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Why Do Prosocial People Dislike Markets in Some Countries and Like Them in Others?

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ABSTRACT

Based on the *doux commerce* thesis, which suggests that people in market-oriented societies hold stronger prosocial values than those in less market-oriented ones, one can expect prosocial and pro-market values to be positively associated. The fact that the association holds for cross-country observations but does not universally hold for cross-individual observations within countries is a puzzle, the paper argues, and it explains this by assuming that market preferences are expressive. It argues that this assumption implies that the link between prosocial and pro-market values should vary with national institutions because the latter reflect prevailing beliefs about markets. The prediction is tested by individual-level regressions that use post-materialism and generalised trust as indicators of prosocial values and ownership preferences as an indicator of pro-market values from the International Values Survey. The regressions support the prediction by showing that the within-country association between these values can be either positive or negative, depending on institutional context and political identity. The moral consequences of markets, therefore, are a key part of the argument for them.

1 | Introduction: Markets and Morals

Why do people hold pro-market or anti-market views? Economists have been trying to influence these views, and economic debates are indeed often seen, rightly or wrongly, as debates over the virtues of markets versus those of governments. Economists usually try to shape people's preferences for markets instrumentally. That is to say, if markets are good at producing favourable outcomes, then—one may reasonably believe—people who prefer those outcomes will support markets, all else being equal.

The favourable outcome that this paper focuses on is that people in societies where market relationships are more prevalent tend to hold more pro-social beliefs compared to those in societies with less prevalent market relationships. The literature on the *doux commerce* thesis (Storr and Choi 2019) shows that freer markets make people more tolerant of others from different

ethnicities, genders or social classes, more trustful and even less materialist. In sum, markets encourage people to adopt more prosocial views.

Given these virtuous characteristics of markets, do people with more prosocial views support markets more strongly than those with less prosocial ones? The answer, as illustrated by Figures 1 and 2, is puzzling. Figures 1 and 2 show that two prominent prosocial views, postmaterialism and generalised trust, are positively correlated with pro-market attitudes, measured by preferences for private versus government ownership from the Integrated Values Survey (EVS 2022; Haerpfer et al. 2022),¹ across countries—that is, when taking the country means of the variables and calculating their correlation, with a country in a wave being an observation. The within-country correlations between these same pairs of variables, which are calculated using the same variables with individuals' responses being the observations, however, are scattered around zero and often negative.²

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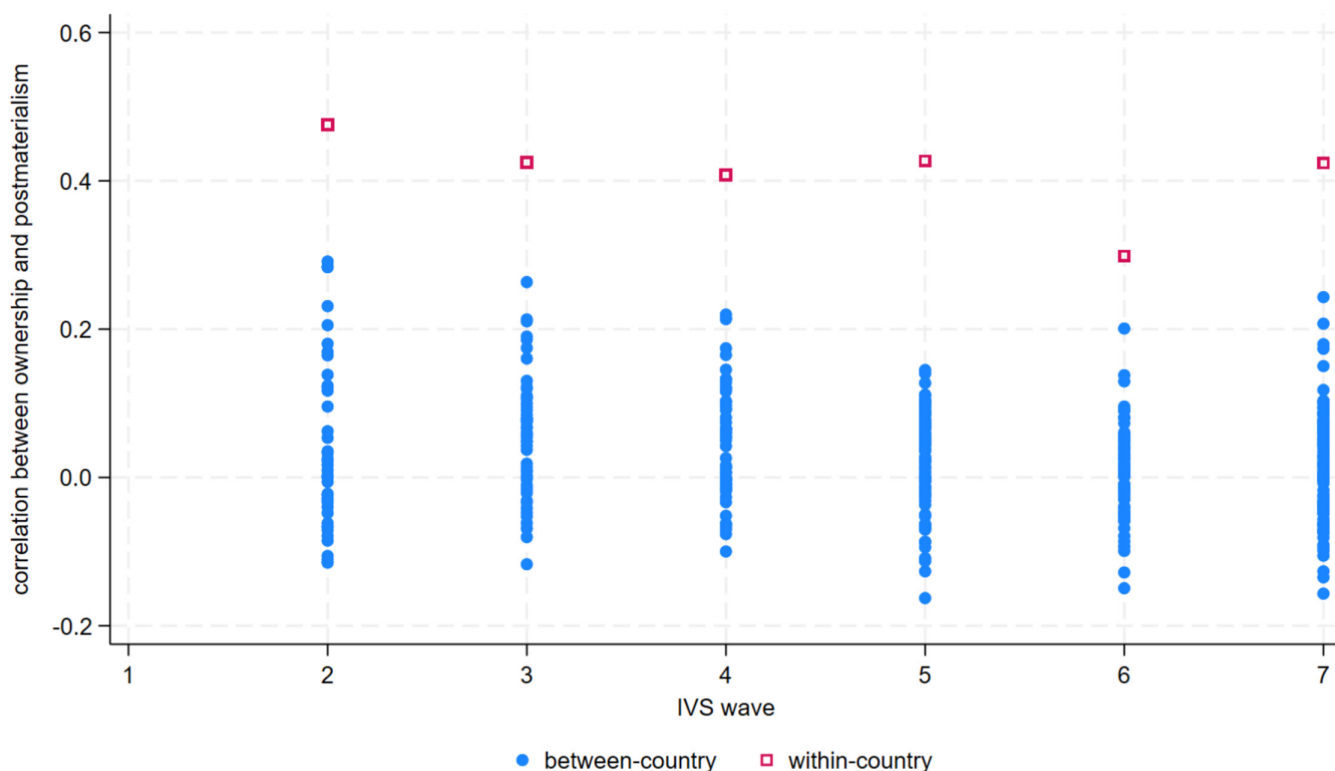


FIGURE 1 | Postmaterialism and ownership preference. The blue circles show the correlation between ownership preference and postmaterialism within each country in each wave of the IVS for which data are available. The number of observations by country ranges from 204 to 4341. The red hollow squares show the correlation across countries in each wave, calculated from the country means of ownership preference and postmaterialism. The numbers of countries across the six waves are 42, 53, 57, 81, 59 and 92. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

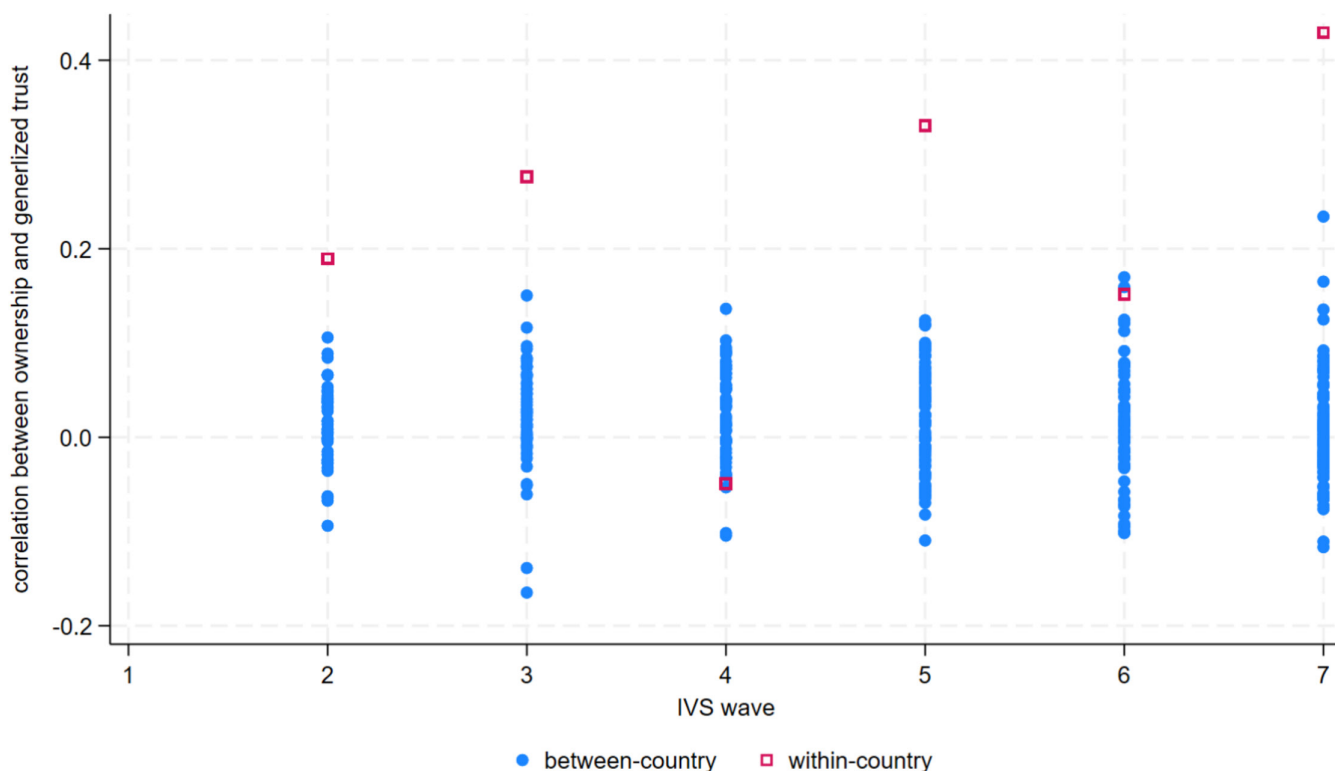


FIGURE 2 | Generalised trust and ownership preference. The blue circles show the correlation between ownership preference and generalised trust within each country in each wave of the IVS for which data are available. The number of observations by country ranges from 211 to 4431. The red hollow squares show the correlation across countries in each wave, calculated from the country means of ownership preference and generalised trust. The numbers of countries across the six waves are 42, 54, 58, 81, 60 and 92. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

That is, in countries where people hold more prosocial views *on average*, they also tend to hold more pro-market views *on average*. However, within any particular country, a person with more prosocial views does not necessarily tend to be more pro-market: In some countries, the correlation is positive, while in others, it is negative. Why is this the case? This paper attempts to answer that question.

