, with closed list PR systems, it is impossible for clients to reward their political patron for his or her services. After controlling for electoral rules, the negative relationship between clientelism and redistribution is maintained although the F statistic from the first stage is below the critical value, thus suggesting the weakness of the instrumental variable and thus the possibility that the estimated impact of clientelism is biased and its statistical significance overstated (Murray, 2006).

Table 2
Clientelism and fiscal redistribution: Additional controls.

	Dependent variable is relative redistribution									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Clientelism	−0.0232***	−0.0259***	−0.0263***	−0.0251***	−0.0278***	−0.0320**	−0.0336***	−0.0605*	−0.0254***	−0.0202**
	(0.0054)	(0.0080)	(0.0075)	(0.00756)	(0.0091)	(0.0128)	(0.0125)	(0.0325)	(0.0096)	(0.0085)
GDP per capita (log)	−0.0175	0.0226	0.0125	0.000892	0.0246	−0.0268	0.0287	0.0335	0.0149	0.0184
	(0.0231)	(0.0232)	(0.0230)	(0.0277)	(0.0283)	(0.0289)	(0.0307)	(0.0867)	(0.0268)	(0.0224)
Democracy	−0.0002	0.0005	0.0028	0.0084	0.0086	−0.0046	−0.0075	0.0038	0.0005	−0.0001
	(0.00268)	(0.00241)	(0.00269)	(0.00773)	(0.00654)	(0.00444)	(0.00478)	(0.00816)	(0.00284)	(0.00307)
Market Gini	0.242	0.232	0.267	0.217	0.108	0.490*	0.887***	−0.562	0.224	0.200
	(0.160)	(0.184)	(0.195)	(0.211)	(0.202)	(0.251)	(0.273)	(0.678)	(0.187)	(0.216)
Ethnic heterogeneity	−0.0800**	−0.0958*	−0.0894*	−0.0693	0.0976*	−0.0720	0.0356	−0.0099	−0.0854*	−0.0850*
	(0.0393)	(0.0498)	(0.0462)	(0.0477)	(0.0575)	(0.0696)	(0.0554)	(0.154)	(0.0450)	(0.0489)
GDP growth	−0.0024	−0.00263	−0.00206	−0.00271	−0.00197	−0.00561	−0.00594*	−0.00518	−0.00212	−0.00229
	(0.0023)	(0.00247)	(0.00247)	(0.00328)	(0.00322)	(0.00494)	(0.00352)	(0.00604)	(0.00257)	(0.00266)
% Elderly	1.031***	0.812***	0.792***	0.852***	0.819**	0.952***	0.836*	−0.394	0.920***	0.903***
	(0.299)	(0.309)	(0.300)	(0.299)	(0.350)	(0.358)	(0.440)	(1.225)	(0.301)	(0.312)
Urbanization	0.0391	−0.0965	−0.0957	−0.0627	−0.192	−0.0219	−0.230	−0.128	−0.0291	−0.0981
	(0.0955)	(0.105)	(0.103)	(0.122)	(0.152)	(0.172)	(0.171)	(0.391)	(0.112)	(0.111)
Share of Catholics	0.135***									
	(0.0454)									
Share of Protestants	0.151***									
	(0.0542)									
Share of Muslims	0.0465									
	(0.0380)									
Share of Orthodox	0.0221									
	(0.0646)									
Targeting poor		0.0020								

(*continued on next page*)

Table 2 (*continued*)

	Dependent variable is relative redistribution									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		(0.0022)								
Targeting middle income		0.0006								
		(0.0020)								
Targeting wealthy		−0.0045*								
		(0.0026)								
Institutional checks			−0.0003							
			(0.0028)							
Ideology					−0.0022					
					(0.0067)					
Electoral rules						−0.0339				
						(0.0260)				
Ethnic inequality (between)								0.0322		
								(0.0395)		
Ethnic inequality (within)								−0.0035		
								(0.0166)		
Contemporary education									−0.0014	
									(0.0090)	
Governance quality									−0.0160	
									(0.0323)	
Individualism										0.0840
N	61	61	60	56	46	45	44	41	58	54
adj. R^2	0.878	0.842	0.848	0.855	0.867	0.808	0.823	0.208	0.859	0.860
1st stage F statistic	21.4094	21.9786	23.3515	20.3907	10.6736	7.3387	11.7006	2.4905	14.3104	11.1268
- Education 1870										−0.6296** (0.2617)
- Historical Pathogen prevalence										1.6382* (0.8507)
Over id p-value										0.5420

Notes: Robust standard errors in parentheses. *p < 0.1, **p < 0.05, ***p < 0.01. All regressions include a constant, Soviet, Scandinavian, German and French legal origin dummies and regional fixed effects (not shown). All regressions are TSLS employing mean years of education in 1870 as the instrumental variable, except for regression 10 that, moreover employs historical pathogen prevalence.

It is important to note that the redistributive variables employed are calculated from the available market and disposable income Ginis published by Solt (2020). Because of data unavailability, in some cases these contain observations that are imputed from inequality in other countries. To address this, Solt (2020) provides the corresponding redistributive variables for a more restricted sample of countries that contains only observations on which he has direct data on both market and net income inequality. The main results reported in this article are robust to the use of this data and, indeed, if anything, the estimated impact of clientelism is stronger (regression 7).

