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The moral costs of markets: Testing the deterioration hypothesis

Justin Callais[a,*], Colin Harris[b], Ben Borchard[b]

[a] University of Louisiana at Lafayette, United States
[b] St. Olaf College, United States

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ABSTRACT

The expansion of markets has generated significant material benefits. Yet some worry that this increase in wealth has come at a significant moral cost. Markets may crowd out or even corrupt existing moral values, causing moral deterioration. We test this hypothesis using both fixed effects and matching methods to estimate the impact of market institutions on a society's moral values. Contrary to the deterioration hypothesis, we find that market-oriented societies have a greater aversion to unethical behavior, higher levels of trust, and are not significantly associated with lower levels of morality under any model specification. Furthermore, we find that becoming more market oriented does not cause a significant reduction in a society's moral values. Together, our results suggest that being or becoming more market oriented does not cause moral deterioration.

1. Introduction

The world is becoming more interconnected due in part to the expansion of markets. And while most people accept that markets generate significant material benefits, there remains debate "concerning whether the wealth that societies gain by embracing markets comes at too high a moral cost" (Storr and Choi 2019: 11). On one side of the debate is the position that markets crowd out or even corrupt existing moral values, resulting in moral deterioration (Rousseau [1754] 1984; Marx [1844] 2000; Radin 1987, 1989; Anderson 1993; Sandel 2012; Bowles 2016). On the other side is the claim that markets actually promote moral virtues, or at worst act as neutral spaces to be filled in by the existing values of the market participants (Mandeville [1714, 1732] 1988; Montesquieu [1748] 1989; Smith [1759] 1982, [1776] 1977; Friedman [1962] 2002; McCloskey 2006; Storr 2009; Storr and Choi 2019). Even though each position presents a testable hypothesis, the debate has largely remained one of philosophical conjecture. This is unsatisfying as the question of the moral costs of markets is "at root an empirical, rather than a philosophical, claim" (Storr and Choi 2019: 12). Do markets cause moral deterioration?

The most thorough attempt at addressing this question empirically comes from Storr and Choi (2019). Their aim is to assess the moral character of markets and the impact that market institutions have on morality, and in doing so provide a plausible retort to both the market's most stringent critics and its most tepid supporters.[1] A major contribution of their

* Corresponding author.
E-mail address: justin.callais@louisiana.edu (J. Callais).

[1] To do this, they "rely on what [they] believe to be the most convincing theories about how markets can work and the best available evidence regarding how markets have worked". Their arguments and evidence are meant to be "suggestive rather than conclusive" as they aim to assess "the empirical plausibility of an often-unsupported empirical claim rather than to definitely answer an empirical question" (Storr and Choi 2019: vi, 251).

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work is in identifying empirical measures which either directly or indirectly measure morality.[2] Indirect measures include variables like income, life expectancy, and infant mortality. These variables cannot directly address the empirical claim that markets cause moral deterioration, yet nonetheless have moral significance. If markets made people worse off on a variety of important margins, markets may be morally suspect regardless of their effect on moral values.

The direct measures capture moral values related to trust, tolerance, materialism, fairness, altruism, and the acceptance of unethical behavior using nationally representative surveys or behavioral variables like how much (and often) people give to charity. These measures capture at least part of the concern critics have over the deterioration of moral values, particularly as it relates to cosmopolitanism and integrity. Sandel (2012: 6) for example, a prominent moral critic of markets, suggests that the "appropriate way" to treat and value human beings is as "persons worthy of dignity and respect, rather than as instruments of gain and objects of use." Being trustworthy and treating others as equals is a part of it means to treat people appropriately. If market institutions cause moral deterioration, we should expect lower levels of these measured moral values in market-oriented societies.

Storr and Choi (2019: 243) find the opposite: "Rather than being incompatible with morality, markets are not only consistent with morality but seem to promote morality." Still, their empirical approach is limited, about which they are very forthright.[3] We build on the foundation of their work using panel data. We first test the markets-cause-moral-deterioration hypothesis using both fixed effects and matching methods to estimate the impact of market institutions on a society's moral values. Contrary to the deterioration hypothesis, we find that market-oriented societies have a greater aversion to unethical behavior, higher levels of trust, and are not significantly associated with lower levels of morality, regardless of which measure is used for moral values or market orientation.

The results of these tests (section 5.1 and 5.2) are comparable to Storr and Choi's (2019) in that we find that *being* a market-oriented society is not associated with lower levels of moral values (and in some instances it is associated with higher levels). However, fixed effects and matching methods alone cannot address the problem of endogeneity. Market-oriented societies may have higher levels of moral values *and yet* the expansion of markets may still deteriorate morals. Thankfully, while our move to panel data reduces the number of countries in the sample compared to Storr and Choi's (2019) cross-section, the added time component allows us to investigate how *changes* in market orientation impacts moral values. By looking at instances of pro-market reform, we are able to employ differencing *and* matching to remove time-invariant factors and balance covariates, bringing our estimates closer to causal (An and Winship 2017). With this method, we find that *becoming* a more market-oriented society does not cause a significant reduction in a society's moral values. Together, our results suggest that *being* or *becoming* a more market-oriented society does not cause moral deterioration.