There are at least two lines of research with recent results on such questions. One is the economics of ‘motivated beliefs’ (Bénabou 2008; Bénabou and Tirole 2016), which applies the key insights of behavioural economics to model belief formation. The other is the public choice literature on expressive behaviour (Brennan and Lomasky 1993; Hamlin and Jennings 2019), which emphasises the non-instrumental nature of some human actions, such as voting.

The novelty of the paper is that I am the first to analyse the relationship between ownership preferences and prosocial preferences as the outcomes of an explicit, expressive choice. In this analysis, I build on these two lines of research, as well as that on the *doux commerce* thesis mentioned above, to argue that the relationship between prosocial and pro-market views can be understood as being shaped by the interaction of institutions and ideology. The main result is that in countries with stable markets and high-quality governance, more prosocial people are not necessarily more pro-market.

The rest of the paper elaborates on these issues. Section 2 reviews the literature on the *doux commerce* thesis, which examines prosocial morals and markets. This section also reviews key insights from the two branches of idea formation referenced above to show that the mechanisms shaping beliefs about markets might not be based on their real effects. Section 3 then derives a hypothesis that expressing either pro-market or anti-market beliefs can signal being prosocial under certain conditions. The model predicts that more prosocial people might choose to be more pro-market or more anti-market depending on their expectations of how others perceive markets. Section 4 tests the main hypothesis, while Section 5 refines it with further checks. Section 6 draws broader conclusions.

2 | Literature Review

2.1 | *Doux Commerce* Versus ‘Markets Corrupt’

Although Stigler (1965, 77) would still be right in saying that ‘the moral influences of the market place’ are important, adding that ‘they have not been subjected to real study’ (Stigler 1965) would not sound right today. It might not have been right even at the time of writing, given that the question of how the market economy shapes the way people think about, and act towards, others has been addressed by philosophers since about the time markets started to dominate Western economies (Hirschman 2013/1977).

Seeing this question as an aspect of the broader one of whether people who appreciate benevolence and tolerance towards others should also appreciate the market economy, we must

consider that this broader question is probably as old as markets themselves. As a result, there are different traditions in social science that ask what morals markets need and promote. A still powerful idea is that impersonal exchange relations, which are supposed to be the essence of the market economy, disfavour the personal relations of the smaller community and the intentional benevolence on which it is built.

In this view markets “overbalance” all traditional and “higher” values’ (Hirschman 1982, 1467). The Marxian version of the claim emphasises ‘alienation’ of the workers through exploitation (Storr and Choi 2019, 28–32), whereas the well-known dichotomy of *Gemeinschaft* and *Gesellschaft* of Tönnies (2001/1887, 17–19) reflects the idea that the values of the organic small communities cannot be maintained in a ‘mechanical’ commercial society. Therefore, ‘markets corrupt’: Market relationships are morally inferior to other kinds of relationships, and the more extensive markets are in a society, the more immoral that society becomes.

A diametrically opposite way of thinking about markets and morals also has a long tradition in social science. The proposition that ‘[c]ommerce is a cure for the most destructive prejudices’ (Baron de Montesquieu, Montesquieu 1777, 1), known as the *doux commerce* thesis, goes back to 17th century (Hirschman 2013/1977).

These two ways of thinking about markets and morals,³ the deterioration thesis and the *doux commerce* thesis, are those which new empirical literature has been testing against each other and which provide some evidence in favour of the *doux commerce* thesis. A recent seminal work is (Storr and Choi’s (2019)) book, in which the authors argue for a modern version of the thesis and show that people in market societies are indeed more prosocial than in non-market societies.⁴

A third intellectual tradition, which I believe may be seen as originating from the view that markets corrupt, is the one called the Adam Smith problem (or *Das Adam Smith Problem*) in the history of economic thought (Sagar 2022; Paganelli 2008; Montes 2003, 1–9). This ‘problem’ concerns the question of how Adam Smith could both praise markets and attribute beneficial outcomes to self-interest in *The Wealth of Nations*, while praising sympathy and virtue in *The Theory of Moral Sentiments*. Since the question of the paper is about how people think and talk about markets and morals, this episode in the history of economic thought is relevant insofar as it shows that even those concerned with the history of economics have found it difficult to distinguish between supporting self-love and supporting the idea of natural liberty as a more effective constraint on self-love than governments are (Paganelli 2008).

The three intellectual traditions described briefly above emphasise the importance of the question of markets and morals, and they are also used here to show two points that the rest of the paper seeks to make by engaging with the more recent literature. First, when asking the question, as I will, why people who praise prosocial morals praise or do not praise markets, we should recognise that this question is different from the one of whether markets promote those morals. Second, the two questions may be related. Whether people who behave

prosocially think well or ill of markets depends on how others think about the consequences of markets. By treating the *doux commerce* thesis and its opposite as beliefs people may or may not hold, we can answer the question posed at the beginning of this section.

A substantial empirical literature examines how markets shape morals commonly regarded as prosocial. I cannot hope to thoroughly review this literature in just one subsection of a paper, and it would be very hard to add anything new to Choi and Storr's (2023) or de Jong's (2024) review articles. Instead, I emphasise two conclusions of this literature that are relevant for the case I am making. The first is that several specifications of the *doux commerce* thesis are given empirical support. The second is that some deeper cultural variables—especially individualism—are positively related to prosocial views or behaviour.

First, the literature does not reject the *doux commerce* thesis, though the specific results depend on which 'destructive prejudice' is the dependent variable. If not markets in general, international trade in particular has been found by Harris et al. (2023) to support a more tolerant *language*. Markets in general, too, are usually found to be in a positive but weak relationship with morals, as illustrated by Callais et al.'s (2022) paper. They estimate the effect of both the level and the change of economic freedom on different aspects of morality, using 128–139 countries observed in 5-year periods between 1990 and 2010. They find no evidence for the so-called deterioration thesis. Neither do Schilpzand and de Jong (2023), who use regional labour-market activity as their main explanatory variable and show that it is positively and robustly correlated with 'civic morality', which measures unwillingness to free ride on public goods.

Though not quite with the *doux commerce* thesis in mind, Berggren and Nilsson (2013, 2014, 2016, 2021) have come to similarly positive but weak results in a series of articles examining different kinds of tolerance. Berggren and Nilsson's (2013) cross-country results support the view that economic freedom—especially the areas concerned with the rule of law and sound money—increases the acceptance of homosexuality. The other two kinds of tolerance the authors examine—racial tolerance and the intention to teach children tolerance—are less affected by economic freedom. An increase in the size of government, however, has a positive effect. This relationship between tolerance towards homosexuals and economic freedom is stronger, Berggren and Nilsson (2014) show, in countries where generalised trust is higher. Berggren and Nilsson (2016) also observe this positive relationship across US states.

Antisemitism is certainly one of 'the destructive prejudices' that economic freedom might 'cure', and Berggren and Nilsson (2021) also examine it. They find a more nuanced relationship rather than a clearly positive one: A stronger rule of law decreases antisemitism, whereas greater international openness increases it. Interestingly, the mechanism they suggest lies in people seeing the market as zero-sum, which the authors are able to check directly (Berggren and Nilsson 2021, 300).

To be able use the 'epidemiological approach', Berggren and Bjørnskov (2024) concentrate on a sample of immigrants and provide evidence that economic freedom does not disfavour women, as there is no difference in the relationship between economic freedom and life satisfaction among women and men. This could partially be explained by the fact that gender norms are less biased towards men in economically freer societies (Fike 2024). Observed gender inequalities in different market outcomes are also reduced by a higher economic freedom, provided that legal institutions treat men and women equally (Dutta et al. 2025).

Trust is given special attention in this context, too, since generalised—and some kinds of particularised—trust are among the variables that Storr and Choi (2019) use as a measure of the 'bourgeois virtues' markets might create. Building on the economic understanding of the market as a discovery procedure, Storr and Choi (2022) highlight how market exchanges reveal who can and cannot be trusted. Results from experiments support this claim for personal trust (Choi and Storr 2020a, 2022), and there are reasons to believe that personal (or particularised) trust can be generalised⁵ (Berggren and Jordahl 2006). In addition to the market process itself, the institutions of economic freedom, especially through the equal enforcement of rules, provide a direct incentive to trust others (Berggren and Jordahl 2006).

The correlation between prosocial behaviour and market institutions, however, receives support in experiments, too. Conducting a meta-meta-analysis of data from more than one thousand experiments in 51 countries, Aimone et al. (2024) find that in countries with higher economic freedom in several areas, people tend to behave more prosocially in these experiments. Data describing the folklore of 943 pre-industrialist ethnolinguistic groups complement this conclusion (Enke 2023) as trust, prosociality and the frequency of market-related concepts are associated in them.

The second conclusion of my reading of the literature is that some views, beliefs or cultural traits that are usually thought to provide the informal foundations of market institutions are also positively related to prosocial views. Individualism is one such trait. As Hayek (2018/1948) argued in his famous essay, 'true' individualism entails tolerance, while the 'unwillingness to bow before any moral rules whose utility is not rationally demonstrated' (Hayek 2018/1948, 68) acts against it.