In column 8 I control for between and within ethnic income inequalities since Houle (2017) has argued that inequality among members of the same ethnic group should lead to demands for redistribution while inequality between ethnic groups should not, since wealthier individuals may be less supportive of fiscal redistribution if it benefits members of other ethnic groups. Reduced support for policies that would benefit all the poor regardless of ethnic background, together with the increased salience of ethnic ingroups, and the lack of credibility of promises by politicians that if elected they will reduce entrenched ethnic inequalities, may lead parties to rely on clientelistic redistribution (Wang and Kolev, 2019). The point estimate of clientelism is still negative and statistically significant but the F statistic from the first stage is far below the critical value again signaling potential problems due to weak instruments.

In column 9, I control for contemporary education levels and the quality of governance. Controlling for the former accounts for the possibility that more education can reduce reliance on patrons as well as directly impact on the redistributive preferences of voters (on the effect of education on redistributive preferences see Alesina et al., 2011). Moreover, it helps shore up the exclusion restriction in the TSLS estimates since historical education may impact on redistribution through contemporary education levels.

The exclusion restriction is further reinforced, and omitted variable bias reduced, when controlling for governance quality in the guise of an effective and independent public administration, the rule of law and the absence of corruption. In relation to the exclusion restriction, Uslaner (2017) has associated historical education to contemporary governance quality and the latter has been linked to redistribution. Specifically, governance quality is likely to enhance redistribution through taxes and transfers because, on the one hand, it implies a greater capacity to raise taxes and design and implement transfer programs (Kyriacou et al., 2018) and, on the other hand, it reduces the scope for economic elites to neutralize redistributive pressures by controlling policy makers and administrators (Sánchez and Goda, 2018). With regards to omitted variable bias, governance quality can also undermine clientelism. Thus, an effective and independent public administration limits the capacity of patrons to distribute private benefits to their clients. Indeed, from a historical perspective, Shefter (1977, 1994) has argued that clientelism flourished in countries where democratization occurred before the development of a Weberian-style public administration, since politicians could easily access state resources to favor clients. Where rational public administrations emerged prior to democratization, they acted as a break on clientelism. The relationship between clientelism and redistribution is robust in the presence of these additional controls.

In the last column of Table 2 I pursue the issue of instrument exogeneity. To do this I employ historical pathogen prevalence from Murray and Schaller (2010) as an additional instrument. The reasoning is that, historically, a heavier disease burden increased the perceived risk of infection when interacting with strangers and led people to limit their social interactions within the context of identifiable ingroups. This is known as the parasite-stress theory of values and sociality and is due to Thornhill and Fincher (2014) who moreover argue that these historical responses persist over time and are expressed today in the guise of cultural traits – most notably individualism versus collectivism – reflecting the salience of ingroups. Strong ingroups also tend to be hierarchically structured. Hofstede et al. (2010, p.103-104) explain that "[i]n cultures in which people are dependent on in-groups, these people are usually also dependent on power figures". Thus, it is plausible to argue that a heavier historical disease burden is reflected in contemporary societies in the form of hierarchical ingroups and the prevalence of such groups facilitates asymmetric patron-client relationships (Kyriacou, 2020). In regression 10, I also control for a country's individualism score since it has been directly linked to lower net income inequality (Nikolaev et al., 2017), greater fiscal redistribution (Kammas et al., 2017; Gründler and Köllner, 2020) and, more generally, to greater economic freedom (Nikolaev and Salahodjaev, 2017). The strength of both instruments, historical education, and historical disease burden, is suggested by the first stage F statistic as well their individual significance. The positive impact of historical pathogen prevalence on clientelism is as expected. The p-value from the over-identification test exceeds 0.100, meaning that we cannot reject the null hypothesis that the instruments are exogenous. Finally, the negative effect of clientelism on redistribution persists.

4.2. Transmission channel analysis

In this section I will review a range of variables that can potentially act as indirect channels through which clientelism can impact on fiscal redistribution through taxes and transfers. Specifically, I will explore the extent to which clientelism affects fiscal redistribution through its effect on programmatic politics, shadow economies, governance quality, public good provision and public sector employment. This requires first conceptually establishing the causal chain from clientelism to the mediator variable and from there to redistribution. Then, one must regress the mediator variable against the clientelism measure in the context of TSLS estimations to see whether clientelism does in fact impact on the mediator. Finally, I will include the mediator as an additional covariate in TSLS regressions of fiscal redistribution on clientelism to see if the mediator picks up some, or all, of the direct impact of clientelism on redistribution (for the method see Wu and Zumbo (2008) and for an application see Krieger and Meierrieks (2019) [4]).

Consider first the mediating effect of programmatic politics. Programmatic politics is conducted by parties that "generate policy,

[4] These latter authors follow the same approach except that when regressing their dependent variable on their key explanatory variable and the mediator they do not apply TSLS, thus raising the specter that the estimated impact of their explanatory variable of interest is biased due to reverse causality.

Table 3
Clientelism and fiscal redistribution: Transmission channels.