Some empirical findings support Hayek's inference. Using the same index of individualism, Davis and Williamson (2019, 2022) and Kramer (2023) show that individualism at the country—and at the individual—level is correlated with several of the virtues identified in the *doux commerce* literature. Davis and Williamson (2019) show that in countries with a higher level of individualism, people are also more supportive of gender equality in different areas of life. Similarly, Davis and Williamson (2022) find that individualism is one of the cross-country determinants of the *de facto* economic rights of women and of gender equality. It is not just women but racial minorities as well, as detailed by Kramer (2023). At the individual level, the author shows, economic individualism and social individualism are positively correlated with racial and other kinds of tolerance.

2.2 | Pro-Market Beliefs as Expressive Preferences?

In the light of the two conclusions drawn from the literature in Section 2.1—that the *doux commerce* thesis is not rejected empirically and that the informal foundations of markets support prosociality—the correlation pattern in Figures 1 and 2 might puzzle us even more. I propose that we can get closer to solving the puzzle by considering beliefs or views—including market beliefs—as goods, that is, objects of deliberate individual choice.

Much of the literature treats pro-market views and market exposure as interchangeable, implicitly assuming that what holds for the relationship between markets and morals must also hold for the relationship between market views and morals. This blurs the distinction between the effects of pro-market views and market institutions and leads researchers to overlook cross-country and cross-individual differences in prosocial views. Schilpzand and de Jong (2023, 49) use ‘market attitudes instead of market activity’ in a robustness test of their baseline result—the positive effect of market activity on civic morality. Choi and Storr (2023, 602) present as puzzling the finding of several studies that people with pro-market views have similar levels of sociability to people without such views. Berggren and Nilsson (2013, 180) refer to the positive association between anti-capitalist sentiments and intolerance as supporting their thesis on a positive relationship between tolerance and economic freedom, though they note that ‘anti-capitalist sentiments are not the same as anti-capitalist policies’ (Berggren and Nilsson 2013).

Indeed, the correlation between some other ‘virtues’ and support for markets might not be very robust. Weiss (2003), for example, finds that in the 1990s support for ‘capitalism’ was associated with more tolerant values in Hungary, Slovakia and Poland, but not in Austria. For about the same period, Inglehart (1997, 260–265) found that support for private property and postmaterialism were related in a slightly inverted V-shaped relationship for a group of 28 non-post-socialist countries, but this pattern did not hold for 12 post-socialist countries.

There is, of course, a difference between exposure to markets and thinking highly or poorly of them, which economists have been well aware of, as revealed by great works such as those by Schumpeter (2013/1943) or Von Mises (2008/1956). Both analysed how living in a market economy can make people—especially intellectuals—hostile to markets.

Once we distinguish between market institutions and the views about them, the economics of beliefs can be applied to the latter. Bénabou and Tirole (2016) conclude that beliefs and institutions might be in complex relationships. Beliefs might not be in line with institutional reality: self-delusion, overconfidence, self-signalling and groupthink might all be rational (Bénabou and Tirole 2016), and so might holding irrational beliefs (Caplan 2001) if the cost of holding them is small. This literature points out that the relationship between policies and beliefs can be reinforcing (Bénabou and Tirole 2006), and people might find it rational to deny reality (Bénabou 2008).

Although the literature on motivated beliefs dismisses the idea that some beliefs may be held without instrumental value in,

for example, voting (Bénabou and Tirole 2016, 150), the literature on expressive behaviour argues precisely this, and convincingly. Despite the fact that ‘expressive’ is usually associated with voting in the political economy literature, voting is clearly not the only behaviour that can be expressive (Hamlin and Jennings 2011; Hillman 2010). Cheering for your team (Brennan and Buchanan 1984, 186–187), writing to a newspaper (Hamlin and Jennings 2011, 651) and—more importantly—speech can all be expressive: Storytelling, playacting and most ordinary conversation are examples (Brennan and Lomasky 1993, 34). The requirement for an action to be motivated by expressive preferences is that it be inconsequential, as Hamlin and Jennings (2011) convincingly explain.

A way to address the puzzle in Section 1 is to consider pro-market beliefs as expressive, drawing on insights from this literature. By this argument, the use of voice in answering survey questions, such as those of the World Values Survey or the European Values Study, can easily be expressive. It might not be exactly true that ‘elections are surveys’ (Caplan 2006, 132), as answering survey questions seems to be even *less* consequential than voting in elections; rather, the point is that surveys are at least as expressive as voting in an election.

Like many forms of political behaviour, views on markets may be expressive (Brennan and Lomasky 1993), leading to an ideological interest in voting that trumps material interest (Lee 2015).⁶ The weak link between pro-market beliefs and material interest seems to be confirmed by Paldam’s (2021, 139, 152–153) finding that support for markets was falling up until 2012 despite strong economic development after 2005 and that the correlation between economic freedom and preferences for it is surprisingly low when concentrating on the time path of the variables. In a cross-section of countries, however, Bjørnskov and Paldam (2012) and Czeglédi and Newland (2018) find them to be correlated.

Using the terminology of the literature on expressive voting (Hamlin and Jennings 2019, 340), being a survey respondent is an institutional ‘frame’ that is inconsequential to the issue on which the respondent’s opinion is sought, even in the aggregate. Behind a ‘veil of insignificance’ (Kliemt 1986), even thicker than with voting, people have no incentives to counter their moral convictions and self-identity. In expressive choice, moral self-identity plays a crucial role.

3 | Pro-Market Beliefs as Expressive Preferences—A Hypothesis

Prosocial and pro-market views differ in that the former concern personal conduct, while the latter concern how society should be organised. Using Collier’s (2016) terminology to categorise these views also suggests a plausible causality between them. The preference for private or government ownership is just that—a preference. Holding prosocial views—being trustful or postmaterialist—is, however, a norm: ‘an internalized constraint upon choices’ (Collier 2016, 9). While holding a norm makes it easier to adopt an identity (Collier 2016, 12), preferences are ‘set by identities’ (Collier 2016, 9).⁷ Referring back to their review of the history of understanding the

relationship between markets and morality, Schilpzand and de Jong (2023, 41) also note that ‘the dominant view on this matter is context and time specific’. The view that ‘markets corrupt’—or that they make us more virtuous—is ultimately a narrative.

Such narratives may be promoted by the cultural elite, for instance, through novels (Guiso et al. 2008, 314–317). The ‘markets corrupt’ narrative that intellectuals in developed countries maintain has long puzzled economists (Stigler 1965), as a deep study of markets should have led these intellectuals to hold a pro-market opinion (Stigler 1959, 41). The puzzle is so perplexing that McCloskey (2006, 68–78; 2010, 40–47; 2017, 597–607), in her ‘Bourgeois Trilogy’, calls it a ‘treason of the clerisy’ (with the latter referring to intellectuals) and argues against it. However, ‘the hostility of the intellectual group—amounting to moral disapproval of the capitalist order—is one thing, and the general hostile atmosphere which surrounds the capitalist engine is another thing’ (Schumpeter 2013/1943, 153). The argument here is that the narrative—that may be maintained by the ‘intellectual group’ or the ‘clerisy’—together with expressive behaviour might explain this particular aspect of this hostility.

The prevalence of the ‘markets corrupt’ view is revealed by the ‘yes, but’ approach (Choi and Storr 2020b; Leeson 2010) that even those supporting free markets seem to maintain. The ‘yes’ part refers to the ability of markets to create wealth, while the ‘but’ part suggests they have side effects that we should not like. One such undesired side effect is moral corruption. When such narratives interact with identities and norms, ‘observed beliefs will usually be *locally stable* clusters of identities, narratives and norms all mutually reinforcing’ (Collier 2016, 8, my italics).

In what follows, I use a simple model to show how choosing to be pro-market or pro-government may depend on the narrative prevalent in a particular society.⁸ I then argue that this model offers clues to resolving the puzzle described in Section 1.

Being prosocial captures what it means to be a ‘nice person’, which, Hillman (2010) argues, is the identity expressed by expressive behaviour. This identity is assumed to shape people’s preferences over markets. People are assumed to attach an intrinsic value to expressing pro-market or anti-market views, as well as a signalling value, since such expressions may indicate to others that the speaker is prosocial. Individual i ’s expected utility of expressing pro-market views (M^+) as opposed to anti-market views (M^-) is

$$U_i(M^+) - U_i(M^-) = v_m(i) + [P(S|M^+) - P(S|M^-)]v_s(i), \tag{1}$$

where $v_m(i)$ is the intrinsic value of expressing pro-market views as compared to expressing anti-market ones and is assumed to be distributed uniformly on the interval $[\bar{v}_m - \delta/2, \bar{v}_m + \delta/2]$, with $\delta > 0$ and \bar{v}_m being the median person’s intrinsic value. The value of being inferred to be prosocial is $v_s(i)$. $P(S|M^+)$ is the conditional probability of being inferred to be prosocial from pro-market talk, while $P(S|M^-)$ is the same for anti-market talk.

The latter probabilities, however, depend on whether the *doux commerce* view or the ‘markets corrupt’ view is the commonly held narrative. This is because, by Bayes’ theorem, the probability of being inferred as prosocial from talking in a pro- or an anti-market way is

$$P(S|M^+) = \frac{P(M^+|S)\pi_s}{\pi_m} \text{ and } P(S|M^-) = \frac{P(M^-|S)\pi_s}{1 - \pi_m}, \tag{2}$$

where π_m is the probability of expressing pro-market views, while π_s is that of voicing prosocial views. $P(M^-|S)$ is the probability that prosocial individuals express anti-market views and thus reflects the prevalence of the ‘markets corrupt’ narrative. If $P(M^-|S) > P(M^+|S)$, then prosocial people are more likely to express anti-market than pro-market views. In this case, the ‘markets corrupt’ view dominates the *doux commerce* view: Prosocial individuals want others to be more prosocial and, therefore, favour a less market-like society, provided they believe that markets corrupt.⁹ By construction,

$$P(M^+|S) + P(M^-|S) = 1. \tag{3}$$

Equation (1) implies that a person will express pro-market views if

$$v_m(i) > -[P(S|M^+) - P(S|M^-)]v_s(i). \tag{4}$$

The cost of being inferred to be pro-social is assumed to be uniformly distributed over the interval $[0, 1]$. Thus, the probability of expressing prosocial values is

$$\pi_s = P[c_i < v_s(i)] = \frac{v_s(i) - 0}{1 - 0} = v_s(i), \tag{5}$$

where c_i is the cost of expressing prosocial values for individual i .