Panel A: effect of clientelism on transmission channel					
Dependent variable is corresponding transmission channel					
	(1)	(3)	(4)	(5)	(6)
Transmission channel →	Programmatic parties	Shadow economy	Governance quality	Public goods	Public employment
Clientelism	−0.0273*	0.0308*	−0.182***	−0.0073**	−0.0217
	(0.0144)	(0.0164)	(0.0584)	(0.0029)	(0.0143)
N	61	60	61	42	49
adj. R^2	0.625	0.279	0.861	0.644	0.472
1st stage F statistic	22.8546	21.8407	22.8546	9.5551	11.8236
Panel B: effect of transmission channel on redistribution					
Dependent variable is relative redistribution					
Clientelism	−0.0296***	−0.0266***	−0.0295**	−0.0142**	−0.0367***
	(0.0087)	(0.0075)	(0.0131)	(0.00685)	(0.0123)
Programmatic parties	−0.0917				
	(0.0883)				
Shadow economy		−0.0186			
		(0.0612)			
Governance quality			−0.0135		
			(0.0380)		
Public goods				1.317***	
				(0.477)	
Public employment					0.0171
					(0.117)
N	61	60	61	42	49
adj. R^2	0.828	0.844	0.827	0.895	0.806
1st stage F statistic	20.4696	21.4232	12.6137	9.2159	10.0137

Notes: Robust standard errors in parentheses. *p < 0.1, **p < 0.05, ***p < 0.01. All regressions include a constant, the full set of control variables shown in Table 1 as well as Soviet, Scandinavian, German and French legal origin dummies and regional fixed effects (not shown). All regressions are TSLS employing mean years of education in 1870 as the instrumental variable. The estimated impact of clientelism on redistribution in the absence of the mediator is - 0.0271 (regression 4, Table 1).

mobilize support, and govern, on the basis of a consistent and coherent ideological position" (International IDEA, 2012). Programmatic parties would be expected to undertake programmatic redistribution characterized by the transfer of resources according to well-defined general rules from categories of contributors (on the tax side) to categories of beneficiaries (on the spending side), in the hope of electoral benefit but without the condition of reciprocal support (Kitschelt and Wilkinson, 2007). It could be that clientelism harms programmatic redistribution because it undermines the emergence of programmatic parties. It may do so because it is difficult for voters in clientelistic systems to shift away from political patrons towards programmatic parties. Those that do so risk losing the private benefits of clientelistic exchange and may calculate that any benefits from such a shift accrue also to voters who don't vote programmatically (Lyne, 2007). Similarly, political patrons who shift towards programmatic promises may lose electoral contests to those who don't.

Consider next the mediating effect of the shadow economy. To the extent that the shadow economy is relatively large, this will directly underestimate declared market income and consequently impact on fiscal redistribution. The link between clientelism and the shadow economy has been drawn by Bardhan and Mookherjee (2017) who suggest that one way that patrons serve clients is by weakening the enforcement of property rights and regulations. They also argue that patrons have an interest in promoting the informal economy as a way of keeping constituents poor and dependent. These authors draw from Holland's (2016, p.232) concept of forbearance defined by her as the "intentional and revocable nonenforcement of law". It can be progressive insofar as law breaking by poorer individuals is tolerated more than that done by richer ones. But, in the context of tax evasion, there is no expectation that this is the case. It could just as well be regressive.

Previously, I argued that governance quality can enhance income redistribution through taxes and transfers at the same time as it can weaken clientelism since it can limit the capacity of patrons to distribute benefits to their clients. But it is also possible for clientelism to impact on governance quality. According to Hicken (2011) clientelism can drive corruption because it reduces the ability of voters to hold politicians accountable thereby creating an environment of impunity. Moreover, clientelism – in the guise of discretionary access to public services, the circumvention of laws and regulations, and non-merit-based staffing of the public administration, – can undermine the effectiveness of the public administration and the rule of law.

Another potential mediator variable is the provision of public – health and education – services. When such services are provided, they are likely to reduce market inequalities at the same time as their financing necessarily increases the tax burden. The resultant redistributive effect depends on the one hand, on the reduced scope for redistribution due to the reduction of market inequality, and on the other hand, on the redistributive effect of the greater tax burden which in turn depends on tax progressivity. Clientelistic systems

will tend to undersupply public health and education because – like tax and transfer schemes - they cannot target specific individuals in exchange for their political support. In the context of new democracies, Keefer and Vlaicu (2008) argue that promises by politicians to provide public goods are not credible. Credibility is established over time. Instead, politicians seek votes through intermediaries or patrons who already have established relationships with clients. These patrons do not have an interest in public goods because they benefit non-clients as well as clients. They prefer private benefits aimed at individuals. This results in the over-provision of private benefits and the under-provision of public goods in newer democracies (for empirical evidence which, moreover, focuses on the negative effect of clientelism on the provision of public health and education see: Keefer and Khemani, 2004, 2005; Keefer, 2007; Khemani, 2015).

A final and related mediator variable is public sector employment. Robinson and Verdier (2013) argue that in clientelistic political systems, politicians will tend to favor the distribution of public sector jobs to clients over direct transfers. Like Keefer and Vlaicu (2008), these authors propose that patrons face a credibility problem when making promises to voters. Promises by patrons to potential clients must be self-enforcing to be credible. Assuming that public sector jobs can be lost if voters do not offer continuing support to patrons, promising public sector jobs is self-enforcing because they tie the continuous utility of clients to the success of patrons. Direct transfers may provide a one-off benefit and once given they cannot be withdrawn. Clientelism can potentially impact on redistribution as measured here, by increasing the public sector wage bill and thus the tax burden faced by wealthier individuals.[5]

In Table 3 I show the empirical results exploring the transmission channels. Panel A reports the effect of clientelism on the potential mediators while in panel B I report the impact of clientelism on redistribution in the presence of the transmission channel. To measure the strength of programmatic politics, I return to the DALP data that also publishes the CoSalPo index reflecting expert perceptions on the extent to which parties make appeals across a range of programmatic dimensions namely, social spending on the disadvantaged, the state's role in the economy, and public spending. The resultant indicator is again weighted for party size and is increasing with the strength of programmatic politics. Regression 1 of Panel A shows that the impact of clientelism on programmatic politics is negative and statistically significant at the 10% level. The relatively weak statistical association is consistent with the observation that political parties tend to pursue both clientelistic and programmatic strategies aimed at different types of voters, with the difference across party systems being the emphasis put on either strategy (Hicken, 2011; Luna et al., 2014). Turning now to Panel B, it does not support the idea that clientelism may reduce redistribution through taxes and transfers by weakening programmatic politics. The same can be said for the mediating effect of shadow economies, governance quality and public sector employment. Shadow economies and governance are affected by clientelism as expected (Panel A), but they do not in turn affect fiscal redistribution (Panel B). Public employment is statistically insignificant in both panels.

I do however find a mediating effect emerging in the case of public goods which I measure as the sum of public health and education spending as a share of GDP. As shown in column 5, clientelism impacts negatively on public goods (Panel A) and their provision has a positive and statistically significant effect on fiscal redistribution (Panel B). Recall from regression 4 in Table 1 that the estimated impact of clientelism on fiscal redistribution in the absence of mediator variables was −0.0271. In the presence of public goods, it is reduced to −0.0142. Thus, not accounting for public goods overestimates the direct negative impact of clientelism on fiscal redistribution. Part of the estimated effect of clientelism on redistribution seems to go through the reduced provision of public goods – fewer public goods reduce fiscal redistribution perhaps because of a lighter tax burden borne by relatively better off individuals. While not shown, this result is maintained when, moreover, controlling for public sector employment to account for the possibility that a significant part of public spending in health and education in developing countries may go to hire workers in the context of clientelistic exchange (Keefer and Khemani (2004, 2005); Keefer (2007)). It is also robust to controlling for experience with democracy to account for Keefer and Vlaicu's (2008) argument that the negative effect of clientelism on public good provision is more likely in young democracies.

Taken together these results suggest that public good provision mediates the effect of clientelism on redistribution through taxes and transfers. However, a note of caution is in order. The mediating role of public goods emerges from a reduced sample of countries and the first stage F statistic is marginally below the critical value. Moreover, to reveal the effect of spending on public health and education policies on fiscal redistribution, we require empirical evidence on how spending on these policies affects both the tax burden and tax progressivity. It would also be necessary to consider if spending on public health and education impacts on public transfers. For example, it could be that reduced spending on these policies potentially provides fiscal space for alternative fiscal instruments including transfers. Data limitations mean that we cannot currently consider these issues in the context of the empirical exercise conducted here. In addition, and as explained by Wu and Zumbo (2008), one can show that the key explanatory variable (clientelism) affects the mediator variable, but finding that the latter has a significant impact on the dependent variable (redistribution) does not guarantee that it causes it since it could be just as well that the mediator is picking up the effect of a third omitted variable or that the outcome variable affects the mediator. To deal with reverse causality one would need valid instruments for the mediator variables, above and beyond the instruments already employed as a source of exogenous variation of the clientelism measure. Moreover, the mediation analysis requires that the key independent variable precedes the mediator which itself precedes the dependent variable. This suggests the convenience of employing lags of different lengths in the variables of interest. How long the lags should be is difficult to know theoretically however, and thus it is an open question that further empirical analysis could attempt to answer. Considering these

[5] Staffing the public sector with party loyalists – a practice known as bureaucratic clientelism, – can be pursued by political parties as a way "to secure power and maintain a party's electoral base." (Lyrintzis, 1984, p.103).

concerns, the relationships reported in this subsection are more suggestive of the underlying mechanisms rather than conclusive evidence of causal relationships (see also, Krieger and Meierrieks, 2019).[6]

5. Conclusion

Clientelism is expected to directly undermine fiscal redistribution to the relatively poor for three reasons. First, a diminishing marginal utility of income implies that their political support is cheaper to buy. Second, political patrons have an incentive to limit the extent of progressive redistribution to keep their clients dependent. Third, political patrons are likely to eschew rule-bound and broadly-targeted tax and transfer policies in favor of discretionary and private benefits targeting individual clients. I consider the impact of clientelism on fiscal redistribution based on a cross-country sample of up to 87 countries and indicators of redistribution that reflect the gap between market and disposable income inequality and thus the redistributive effect of direct taxes and social transfers. The empirical analysis accounts for a large range of potentially confounding variables, the likelihood that the extent of income redistribution can itself impact on the strength of clientelistic politics, and a range of variables through which clientelism can indirectly affect fiscal redistribution. Through it all, I find that clientelism is inimical to the progressive fiscal redistribution of income. The economic impact of clientelism is quantitatively large since a one standard deviation increase in the clientelism measure, will reduce fiscal redistribution by between 50 and 55 per cent of a standard deviation of the redistribution indicators employed. By way of illustration, that means that the lower level of relative redistribution in Greece compared to Austria can be entirely explained by the greater strength of clientelism in the former. The examination of potential transmission channels also suggests the role of public goods in the guise of public health and education services. Clientelism can be inimical to the provision of such public goods and this in turn may undermine fiscal redistribution because it implies a reduced tax burden borne by the relatively wealthy.