Using Equations (2), (3) and (5), the condition in Equation (4) can be written as

$$v_m(i) > q(\pi_m)\pi_s^2, \tag{6}$$

where

$$q(\pi_m) = \frac{\pi_m - P(M^+|S)}{\pi_m - \pi_m^2}. \tag{7}$$

With the help of Equation (6), the equilibrium probability of expressing pro-market beliefs, π_m^* , is

$$\pi_m^* = P[v_m(i) > q(\pi_m^*)\pi_s^2] = 1 - P[v_m(i) < q(\pi_m^*)\pi_s^2]. \tag{8}$$

Considering the distribution of $v_m(i)$ defined earlier, Equation (8) implies that

$$\pi_m^* = 1 - \frac{q(\pi_m^*)\pi_s^2 - (\bar{v}_m - \delta/2)}{\delta} = \frac{\bar{v}_m + \delta/2 - q(\pi_m^*)\pi_s^2}{\delta}, \tag{9}$$

or

$$\bar{v}_m + \delta/2 - \delta\pi_m^* = q(\pi_m^*)\pi_s^2. \quad (10)$$

Equation (10) can be interpreted as an equilibrium condition, with the left-hand side representing the marginal benefit, and the right-hand side representing the marginal cost of expressing pro-market beliefs.¹⁰ The right-hand side reflects the value of expressing such beliefs as a function of their probability, while the left-hand side is the marginal cost of increasing this probability, arising from a higher likelihood of being inferred as anti-social.

The model predicts that the effect of an increase in being prosocial on expressing pro-market views will be negative or positive depending on the intrinsic value individuals attach to markets relative to what they think of their moral costs. This is because, first, the equilibrium in Equation (10) implies that

$$\frac{d\pi_m^*}{d\pi_s} = -\frac{2q(\pi_m^*)\pi_s}{q'(\pi_m^*)\pi_s^2 + \delta}, \quad (11)$$

whose sign is the opposite of that of $q(\pi_m^*)$, given that π_s , δ and $q'(\pi_m^*)$ are all positive.

Second, this sign depends on a parameter describing beliefs that are commonly held, as formalised by the following proposition¹¹:

Proposition: If $\Delta > 0$, then $q(\pi_m^*) > 0$, and therefore, $d\pi_m^*/d\pi_s < 0$, and if $\Delta < 0$, then $q(\pi_m^*) < 0$, and therefore, $d\pi_m^*/d\pi_s > 0$.

The parameter Δ is the difference between the intrinsic preference for markets and the view that markets corrupt:

$$\Delta \equiv \pi_m^0 - P(M^+|S), \quad \pi_m^0 = 1/2 + \bar{v}_m/\delta. \quad (12)$$

Δ is higher if people have a stronger intrinsic belief in markets (π_m^0) or a stronger disbelief in their favourable moral effects ($P(M^+|S)$).

The argument of the model above can be expressed in plain English. People might follow norms that shape their identity, and they want to express that identity when talking about markets. How they talk about markets will be shaped not only by the extent to which they value markets for their own sake but also by the way of talking about markets that will signal their identity more effectively. People will talk about markets in a positive or negative way in part because they want others to infer their identity from this talk.

Whether it is pro- or anti-market talk that will be a signal for being prosocial will, however, depend on the general beliefs about markets and the generally accepted narratives about markets. If people have rather pro-market beliefs *but* the accepted moral narrative about markets is that ‘markets corrupt’, then prosocial values tend to be associated with anti-market talk. If people are less pro-market in general but markets are interpreted as morally good, the association may be positive. These conclusions are, however, concerned with beliefs within a certain community and with deviations from the generally accepted view.

The implication is that in a more pro-market country, relatively more prosocial people will tend to be relatively less pro-market, especially if narratives about markets are of the ‘yes, but’ kind—markets are thought to bring material benefits or freedom, for example, and yet to be bad for the soul, since ‘markets corrupt’. Such general attitudes and narratives might be reflected in the institutions and policies of the country, as much as public opinion about markets will shape market-oriented policies and the policies aimed at healing the bad moral effects that markets are deemed to have.

4 | Regressing Pro-Market Views on Prosocial Views

Provided that views on markets and social issues are available in the Integrated Values Surveys (EVS 2022; Haerpfer et al. 2022), it is possible to test an approximation of the predictions of the model above. As both the dependent and independent variables must be defined at the individual level, they are drawn from the IVS. The ownership preference variable is derived from question E036 of the IVS, and measures the preference for private over government ownership, serving as a good approximation of pro-market views (Paldam 2021, 131–136).

The key independent variables are those introduced in Section 1: generalised trust and post-materialism. Generalised trust is derived from question A163 of the IVS and is binary. Its value is 1 if the respondent agrees that ‘most people can be trusted’, and 0 if they answer ‘you need to be very careful’. Post-materialism comes from question Y002, a four-item scale ranking national aims (WVS 2017, 51, 208).¹² The measure of post-materialism runs between 1 and 3.

One implication of the argument in Section 3 is that pro-market beliefs may be positively or negatively related to prosocial views, even in those market societies that are, as Storr and Choi (2019) show, more pro-social than non-market societies. Furthermore, the model suggests that the effect should depend on the parameter Δ , which captures the expected average societal view of markets. More precisely, it is the expected difference between the strength of the intrinsic preference for markets and their perceived moral costs. A higher Δ therefore reflects a stronger ‘yes, but’ approach to markets, as discussed in Section 3.

I assume that such preferences of society are reflected in their actual policies and institutions. The individual therefore makes their choice of beliefs, as modelled in Section 3, with these institutions shaping expectations about society’s views on markets. Seeing institutions as coordinating actions is not new. Lachmann (1971, 50), for example, describes them as ‘means of orientation to a common signpost’ that coordinate human actions. One measurable characteristic of a country’s institutions linked to parameter Δ in Section 3 is ‘state economic modernity’ (SEM) that Murphy (2019) defines as the difference between Area 2 (Legal System and Property Rights) and Area 1 (Size of Government) of the Economic Freedom of the World Index (Lawson and Murphy 2023). SEM thus

captures the rule of law maintained despite a relatively large government.

I have two reasons to suppose that SEM is related to Δ . First, Murphy (2019) shows that SEM is more strongly correlated with beliefs (social capital) than economic freedom is. Second, the parameter in question is the difference between what is believed about the market's intrinsic value and what is thought about its moral consequences. A relatively large gap between the two may be reflected in a relatively high SEM, showing that although people support the rule of law as the primary condition of a market economy, they also want a large government to mitigate its morally harmful consequences. A high SEM may therefore signal a relatively strong preference for markets for some reasons but concern about their consequences for others.

Assuming that SEM is a measure of parameter Δ , the hypothesis implied by the model can be tested by estimating the regression equation

$$\begin{aligned} \text{pro-market}_{ijt} = & \beta_0 + \beta_1 \text{SEM}_{jt} + \beta_2 \text{prosocial}_{ijt} + \\ & + \beta_3 \text{SEM}_{jt} \times \text{prosocial}_{ijt} + \beta_4 X_{ijt} + \epsilon_{ijt}, \end{aligned} \quad (13)$$

where variables are indexed by individual i , country j , and year t . Country-level variables, such as State Economic Modernity (SEM), vary only by j and t . Here, *pro-market* _{t} measures the intensity of pro-market views (ownership preference), and *prosocial* _{i} denotes one of the two prosocial views from Section 1: post-materialism or generalised trust.

The vector X is a set of individual control variables from the IVS, including dummies for gender, ten income brackets, three education levels, employment status (employed or unemployed), and age, all of which have been shown to influence market preferences (Zitelmann 2023). Country and wave dummies¹³ are included as well.

Following Murphy (2019), I compute SEM as the difference between Area 2 and Area 1 of the Economic Freedom of the World Index (Gwartney et al. 2024). Year t is defined as the average value over $t - 4$ to t . For years before 2000, when the index is available only every 5 years, the observed value for year t is assigned to $t - 2$, $t - 1$, $t + 1$ and $t + 2$.¹⁴

The main coefficient of interest is β_3 in Equation (13). Equation (13) implies that a one-unit difference in *prosocial* _{ijt} will be associated with

$$\frac{\Delta \text{pro-market}_{ijt}}{\Delta \text{prosocial}_{ijt}} = \beta_2 + \beta_3 \text{SEM}_{jt} \quad (14)$$

units of change in *pro-market* _{ijt} . This means the association might be negative or positive depending on the estimated values of β_2 and β_3 and the value of SEM. The model in Section 2 predicts a positive association at relatively low values of SEM and a negative one at relatively high values. My main concern when estimating Equation (13) is therefore (1) whether β_3 is estimated to be negative and (2) whether the estimated values of β_2 and β_3

fall in a range that allows Equation (14) to shift from positive to negative as SEM rises.

The values of the main coefficients estimated by OLS can be seen in Columns 1 and 2 of Table 1. Both when the variable *prosocial* _{i} is defined as post-materialism and when it is defined as generalised trust, the coefficient β_3 is negative. This means that the relationship between prosocial and pro-market views is more positive, or less negative, in countries with lower SEM.