Future empirical work should focus on how clientelism may impact on the full gambit of specific tax and spending policies that constitute the fiscal redistribution of income. In relation to this, data on indirect taxes would be welcome given the relative importance of such taxes in developing countries. Considering the impact of clientelism separately on taxes and transfers would also help illuminate the transmission channels – among them public good provision – through which clientelism may affect fiscal redistribution. Similarly, a deeper examination of transmission channels should deal with potential endogeneity concerns as well as the expectation that it may take some time for the effect of clientelism and the mediator variables to be transmitted. These research areas could benefit greatly from indicators tracking clientelism over time. This would moreover allow us to apply estimation techniques that account for the influence of time invariant omitted variables in a fuller way. While the generation of time-series-cross-section indicators of clientelism undoubtedly requires a concerted research effort, it is surely justified considering the strong negative impact of clientelism on welfare states reported in this article.

Declaration of competing interest

I declare that I there is no conflict of interest generated by the funding received for this project.

Data availability

Data will be made available on request.

Acknowledgments

The author would like to thank the following projects for funding support: PID2019-104723RB-I00, PID2020-113452RB-I00 (Ministerio de Ciencia e Innovación). Open Access funding was provided thanks to the CRUE-CSIC agreement with Elsevier.

Appendix A. Variable definitions and sources

Variable	Definition	Source
Absolute redistribution	Gini market income-Gini disposable income.	Own calculations based on Solt (2020)
Relative redistribution	(Gini market income-Gini disposable income)/Gini market income.	Own calculations based on Solt (2020)
Absolute redistribution	Ibid, but for restricted sample.	Solt (2020)
Relative redistribution	Ibid, but for restricted sample.	Solt (2020)
Clientelism (general)	As defined in the text. Corresponds to variable b15nwe.	Kitschelt (2013)
GDP per capita (log)	Logarithm of real GDP per capita at constant prices.	Penn World Table 9.1

(*continued on next page*)

[6] I do take one step in the direction of addressing the timing issue by repeating the regressions in Table 3 using the 2010 value for the mediator variables and the 2011 value for the redistributive measures. The results are maintained.

(*continued*)

Variable	Definition	Source
Democracy	Competitiveness of elections, recruitment and participation, and constraints on the executive.	Marshall (2020)
Market Gini	Gini index based on market income.	Solt (2020)
Ethnic heterogeneity	The probability that two randomly selected individuals from a population belong to different groups, computed as one minus the Herfindahl index of ethnolinguistic group shares.	Alesina et al. (2003)
GDP growth	Real GDP growth.	World Development Indicators
Share of elderly	Population ages 65 and above (% of total population).	World Development Indicators
Urbanization	Urban population (% of total population).	World Development Indicators
Legal origins	Soviet, Scandinavian, German and French legal origin dummies (English common law dummy is the omitted category).	La Porta et al. (2008)
Historical education 1870	Mean number of years of education in 1870.	Morrison and Murtin (2009)
Religious affiliation	Respectively, share of Catholics, Protestants, Muslims or Orthodox in 2000.	North et al. (2013)
Clientelism targeting poor, middle income or wealthy	As defined in the text. Corresponds to variables b9_1, b9_2 and b9_3 respectively.	Kitschelt (2013)
Institutional checks	Starts off with a value of one and rises with competitiveness of executive elections, the existence of additional legislative chambers, divided government, the number of coalition parties or inter-party ideological distance.	Cruz et al. (2018)
Political ideology	Political orientation of the executive ranging from Right (1) to Center (2) to Left (3).	Cruz et al. (2018)
Electoral rules	Dummy variable selecting for closed lists interacted with dummy variable taking the value of 1 if candidates are elected based on the percent of votes received by their party and/or the sources specifically call the system "proportional representation". "0" otherwise.	Cruz et al. (2018)
Ethnic inequality (between)	Income inequality between ethnic groups.	Houle (2017)
Ethnic inequality (within)	Income inequality within ethnic groups.	Houle (2017)
Years of education	Average year of schooling for those above 25 year of age.	Barro and Lee (2013)
Governance quality	Average of control of corruption, rule of law, regulatory quality and government effectiveness dimensions.	World Governance Indicators
Historical pathogen prevalence	Historical prevalence of nine infectious diseases across countries.	Murray and Schaller (2010)
Individualism	Individualism-Collectivism cultural dimension.	https://www.hofstede-insights.com/product/compare-countries/
Programmatic politics	As defined in the text. Corresponds to variable cosalpo_3econ.	Kitschelt (2013)
Shadow economy	Size of underground economy as a share of GDP.	Hassan and Schneider (2016)
Public goods	Government expenditure on health and education (% of GDP).	World Development Indicators
Public employment	Government spending on employees (% of GDP).	World Development Indicators
Democratic experience	Consecutive years of competitive electoral politics (1974–2009).	Own calculations based on Keefer (2007)

Notes: The time variant data is for the year 2009 or closest to it.

Appendix B. Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Absolute redistribution	87	0.0904	0.0787	−0.0511	0.2446
Relative redistribution	87	0.1864	0.1656	−0.2249	0.4908
Absolute redistribution (restricted sample)	60	0.1138	0.0782	−0.0511	0.2446
Relative redistribution (restricted sample)	60	0.2349	0.1693	−0.2405	0.4906
Clientelism (general)	87	13.3040	3.3492	5.7854	18.4773
GDP per capita (log)	87	9.4229	0.9930	6.6587	11.3072
Democracy	87	7.5747	3.3572	−6.0000	10.0000
Market Gini	87	0.4723	0.0641	0.2273	0.6945
Ethnic heterogeneity	87	0.4020	0.2377	0.0020	0.8588
GDP growth	87	−1.4494	5.0666	−14.8142	10.2322
Share of elderly	87	0.1004	0.0574	0.0195	0.2183
Urbanization	87	0.6331	0.1843	0.1623	0.9760
Historical education	61	1.5572	1.8371	0.0100	6.0700
Catholics	86	0.3275	0.3395	0.0000	0.9220
Protestants	86	0.2018	0.2294	0.0009	0.9259
Muslims	86	0.1746	0.3028	0.0000	0.9894
Orthodox	86	0.0649	0.1761	0.0000	0.9118
Clientelism targeting poor	87	10.7955	7.8848	2.0448	49.8250
Clientelism targeting middle income	87	10.0893	6.6223	0.2806	43.6317
Clientelism targeting wealthy	87	6.2932	5.0759	0.0000	24.1033
Institutional checks	85	3.5647	1.9114	1.0000	17.0000
Political ideology	62	2.1129	0.9599	1.0000	3.0000
Ethnic inequality (between)	59	0.4370	0.6546	0.0000	2.7820
Ethnic inequality (within)	59	1.7326	2.7811	0.0336	11.1669

(*continued on next page*)

(*continued*)

Variable	Obs	Mean	Std. Dev.	Min	Max
Education (years)	81	8.9291	3.0024	1.2400	13.4200
Governance quality	87	0.2924	0.9258	−1.3490	2.1213
Historical pathogen prevalence	81	−0.0251	0.6541	−1.3100	1.1600
Individualism	75	0.4180	0.2359	0.0600	0.9100
Programmatic politics	87	0.2356	0.1545	0.0314	0.7163
Shadow economy	86	0.3591	0.1731	0.0942	0.8145
Public goods	63	0.1227	0.0338	0.0434	0.2091
Public employment	70	0.2288	0.1239	0.0568	0.5383
Democratic experience	86	21.6163	10.8760	0.0000	35.0000

Notes: Dummy variables are not shown.

Appendix C. Countries and country codes

Albania (ALB), *Angola (AGO)*, *Argentina (ARG)*, *Austria (AUT)*, *Australia (AUS)*, *Bangladesh (BGD)*, *Belgium (BEL)*, *Benin (BEN)*, Bolivia (BOL), Botswana (BWA), *Brazil (BRA)*, *Bulgaria (BGR)*, *Canada (CAN)*, *Chile (CHL)*, Colombia (COL), *Costa Rica (CRI)*, Croatia (HRV), Czech Republic (CZE), *Denmark (DNK)*, *Dominican Republic (DOM)*, Ecuador (ECU), *Egypt (EGY)*, *El Salvador (SLV)*, Estonia (EST), *Finland (FIN)*, *France (FRA)*, Georgia (GEO), *Germany (DEU)*, *Ghana (GHA)*, *Greece (GRC)*, *Guatemala (GTM)*, *Honduras (HND)*, *Hungary (HUN)*, *India (IND)*, *Indonesia (IDN)*, *Ireland (IRL)*, Israel (ISR), *Italy (ITA)*, *Jamaica (JAM)*, *Japan (JPN)*, *Kenya (KEN)*, Latvia (LVA), Lebanon (LBN), Lithuania (LTU), Macedonia (MKD), *Malaysia (MYS)*, *Mali (MLI)*, Mauritius (MRU), *Mexico (MEX)*, Moldova (MDA), Mongolia (MNG), *Morocco (MAR)*, *Mozambique (MOZ),* Namibia (NAM), *Netherlands (NLD)*, *New Zealand (NZL)*, *Nicaragua (NIC)*, *Niger (NER)*, *Nigeria (NGA)*, *Norway (NOR)*, *Pakistan (PAK)*, *Panama (PAN)*, *Paraguay* (PRY), *Peru (PER)*, *Philippines (PHL)*, Poland (POL), *Portugal (PRT)*, Romania (ROU), *Russia (RUS)*, *Senegal (SEN)*, Serbia (SRB), Slovakia (SVK), Slovenia (SVN), *South Africa (ZAF)*, *South Korea (KOR)*, *Spain (ESP)*, *Sweden (SWE)*, *Switzerland (CHE)*, Tanzania (TZA), *Thailand (THA)*, *Turkey (TUR)*, Ukraine (UKR), *United Kingdom (GBR)*, *United States (USA)*, *Uruguay (URY)*, *Venezuela (VEN)*, Zambia (ZMB).

Notes: Countries in italics are the ones for which Education in 1870 is also available.

References

Acemoglu, D., Naidu, S., Restrepo, P., Robinson, J., 2015. Democracy, redistribution and inequality. In: Atkinson, A., Bourguignon, F. (Eds.), Handbook of Income Distribution, 2B. Elsevier, pp. 1885–1966.

Alesina, A., Glaeser, E., 2004. Fighting Poverty in the U.S. And Europe: A World of Difference. Oxford University Press.