A negative β_3 does not imply, however, that the association between the two kinds of views actually changes sign from positive to negative as SEM rises. To see if that is the case, we need an estimation of the effect described in Equation (14). This estimation is illustrated in Figure 3. In Figure 3, SEM is allowed to run over a wider range than in the actual sample the regressions in Columns 1 and 2 of Table 1 use. The range is, however, neither infeasible nor unrealistic. By construction, SEM must be in the interval $[-10, 10]$, while its actual values lie between $[-8.1, 6.14]$.¹⁵ These values extend beyond the restricted sample used in Columns 1 and 2 of Table 1, which is limited by the availability of other variables.

Figure 3 shows that the association is indeed estimated to be positive at relatively low SEMs and negative at relatively high ones. The switch from positive to negative occurs at an SEM of around¹⁶ 1. Above an SEM of about 2, the association between the two prosocial values is negative, whereas it remains positive below an SEM zero.

The estimates in Table 1 and Figure 3 align with the hypothesis from Section 3 but may also fit some alternative explanations. One of these is to see SEM as state capacity (Murphy 2019)—the ability of government to act inclusively rather than for the few. In this view, pro-social individuals favour government over markets when SEM is high, seeing state intervention as a credible way to realise their values.

If the explanation for the association between pro-market and prosocial values in Equation (14) is that at higher SEM levels the government is seen as having more capacity, rather than the expressive-preference mechanism of Section 3, then the sign of the association should not depend on the values being expressed. Whether it does is tested with two OLS regressions, the results of which appear in Columns 3 and 4 of Table 1. The idea is to check if the sign of the estimated value of Equation (14) depends on the respondent's self-defined position on a left-right political scale. Question E033 of the IVS asks respondents to place themselves on a 10-point scale, with higher values meaning further to the left. The variable *left* _{i} , which is added to the independent variables in Equation (13), ranges from 1 to 10. To test whether SEM matters primarily as a measure of state capacity, I adjust Equation (13) by allowing the association between pro-market and prosocial values to also depend on the variable *left* _{i} :

$$\frac{\Delta \text{pro-market}_{ijt}}{\Delta \text{prosocial}_{ijt}} = \beta_2 + \beta_3 \text{SEM}_{jt} + \beta_6 \text{left}_{ijt} + \beta_7 \text{SEM}_{jt} \times \text{left}_{ijt}. \quad (15)$$

TABLE 1 | Ownership preferences, prosociality and political identity.

	1	2	3	4	5	6
prosocial _i =	postmat _i	gentrust _i	postmat _i	gentrust _i	postmat _i	gentrust _i
SEM	0.043*** (0.010)	0.004 0.009	-0.117*** 0.022	0.109*** 0.013	0.054** (0.021)	0.041*** (0.012)
prosocial _i	0.031*** (0.007)	0.025*** 0.009	0.349*** 0.022	0.416*** 0.029	0.043** (0.021)	-0.103*** (0.029)
SEM × prosocial _i	-0.026*** (0.003)	-0.023*** 0.004	0.146*** 0.010	0.132*** 0.012	-0.024** (0.009)	-0.093*** (0.012)
left _i			0.001 0.007	-0.072*** 0.003		
SEM × left _i			0.016*** 0.003	-0.026*** 0.001		
prosocial _i × left _i			-0.051*** 0.004	-0.065*** 0.005		
SEM × prosocial _i × left _i			-0.028*** 0.002	-0.028*** 0.002		
trustgov _i					-0.045*** (0.017)	-0.083*** (0.07)
SEM × trustgov _i					0.028*** (0.007)	0.015*** (0.003)
prosocial _i × trustgov _i					-0.010 (0.008)	0.059*** (0.011)
SEM × prosocial _i × trustgov _i					-0.002 (0.004)	0.027*** (0.005)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Wave dummies	Yes	Yes	Yes	Yes	Yes	Yes
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes
R ²	0.078	0.078	0.089	0.089	0.074	0.073
Obs.	426,720	431,849	328,457	331,209	384,085	386,106
Countries	107	109	103	104	106	108

Note: Controls (not shown): dummies for gender, age, three education levels, 10 income brackets, unemployed, self-employed. Dummies for IVS waves and for countries are included. Standard errors (in parentheses) are robust.

Abbreviations: Dep. var.: ownership preference (*pro-market*); *gentrust*: generalised trust; *left*: political self-positioning; *postmat*: postmaterialism; SEM: State Economy Modernity; *trustgov*: confidence in the government.

* $p < 0.1$.

** $p < 0.05$.

*** $p < 0.01$.

The alternative hypothesis which emphasises state capacity would be supported if β_7 were estimated not to be different from zero at conventional significance levels. In this case, the *dependence* of the association between pro-market and prosocial values on SEM for people with left-wing values should be the same as for those with right-wing ones. As the results in Columns 3 and 4 show, that is not the case. The coefficient

β_7 is estimated to be different from zero at the 5% level of significance.

Furthermore, β_7 is negative, which means that at a low level of a self-positioned left-wing identity (or a high level of self-positioned right-wing identity) the relationship between pro-market and prosocial values becomes positively dependent on

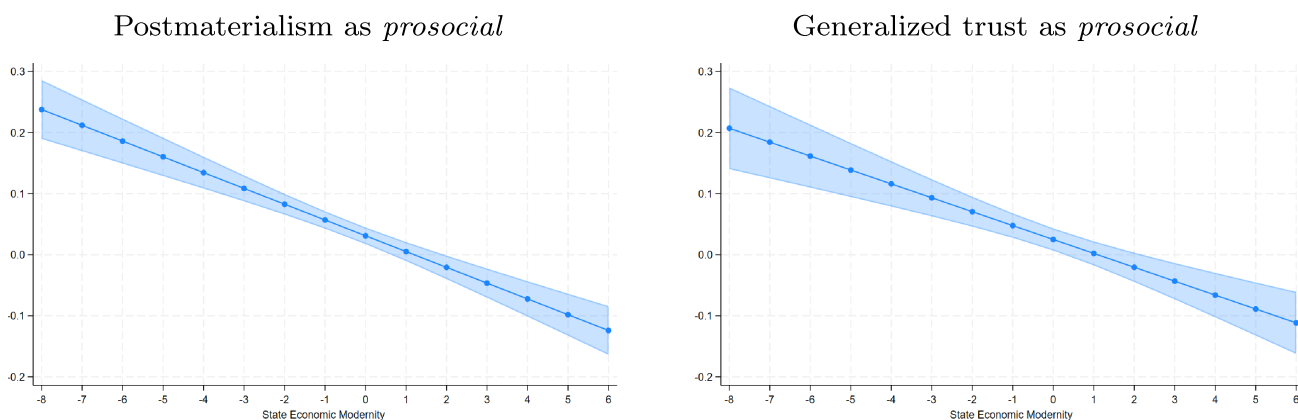


FIGURE 3 | Estimation of the association between $pro\text{-}market_i$ and $prosocial_i$. Estimation of the partial association of pro-market preference with postmaterialism and generalised trust (Equation 14) at different possible levels of SEM. The dotted line depicts the point estimates, while the shaded area illustrates the 95% confidence intervals around it. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

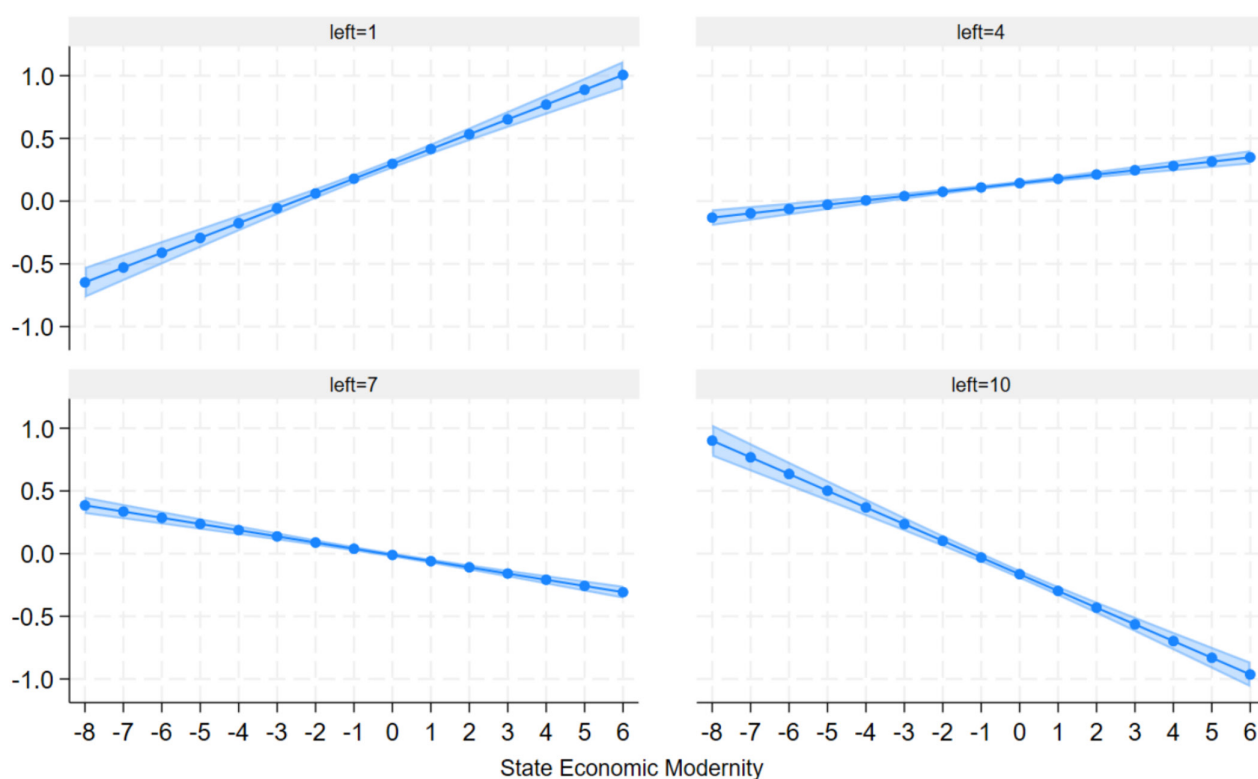


FIGURE 4 | Estimation of the association between pro-market preference and postmaterialism as depending on political identity. Point estimates (dotted line) and 95% confidence intervals (shaded area) of the partial association between pro-market preference and postmaterialism (Equation 15) as a function of SEM and political self-positioning ($left_i$). The four panels show this association at four different levels of $left_i$, which runs from 1 to 10, with 10 being the furthest to the left. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

the level of SEM. This result is illustrated in Figure 4 with postmaterialism as the prosocial value.¹⁷

Figure 4 shows the relationship in Equation (15) at four different levels of the variable $left_i$. The figure shows that the relationship is positive when $left_i$ is relatively low, decreases steadily, and turns negative when $left_i$ is high. I interpret this result as supportive of the hypothesis that sees the role of SEM as shaping expectations about what other people think, as opposed to the one that sees SEM as a(n) (objective) measure of state capacity.

The results in Columns 3 and 4 as well as in Figure 4 would still not support an interpretation built on expressive preferences if the terms political left and right had the usual interpretation—namely, that ‘individuals on the left tend to believe that the government should have a broader scope and be more trusted as an institution, whereas the opposite holds for those on the right’ (Stantcheva 2024, 7). That would mean that the variable $left_i$ is a sign of how much individuals trust the government.

The results in Columns 5 and 6 of Table 1, however, do not support this interpretation. Columns 5 and 6 in Table 1 show

the results of re-estimating the regressions from Columns 3 and 4, this time replacing the variable $left_i$ with the variable $trustgov_i$ that stands for trust in the government. $trustgov_i$ is derived from IVS variable $E069_11$, which records an individual's confidence in the government on a 4-point scale ranging from *none at all* to *a great deal*. Accordingly, $trustgov_i$ takes values between 1 and 4. The striking result is that $trustgov_i$ does not behave like $left_i$ did in Columns 3 and 4. The coefficient β_7 in Equation (15) is insignificant at the 5% level in Column 5. This means that the association between ownership preference and post-materialism does not vary systematically with trust in government. The coefficient β_7 in Column 6, however, is significantly positive. This implies that the association between generalised trust and ownership preference is higher at a higher level of trust in the government than at a lower level, the opposite of the pattern observed with $left_i$. The conclusion from the results in Columns 5 and 6 is that the variable $left_i$ cannot be interpreted as a proxy for trust in government.

In addition to the one just discussed, there are, of course, other alternative hypotheses.¹⁸ One is that it might simply be less costly to voice an anti-market opinion in a market environment. Such a hypothesis seems to be true for almost any kind of opinion, but it is not straightforwardly so when it comes to an anti-market one. To see that, consider that this hypothesis is an answer to the question of whether it is less costly to voice a pro-market opinion in a non-market environment. The answer is not obviously yes because less market-oriented economies tend to be less free politically, too (Geloso and Tabarrok 2025), which makes the pro-market opinion run against the official policies of the government.

Second, if this alternative hypothesis held, the regression in Table 1 should also hold with SEM being replaced by economic freedom or by one of its components. In that case, however, the results are less convincing.¹⁹ It must be added that as economic freedom correlates strongly with SEM, it is difficult to separate this alternative hypothesis from the one I am arguing for.

Another alternative hypothesis might be an application of what Demsetz (1969) calls the nirvana fallacy: People tend to compare the imperfect reality of markets to the perfect but infeasible ideal of government interventions. Czeglédi (2022) argues that this bias is indeed one reason why confidence in the government and in companies does not affect pro-market preference the same way. In the present case, however, the nirvana fallacy hypothesis is equivalent to the one I tested in Columns 5 and 6 of Table 1. If the regression results were driven by the nirvana fallacy, then including trust in the government should show it. The results in these two columns, however, show that the association between ownership preference and postmaterialism or generalised trust is not stronger among those with more confidence in the government.

The conclusion of this section is that the regression results support the hypothesis that prosocial individuals' support for markets is shaped by national institutions and policies, which are perceived to embody the prevailing narrative about markets and their moral consequences.

5 | Controlling for Social Effects With Instruments

A serious concern about the results in Section 4 is that both pro-social and pro-market views might be correlated with state economic modernity, and therefore the estimation of the association between pro-market and prosocial values might be biased when estimated with OLS, as in Section 4. This bias is expected to be positive, since OLS does not account for the possibility that the correlation between $pro-market_i$ and $prosocial_i$ in Equation (13) may operate through SEM, nor that SEM may itself be partially endogenous. Both factors may produce an upward bias in the estimated values of β_2 and β_3 .

As state economic modernity (SEM) may partially be shaped by ownership preferences and prosocial views, this makes the estimation results in Section 4 suspect of being biased by endogeneity. The usual way to check whether there is such a bias is to instrument SEM. The instrumenting strategy is suggested by the model in Section 3 on the one hand, and by the usual way of instrumenting institutions on the other hand.

There are two further difficulties in addition to the usual ones, of instrumenting SEM in Table 1. First, SEM appears in interaction terms as well, meaning that there is not only one variable that needs to be instrumented. Second, as the variables that are interacted with SEM are individual-level ones, the instruments need to be individual-level, too. These individual-level instruments can only come from the same dataset, the IVS, where my prosociality variables come from, which puts serious limitations on finding good instruments.

If SEM is shaped partially by individual views themselves, the Equation (13) includes a 'social effect' (Manski 1993), that is, individual behaviour is correlated with the behaviour of others in the reference group. As a result, Equation (13) might indirectly include a peer effect (Angrist and Pischke 2009, 192–197) as SEM being correlated with the prosocial views of others in the reference group. The reference group here is therefore the country sample for a given time period: Those who have a say in how the institutions determining SEM are shaped. One of the instruments for SEM will be the average prosocial views of others in the reference group, which means the country average of the prosocial views calculated excluding the views of the individual i . These variables are referred to by their name prefixed with llo —leave one out. As it is individual i who is left out, these variables are defined at the individual level. For instance, the variable $llo_postmat_i$ refers to the country-average of postmaterialism calculated without individual i .

In order to have instruments that are not only relevant but valid, we need a variable that is possibly unaffected by common shocks to SEM and individual prosocial views. Institutions are often instrumented with cultural variables (Licht et al. 2007; Tabellini 2010), which are usually shown to be further influenced by 'deep' historical, geographical or even genetic variables (Olsson 2024; Spolaore and Wacziarg 2013). SEM, as mentioned before, is predicted even better by some cultural variables than is economic freedom (Murphy 2019).

Culture does not appear to be a valid instrument in my regressions, however, because economic views, even though

individual ones, are regressed, and these views themselves may quite plausibly be influenced by culture through channels other than SEM (Guiso et al. 2003). Historical variables, which may affect culture, could better serve as an instrument in my case. Considering that SEM is a proxy for state capacity, a variable that measures to what extent the government of a country (or the country from which it evolved) was able to respect private property in the past may be a relevant and valid instrument, for which Roland's (2020) variables seem to be fairly good candidates. As his illustrative discussion (Roland 2020, 485–486) of ancient Egypt versus Mesopotamia reveals, his focus is indeed the ability of the government to secure and respect individual rights—in the ancient past. Assuming that history matters for SEM, one of Roland's (2020) variables might be a relevant and valid predictor of it.

Out of Roland's (2020) several variables, I use the one measuring the extent to which private ownership of land was present at the very beginning of the country's history, which ranges between 1 (no private ownership) and 10 (mostly private ownership).²⁰ The variable *land* is therefore country-specific and cannot be used together with country dummies. In order to retain the latter in the first-stage IV regressions of Tables 2, 3, S2 and S3,²¹ the variable *land* will be interacted with some individual-level instruments.

In choosing such individual-level instruments, I am confined to the same database from which I get the explanatory and the dependent variables—the IVS. To find such instruments, I rely on the idea that several of the single variables used as a reflection of prosocial attitude do not have a direct relationship with ownership preference except through the general notion of prosociality. Starting from this idea, in this section I use the acceptance of homosexuality (variable F118) and trust in family (D001_B) when running the IV version of the OLS estimations in Columns 1 and 2 of Table 1.

The fact that the acceptance of homosexuality and the strength of family relations are often considered reflections of individualism (Beugelsdijk et al. 2015, 229–230; Davis and Dutta 2025; Davis and Williamson 2020) does not contradict seeing them as reflections of prosocial attitude as well. 'True individualism', as Hayek (2018/1948, 52–54) explains, is a 'theory of society' (emphasis in the original), leading to a belief in the beneficial nature of 'the spontaneous collaboration of free men' and the sort of tolerance that makes a up part of what is identified with a prosocial attitude. 'Universalistic moral principles and individual responsibility' (Greif et al. 2025, 86) are therefore naturally intertwined through institutional-cultural evolution.

Trust in family may similarly be seen as part of a prosocial attitude and part of individualism, too. First, trust in family is a kind of trust, and trusting other people is considered to be a prosocial value. Second, family ties, as opposed to the strength of less personal relations, are often seen as what helps create a less individualist system of values and institutions. Stronger family values may be associated with stronger family ties, which ultimately lead to institutions reinforcing these values, which are more collectivist and more suspicious of 'strangers' outside the 'clan' (Greif et al. 2025). A more individualist approach and a higher

willingness to accept strangers are thus intertwined. Trust in the family and the acceptance of homosexuality are therefore used in Tables 4, S2 and S3 as additional individual-level instruments of the two variables that are to be instrumented.