Alesina, A., Baqir, R., Easterly, W., 1999. Public goods and ethnic divisions. Q. J. Econ. 114 (4), 1243–1284.

Alesina, A., Devleeschauwer, A., Easterly, W., Kurlat, S., Wacziarg, R., 2003. Fractionalization. J. Econ. Growth 8, 155–194.

Alesina, A., Giuliano, P., Bisin, A., Benhabib, J., 2011. Preferences for Redistribution. Handbook of Social Economics. North Holland, pp. 93–132.

Alston, L., Ferrie, J., 1999. Southern Paternalism and the American Welfare State. Cambridge University Press, Cambridge.

Anderson, S., Francois, P., Kotwal, A., 2015. Clientelism in Indian villages. Am. Econ. Rev. 105 (6), 1780–1816.

Bardhan, P., Mookherjee, D., 2017. Clientelistic Politics and Economic Development: an Overview. Department of Economics, University of California, Berkeley. Unpublished manuscript.

Barro, R., Lee, J.-W., 2013. A new data set of educational attainment in the world, 1950–2010. J. Dev. Econ. 104, 184–198.

Besley, T., Pande, R., Rao, V., 2007. Political economy of Panchayats in south India. Econ. Polit. Wkly. 42 (8), 661–666.

Bradley, D., Huber, E., Moller, S., Nielsen, F., Stephens, J., 2003. Distribution and redistribution in post-industrial democracies. World Polit. 55, 193–228.

Breeding, M.E., 2011. The micro-politics of vote banks in Karnataka. Econ. Polit. Wkly. 46 (14), 71–77.

Calvo, E., Murillo, M.V., 2004. Who delivers? Partisan clients in the Argentine electoral market. Am. J. Polit. Sci. 48, 742–757.

Chubb, Judith, 1981. The social bases of an urban political machine: the case of Palermo. Polit. Sci. Q. 96 (1), 107–125.

Cruz, C., Keefer, P., Scartascini, C., 2018. Database of Political Institutions 2017 (DPI2017). Inter-American Development Bank.

Frey, A., 2019. Cash transfers, clientelism, and political enfranchisement: evidence from Brazil. J. Publ. Econ. 176, 1–17.

Fukuyama, F., 2014. Political Order and Political Decay: from the Industrial Revolution to the Globalisation of Democracy. Farrar, Straus and Giroux, New York.

Gründler, K., Köllner, S., 2020. Culture, diversity, and the welfare state. J. Comp. Econ. 48, 913–942.

Harding, R., 2008. Vote Buying across Africa. New York University. Unpublished manuscript.

Hassan, M., Schneider, F., 2016. Size and Development of the Shadow Economies of 157 Countries Worldwide: Updated and New Measures from 1999 to 2013. IZA DP. N° 10281.

Hicken, A., 2011. Clientelism. Annu. Rev. Polit. Sci. 14, 289–310.

Holland, A., 2016. Forbearance. Am. Polit. Sci. Rev. 110 (2), 232–246.

Houle, C., 2017. Inequality, ethnic diversity, and redistribution. J. Econ. Inequal. 15, 1–23.

Huber, E., Stephens, J., 2014. Income inequality and redistribution in post industrial democracies: demographic, economic and political determinants. Soc. Econ. Rev. 12, 245–267.

International IDEA, 2012. Programmatic Parties (Stockholm).

Iversen, T., Soskice, D., 2009. Distribution and redistribution. The shadow of the nineteenth century. World Polit. 61 (3), 438–486.

Joumard, I., Pisu, M., Bloch, D., 2012. Tackling income inequality: the role of taxes and transfers. OECD Journal: Econ. Stud. (1), 37–70, 2012.

Kahl, S., 2005. The religious roots of modern poverty policy: Catholic, Lutheran, and reformed Protestant traditions compared. Eur. J. Sociol. 46, 91–126.

Kammas, P., Kazakis, P., Sarantides, V., 2017. The effect of culture on fiscal redistribution: evidence based on genetic, epidemiological and linguistic data. Econ. Lett. 160, 95–99.

Keefer, P., 2007. Clientelism, credibility, and the policy choices of young democracies. Am. J. Polit. Sci. 51 (4), 804–821.

Keefer, P., Vlaicu, R., 2008. Democracy, credibility and clientelism. J. Law Econ. Organ. 24 (2), 371–406.

Keefer, P., Khemani, S., 2004. Do the poor receive poor services? Econ. Polit. Wkly. 39 (9), 935–943.

Keefer, P., Khemani, S., 2005. Democracy, public expenditures, and the poor. Understanding political incentives for providing public services. World Bank Res. Obs. 20 (1), 1–27.