In addition to the acceptance of homosexuality and trust in family, in Tables S2 and S3 in the online appendix, in which the interaction term of SEM with $left_i$ is to be instrumented, too, I use the variable on the justification of abortion (F120) as an additional instrument. The abortion variable seems to be a good choice—among those available in the IVS—because the justification of abortion seems to be a left-right issue without being clearly aligned with private ownership preference in general.²²

Using the instruments explained above, Table 2 presents the IV estimation of Table 1's Column 1, and Table 3 presents that of Table 1's Column 2. Table 4 includes the second-stage estimation of Columns 3 and 4 of Table 1, while Tables S2 and S3 present the first stage. As the instruments are available for a smaller number of countries or individuals, their inclusion changes the sample size significantly. For the sake of comparison, therefore, Tables 2, 3 and 4 re-run the OLS regressions, too, on the same sample that the IV regressions of the same table use. These OLS estimations are in the first two columns of these three tables.

Columns 3 and 4 in the upper section of Table 2 include the second-stage results of two IV estimations of the same equation whose OLS estimation was presented in Column 1 of Table 1. The two alternative IV estimations are presented as a check on the robustness of the results. The OLS results that use the same sample as the IV regressions are in Columns 1 and 2. The instruments used in Column 3 differ from those used in Column 4. As the lower section of the table shows, for the estimation in Column 3 I used the leave-one-out version of postmaterialism ($llo_postmat_i$), the interaction of the *land* variable with postmaterialism ($land \times postmat_i$), and the interaction of the leave-one-out version of postmaterialism with generalised trust ($llo_postmat_i \times gentrust_i$). In Column 4, the latter two instruments are replaced by the interaction of the leave-one-out version of postmaterialism with postmaterialism ($llo_postmat_i \times postmat_i$) and the interaction of the *land* variable with trust in the family ($land \times family_i$).

A comparison of Column 1 in Table 1 and the upper section of Table 2 shows differences, but these differences do not change the main message. The coefficient of SEM is much larger when instrumented than in the OLS case. The variable postmaterialism is estimated to have no statistically significant effect (Column 3) or a negative effect (Column 4) in Table 2. However, the cross-variable is statistically significant and has the same negative sign, which leads to the same conclusion: the marginal association between the variable $postmat_i$ and ownership preference, described in Equation (14), is positive at relatively low levels of SEM, becomes smaller at higher levels, and even turns negative at a certain value of SEM. The marginal effect is estimated to be somewhat higher with the IV estimation. The value at which its sign turns from positive to negative is estimated to be somewhat higher in Column 3 of Table 2 (about 0) than in Column 4 (about –0.67).

TABLE 2 | IV estimations with postmaterialism as an independent variable.

	1	2	3	4
	OLS		IV: second stage	
SEM	-0.022*	-0.239***	0.578***	-4.850***
	(0.013)	(0.030)	(0.177)	(0.782)
SEM × postmat _i	-0.021***	-0.020***	-0.057***	-0.094***
	(0.003)	(0.004)	(0.006)	(0.009)
postmat _i	0.011	-0.012	-0.002	-0.063***
	(0.008)	(0.010)	(0.008)	(0.012)
Controls	Yes	Yes	Yes	Yes
Wave dummies	Yes	Yes	Yes	Yes
Country dummies	Yes	Yes	Yes	Yes
Obs.	325,375	196,113	325,375	196,113
Countries	77	69	77	69
Kleibergen–Paap rk LM			1049.131	291.996
(<i>p</i> value)			(<0.01)	(<0.01)
Kleibergen–Paap rk Wald F			382.870	98.814
Hansen J			0.117	0.004
(<i>p</i> value)			(0.733)	(0.952)
	First stage of Column 3		First stage of Column 4	
Instrumented:	SEM	SEM × postmat_i	SEM	SEM × postmat_i
l1o_postmat _i	-0.325***	-0.662***	0.058***	-10.397***
	(0.010)	(0.031)	(0.012)	(0.064)
land × postmat _i	0.001	0.553***		
	(0.000)	(0.002)		
l1o_postmat _i × gentrust _i	0.002*	0.046***		
	(0.001)	(0.003)		
l1o_postmat _i × postmat _i			-0.025***	5.790***
			(0.004)	(0.027)
land × family _i			0.003***	0.003***
			(0.000)	(0.001)
Controls	Yes	Yes	Yes	Yes
Wave dummies	Yes	Yes	Yes	Yes
Country dummies	Yes	Yes	Yes	Yes

Note: Controls (not shown): dummies for gender, age, three education levels, 10 income brackets, unemployed, self-employed. Dummies for IVS waves and for countries are also included. Standard errors (in parentheses) are robust.

Abbreviations: Dep. var.: ownership preference (*pro-market*); *family*: trust in family; *gentrust*: generalised trust; *l1o_postmat*: leave-one-out country-average of *postmat*; *land*: private ownership of land in history; *postmat*: postmaterialism; SEM: State Economy Modernity.

**p* < 0.1.

****p* < 0.01.

The usual tests of the instruments, shown in the middle three lines of Table 2, support the hypothesis that both sets of instruments are relevant, as the Kleibergen–Paap LMs are significant, and sufficiently strong, since the Kleibergen–Paap

Wald F statistics are above the common threshold (10), and valid, as the Hansen J overidentification tests are insignificant. Though the same sets of instruments are not relevant and valid across the two samples, the change in the set of

TABLE 3 | IV estimations with generalised trust as an independent variable.

	1	2	3	4
	OLS		IV: second stage	
SEM	-0.054*** (0.012)	-0.096*** (0.012)	0.366** (0.172)	-1.517*** (0.279)
SEM × <i>gentrust_i</i>	-0.026*** (0.005)	-0.036*** (0.005)	-0.061*** (0.008)	-0.213*** (0.069)
<i>gentrust_i</i>	0.005 (0.010)	-0.021* (0.011)	0.000 (0.0100)	0.041*** (0.012)
Controls	Yes	Yes	Yes	Yes
Wave dummies	Yes	Yes	Yes	Yes
Country dummies	Yes	Yes	Yes	Yes
Obs.	325,375	295,993	325,375	295,993
Countries	77	77	77	77
Kleibergen–Paap rk LM (<i>p</i> value)			1092.894 (<0.01)	461.607 (<0.01)
Kleibergen–Paap rk Wald F			400.092	158.875
Hansen J (<i>p</i> value)			0.003 (0.958)	0.635 (0.426)
	First stage of Column 3		First stage of Column 4	
Instrumented:	SEM	SEM × <i>gentrust_i</i>	SEM	SEM × <i>gentrust_i</i>
<i>llo_postmat_i</i>	-0.319*** (0.010)	-1.566*** (0.019)	-0.201*** (0.011)	0.289*** (0.027)
<i>llo_postmat_i</i> × <i>gentrust_i</i>	-0.023*** (0.008)	6.060*** (0.019)		
<i>land</i> × <i>postmat_i</i>	-0.001*** (0.000)	0.031*** (0.000)	-0.001*** (0.000)	0.008*** (0.000)
<i>land</i> × <i>acc_homosex_i</i>			0.0004*** (0.000)	0.003*** (0.000)
Controls	Yes	Yes	Yes	Yes
Wave dummies	Yes	Yes	Yes	Yes
Country dummies	Yes	Yes	Yes	Yes

Note: Controls (not shown): dummies for gender, age, three education levels, 10 income brackets, unemployed, self-employed. Dummies for IVS waves and for countries are also included. Standard errors (in parentheses) are robust.

Abbreviations: *acc_homosex*: acceptance of homosexuality; dep. var.: ownership preference (*pro-market*); *gentrust*: generalised trust; *llo_postmat*: leave-one-out country-average of *postmat*; *land*: private ownership of land in history; *postmat*: postmaterialism; SEM: State Economy Modernity.

**p* < 0.1.

***p* < 0.05.

****p* < 0.01.

instruments because of the change in the sample does not change the main message from the second stage of the regressions. The main results are therefore not sensitive to the choice of instruments or the sample size.

Table 3 is similar to Table 2, as it presents the IV estimation of the same equation whose OLS estimation was presented in

Column 2 of Table 1. As it is now the generalised trust variable, not postmaterialism, that serves as a right-hand-side variable, the interaction terms that are to be instrumented differ, too. The instruments and the sample size are therefore different from those in Table 1 or 2. For this reason, the OLS estimations are repeated with this restricted sample size in Columns 1 and 2.

TABLE 4 | Second-stage results with political identity included.