Khemani, S., 2015. Buying votes versus supplying public services: political incentives to under-invest in pro-poor policies. J. Dev. Econ. 117, 84–93.
Kitschelt, H., 2013. Democratic Accountability and Linkages Project. Duke University, Durham, NC.
Kitschelt, H., Wilkinson, S., 2007. Patrons, Clients, and Policies: Patterns of Democratic Accountability and Political Competition. Cambridge University Press.
Krieger, T., Meierrieks, D., 2019. Income inequality, redistribution and domestic terrorism. World Dev. 116, 125–136.
Kyriacou, A., 2020. Inequality and Governance. Routledge, London, New York.
Kyriacou, A., Muinelo-Gallo, L., Roca-Sagalés, O., 2018. Redistributive efficiency in 28 developed economies. J. Eur. Soc. Pol. 28 (4), 370–385.
La Porta, R., Lopez-de-Silanes, F., Shleifer, A., 2008. The economic consequences of legal origins. J. Econ. Lit. 46, 285–332.
Luna, J., Rosenblatt, F., Toro, S., 2014. Programmatic parties: a survey of dimensions and explanations in the literature. In: Politics Meets Policies: the Emergence of Programmatic Political Parties. International IDEA, Stockholm.
Lyne, M., 2007. Rethinking economics and institutions: the voter's dilemma and democratic accountability. In: Kitschelt, H., Wilkinson, S. (Eds.), Patrons, Clients, and Policies: Patterns of Democratic Accountability and Political Competition. Cambridge University Press, pp. 159–181.
Lyrintzis, C., 1984. Political parties in post-junta Greece: a case of 'bureaucratic clientelism. W. Eur. Polit. 7 (2), 99–118.
Mahler, V., Jesuit, D., Paradowski, P., 2014. Electoral turnout and state redistribution: a cross-national study of fourteen developed countries. Polit. Res. Q. 67 (2), 361–373.
Markussen, T., 2011. Inequality and political clientelism: evidence from south India. J. Dev. Stud. 47 (11), 1721–1738.
Marshall, M., 2020. Polity V Project: Political Regime Characteristics and Transitions, 1800–2018 – Dataset User's Manual. Center for Systemic Peace.
Meltzer, A., Richard, S., 1981. A rational theory of the size of government. J. Polit. Econ. 89 (5), 914–927.
Morrison, C., Murtin, F., 2009. The century of education. J. Hum. Cap. 3, 1–42.
Murray, D., Schaller, M., 2010. Historical prevalence of infectious diseases within 230 geopolitical regions: a tool for investigating origins of culture. J. Cross Cult. Psychol. 41 (1), 99–108.
Murray, M., 2006. Avoiding invalid instruments and coping with weak instruments. J. Econ. Perspect. 20 (4), 111–132.
Nikolaev, B., Salahodjaev, R., 2017. Historical prevalence of infectious diseases, cultural values, and the origins of economic institutions. Kyklos 70 (1), 97–128.
Nikolaev, B., Boudreaux, C., Salahodjaev, R., 2017. Are individualistic societies less equal? Evidence from the parasite stress theory of values. J. Econ. Behav. Organ. 138, 30–49.
North, C., Orman, W., Gwin, C., 2013. Religion, corruption, and the rule of law. J. Money Credit Bank. 45 (5), 757–779.
Olson, M., 1965. The Logic of Collective Action. Public Goods and the Theory of Groups. Harvard University Press.
Pellicer, M., 2009. Inequality persistence through vertical vs. horizontal coalitions. J. Dev. Econ. 90 (2), 258–266.
Pellicer, M., Wegner, E., 2013. Electoral rules and clientelistic parties: a regression discontinuity approach. Q. J. Polit.Sci. 8 (4), 339–371.
Pleninger, R., Sturm, J.-E.-, 2020. The Effects of Economic Globalisation and Ethnic Fractionalisation on Redistribution, vol. 130. World Development, p. 104945.
Robinson, J., Verdier, T., 2013. The political economy of clientelism. Scand. J. Econ. 115 (2), 260–291.
Sánchez, A., Goda, T., 2018. Corruption and the 'paradox of redistribution. Soc. Indicat. Res. 140, 675–693.
Scott, J., 1969. Corruption, machine politics and political change. Am. Polit. Sci. Rev. 63 (4), 1142–1158.
Scott, J., 1972. Patron-client politics and political change in Southeast Asia. Am. Polit. Sci. Rev. 66 (1), 91–113.
Shefter, M., 1977. Party and patronage: Germany, England, and Italy. Polit. Soc. 7 (4), 403–451.
Shefter, M., 1994. Political Parties and the State. Princeton University Press, Princeton.
Solt, F., 2020. Measuring income inequality across countries and over time: the standardized world income inequality database. Soc. Sci. Q. 101 (3), 1183–1199.
Staiger, D., Stock, J., 1997. Instrumental variables regression with weak instruments. Econometrica 65, 557–586.
Stokes, S., 2009. Political clientelism. In: Boix, C., Stokes, S. (Eds.), The Oxford Handbook of Comparative Politics. Oxford Univ. Press, New York.
Stokes, S., Dunning, T., Marcelo, M., Brusco, V., 2013. Brokers, Voters and Clientelism. The Puzzle of Distributive Politics. Cambridge University Press.
Tabor, S., 2002. Assisting the Poor with Cash: Design and Implementation of Social Transfer Programs. Social Protection Discussion Paper Series No. 022. In: 3. The World Bank, Washington D.C.
Thornhill, R., Fincher, C., 2014. The Parasite-Stress Theory of Values and Sociality: Infectious Disease, History and Human Values Worldwide. Springer Science & Business Media, New York.
Uslaner, E., 2017. The Historical Roots of Corruption. Mass Education, Economic Inequality, and State Capacity. Cambridge University Press.
Wang, Y., Kolev, K., 2019. Ethnic group inequality, partisan networks, and political clientelism. Polit. Res. Q. 72 (2), 329–341.
Wu, A., Zumbo, B., 2008. Understanding and using mediators and moderators. Soc. Indicat. Res. 87, 367–392.