	1	2	3	4
	OLS		IV	
prosocial_i =	postmat_i	gentrust_i	postmat_i	gentrust_i
SEM	-0.317*** (0.045)	-0.052 (0.038)	-3.282*** (0.610)	-3.949*** (0.695)
prosocial _i	0.324*** (0.032)	0.376*** (0.044)	0.257*** (0.036)	0.309*** (0.063)
SEM × prosocial _i	0.171*** (0.014)	0.146*** (0.018)	0.116*** (0.023)	0.866*** (0.219)
left _i	0.013 (0.011)	-0.062*** (0.004)	-0.004 (0.012)	-0.027* (0.016)
SEM × left _i	0.016*** (0.005)	-0.030*** (0.002)	-0.002 (0.008)	-0.004 (0.012)
prosocial _i × left _i	-0.052*** (0.005)	-0.054*** (0.008)	-0.044*** (0.006)	-0.029*** (0.010)
SEM × prosocial _i × left _i	-0.031*** (0.002)	-0.035*** (0.003)	-0.025*** (0.004)	-0.152*** (0.034)
Controls	Yes	Yes	Yes	Yes
Wave dummies	Yes	Yes	Yes	Yes
Country dummies	Yes	Yes	Yes	Yes
Obs.	145,176	145,176	145,176	145,176
Countries	66	66	66	66
Kleibergen–Paap rk LM (<i>p</i> value)			562.679 (<0.01)	423.709 (<0.01)
Kleibergen–Paap rk Wald F			81.939	61.327
Hansen J (<i>p</i> value)			4.919 (0.178)	2.012 (0.570)

Note: Controls (not shown): dummies for gender, age, three education levels, 10 income brackets, unemployed, self-employed, IVS waves. Standard errors (in parentheses) are robust and clustered by country. Abbreviations: Dep. var.: ownership preference (*pro-market*); *gentrust*: generalised trust; *left*: political self-positioning; *postmat*: postmaterialism; SEM: State Economy Modernity. **p* < 0.1. ****p* < 0.01.

There are two sets of instruments. In Column 3, they include the leave-one-out version of postmaterialism (*llo_postmat_i*), its interaction with generalised trust (*llo_postmat_i × gentrust_i*), and the interaction of the *land* variable with postmaterialism (*land × postmat_i*). In the alternative estimation in Column 4, the second instrument is replaced by the interaction of *land* and the acceptance of homosexuality (*land × acc_homosex_i*).

The results are similar to those that were obtained from Table 2. The basic result is not altered by the change in the sample size and in the set of instruments. The interaction term of SEM with generalised trust, implies that the association of trust with

pro-market preference goes from positive to negative as SEM increases, with the cut-off point being close to zero. Also, according to the middle section of Table 3, the usual tests do not reject the hypothesis that both sets of instruments are relevant, strong and valid.

Instrumenting SEM in the equations in Columns 3 and 4 of Table 1 seems much more difficult, as there are four variables to be instrumented. The second-stage results of such estimations, together with the OLS estimations repeated for the same sample, are in Table 4, while the first-stage estimations of Column 3 are in Table S2, and those of Column 4 are in Table S3 with the latter two tables being in the online

appendix. The instruments used here are similar to those that were used previously, but new instruments are also added, namely those interacted with the variable $left_i$, as two of the variables that are to be instrumented are also interaction terms with $left_i$. There are seven instrumental variables in Tables S2 and S3. One of these is the leave-one-out version of generalised trust ($llo_genstrust_i$); the other six are interactions of two or three variables. In Table S2, the leave-one-out version of generalised trust is interacted with $left_i$, while the $land$ variable is interacted with postmaterialism, the justification of abortion, trust in family and leftist political position. There is a threefold interaction in which $land$ is interacted both with postmaterialism and leftist political position. Instead of the latter, in Table S3, the threefold interaction includes generalised trust and leftist political position in addition to $land$.

The inclusion of $left_i$ among the right-hand variables in the second stage and the justification of abortion in the first stage reduces sample size radically. As before, the OLS estimations are repeated in Columns 1 and 2 in Table 4 on the reduced sample on which the IV estimation is run. Again, the main message is not changed: With the coefficients in Table 4, Equation (15) still implies that the association between pro-market preference and either postmaterialism or generalised trust goes from negative to positive as SEM increases if $left_i$ is relatively low, and vice versa if $left_i$ is relatively high.

According to the test results in the lower section of Table 4, the instruments pass the tests for relevance, strength and validity: The Kleibergen–Paap LM is statistically significant, the Wald F is above the common threshold and the Hansen J overidentification test is insignificant. The last line of Tables S2 and S3 shows that the F-test of the excluded instruments is also above the commonly expected threshold of 10. In addition, the coefficients of the instruments are statistically significant at the 5% level with very few exceptions. The inclusion of the justification of abortion is confirmed by the fact that its interaction with $land$ has a positive and significant coefficient in each case.

In sum, the SEM and its interaction with individual variables can be instrumented by using historical variables and with the help of the idea that prosociality affects other individual variables in addition to postmaterialism and generalised trust. Though the instruments must be confined to the IVS, the main results of the regressions in Table 1 are confirmed, giving additional support to the hypothesis that the association between prosocial values and ownership preference (a pro-market value) is determined by institutions, insofar as they reflect the preferences of others.

6 | Conclusions

An old criticism of using survey data is that they show only what people say, not what people do. The usual suggestion is therefore to give up using such data and examine what people actually do (Choi and Storr 2023, 603–604). I chose another approach, implicitly suggested by Tollison (1986, 919), who stated that ‘[t]he argument that survey data are not reliable is equivalent to saying that we do not have an economic theory of talk’, and used the

idea of expressive behaviour as such a theory—of the answers given to survey questions, at least.

Such an approach seems to be a way of solving the puzzle described in Section 1: Why is the cross-individual correlation of the two prosocial values, post-materialism and generalised trust, so radically different from their cross-country correlation? The main conclusion of the paper is that the relationship between these two pro-social values and ownership preference depends on the institutional quality of the country because it both reflects the general opinion about markets and their moral narrative.

A high level of State Economic Modernity—a relatively large government combined with a secure legal system—implies a negative individual-level correlation between prosociality and pro-market preference. The reason that this paper has suggested is that such an institutional setting conveys the narrative that, though markets are instrumentally good, they corrupt our morals. With such a narrative, pro-market talk can easily signal antisocial views.

As a broader conclusion, the paper can be seen as a specification of, and support for, Buchanan’s (2000) argument—and that of many others cited in the paper—about the ‘soul of liberalism’: Pro-market arguments will not be convincing enough, at least for non-economists, without an underlying narrative about their morality. The ‘pragmatic utilitarian calculus’ (Buchanan 2000, 118) without a ‘vision’ will not convince. In the model of this paper, this implication was formulated as follows: What I called ‘yes, but’ arguments about markets might not be enough or might even be counterproductive. Focusing on consequences only and ignoring or hiding morally positive effects of markets, such as those that the *doux commerce* thesis suggests, might backfire by making pro-market arguments a signal of immorality or antisociality. This conclusion is crucial when pro-market arguments seem to be losing in the public scene.

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Conflicts of Interest

The author declares no conflicts of interest.

Data Availability Statement

Data are available on request from the author.

Endnotes

¹ For a more detailed presentation of these data, see Section 4.

² Cross-country correlation for Wave 4 is reduced by two outliers, China and Iraq. Without them, the correlation is 0.292. For Wave

6, the correlation increases to 0.328 upon exclusion of China and Rwanda. Similarly, excluding Rwanda alone increases the correlation between postmaterialism and ownership to 0.381 in Wave 6.

³ There are at least two other ways to think about the relationship between markets and morality, as shown by Hirschman's (1982) presentation of the rival interpretations.

⁴ Or, as Friedman (2023) puts it in applying an evolutionary game-theoretic argument: 'a market society will have nicer people than either a traditional or a centrally planned society'.

⁵ Although there are some doubts on this question (Bjørnskov 2019, 630–631).

⁶ When it comes to opinions on protectionism, however, even Mayda and Rodrik (2005), who find a significant role for self-interest as predicted by the general models of international trade, prefer a model that includes 'communitarian–patriotic values'. Much more recently, and in line with the expressive voting hypothesis, Autor et al. (2024) show that in the United States the tariff war against China delivered electoral gains for the political party responsible for it, despite the lack of employment effect.

⁷ The notion of 'luxury beliefs', for example, developed by Henderson (2024), holds that preferences regarding several social issues are part of the 'upper-class' identity.

⁸ What follows, therefore, is an expressive-preference model of pro-market views in which the 'measure of morality' (Clark and Lee 2016, 39) of expressing such beliefs depends on whether others think that 'markets corrupt' or that they are 'doux'.

⁹ Some evidence of this is that researchers looking for empirical support for the *doux commerce* thesis found it puzzling that more pro-market people are not more prosocial, as we saw in Section 2.

¹⁰ When $q(\pi_m^*)$ is negative (-1) times the left-hand side represents the marginal benefit of being *anti*-market, while (-1) times the right-hand side is its marginal cost.

¹¹ The proof of the proposition is in Section S1 in the online appendix.

¹² These aims are (1) maintaining order in the nation, (2) giving people more say in important government decisions, (3) fighting rising prices and (4) protecting freedom of speech (WVS 2017, 51).

¹³ The reason I include wave dummies and not year dummies is that a certain wave of the IVS ranges over several years, leaving too many years compared to the number of countries, which would reduce the variance of SEM available as an explanatory factor.

¹⁴ Descriptive statistics are reported in Table S1 in the online appendix.

¹⁵ From Eswatini in 2001 to Denmark in 1980.

¹⁶ That is roughly equal to the SEM value for the United States in 2020.

¹⁷ A similar figure using generalised trust as the prosocial value is not presented here for brevity; it is available from the author upon request.

¹⁸ I am grateful to one of my anonymous referees for suggesting them.

¹⁹ The results are more similar to those in Table 1 with postmaterialism than with generalised trust in general, but they are completely the opposite in both cases when SEM is replaced with government size. These regression results are not shown but are available upon request from the author.

²⁰ See (Roland 2020, 506) and the data appendix available on Roland's webpage (<https://eml.berkeley.edu/~groland/>).

²¹ Tables S2 and S3 can be found in the online appendix.

²² Although abortion is often argued for on the basis of women's ownership of their own body, even the rights-based libertarian argument is not unequivocal (Block 2023).

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Supporting Information

Additional supporting information can be found online in the Supporting Information section. nicepeople_v3.0_proofread_app.pdf. nicepeople_v3.0_proofread_app.tex.