The rest of the paper proceeds as follows. Section two outlines the central claims of the deterioration hypothesis, including the mechanisms by which deterioration is believed to occur and the main moral values likely to be affected. Section three explains our data for market orientation and moral values. Section four outlines our empirical strategy for testing the deterioration hypothesis and section five presents our results. Section six concludes.

2. The deterioration hypothesis

The moral critics of markets argue that market institutions will cause moral deterioration either because the nature of market exchange corrupts our morals or because market values crowd out moral considerations.[4] Three prominent critics who hypothesize moral deterioration are Jean-Jaques Rousseau, Karl Marx, and Michael Sandel.

2.1. Rosseau: markets encourage deception and greed

Rousseau ([1754] 2006) argues that the creation of property resulted in two main social ills: dependency and inequality. As long as people were content with basic necessities and "undertook only what a single person could accomplish", they lived "free, healthy, honest and happy lives". However, "from the moment one man began to stand in need of the help of another; from the moment it appears advantageous to any one man to have enough provisions for two, equality disappeared, [and] property was introduced" (Ibid.: 47-48). The establishment of a property-based society gave rise to "rivalry and competition on the one hand, and conflicting interests on the other, together with a secret desire on both of profiting at the expense of others." Variation in persons' natural abilities, combined now with the ability to accumulate, resulted in

[2] See Storr and Choi (2019: 260-269) for a list and description of their chosen measures. Choi and Storr (2020) provide further discussion on the method of measuring morality.

[3] See Storr and Choi (2019: 249-254) for a discussion on the benefits and limitations of their empirical approach. They also acknowledge that while their methods "will not be fully satisfying to anyone who worries that markets are morally corrupting", they at least offer some "reasons to be skeptical of the claim that markets are morally corrupting". They conclude this acknowledgement by stating, "If we inspire others to look for more compelling ways to assess whether or not market activity is morally corrupting, we would have surpassed our ambition." (Storr and Choi 2019: 11, fn. 4) Given our attempt, we believe they have.

[4] The term "corrupt" here refers to a fundamental shift in a person's moral values in a negative direction. "Crowing out" instead refers to foregoing moral considerations in favor of nonmoral reasons, typically related to monetary incentives. Because crowding out reduces the salience of moral values, it can still be said to result in moral deterioration. The two ideas are not mutually exclusive (e.g., a crowded out moral value of fairness may be replaced by a vice, like greed) and generate the same empirical prediction: societies which embrace markets will see a deterioration in their existing moral values.

immense inequalities in wealth and power. And because "the loss of one man almost always constitutes the prosperity of another", these inequalities "suppres[s] the cries of natural compassion" and fill people with "avarice, ambition and vice" (Ibid.: 66, 50).

From this perspective, market societies are expected to develop significant inequalities because they rely on private property and exchange. These inequalities are then likely to be exacerbated by the division of labor and resulting dependency. Dependency, according to Rousseau (Ibid.: 49) brings us into "subjection… to one another" as even the rich and powerful are "in need of the services of others". Survival in a market society will thus require us to be "perpetually employed in getting others to interest themselves in [our] lot, and in making them… find their advantage in promoting [our interests]." And while this can be accomplished by gentle persuasion, differences in power and wealth suggest we're also likely to be "sly and artful in [our] behaviour to some, and imperious and cruel to others". Inequality begets inequality, and as such people are encouraged to obtain and maintain their privileges by any means necessary, including by deception and violence. It is as if a person is "under a kind of necessity to ill-use all the persons of whom he stood in need". This, combined with our "[i]nsatiable ambition" and "thirst [for] raising [our] respective fortunes, not so much from real want as from the desire to surpass others", suggests our "natural compassion" will be corrupted in a market society by greed, dishonesty, jealousy, and a willingness to commit unethical acts to get ahead (Ibid.: 49-50).

2.2. Marx: markets encourage dehumanization

Marx ([1844] 2000) offers a similar critique of the morally corrupting nature of markets, only with an emphasis on exploitation and alienation rather than dependency and inequality. In the Marxist framework, market production requires exploitation. Exploitation results in alienation, and it is alienation that leads to estrangement, dehumanization, and the corruption of our morals.

According to Marx ([1844] 2000: 28), production in a market society will result in the commodification of labor as competition accumulates "capital in a few hands" and separates society into "two classes – property owners and propertyless workers". The owners of capital will exploit the workers, paying out in wages less than the laborers produce, and reduce a worker to their commodity exchange-value. This commodification of labor alienates the worker from the product of their labor, and subsequently from their sense of self and even what it means to be human. Alienation estranges us from our "*human* aspect" and prevents us from valuing ourselves and others as persons, worthy of dignity and respect (Ibid: 32). As Marx (Ibid.: 32) states, "[a]n immediate consequence of the fact that man is estranged from the product of his labor, from his life activity, from his species-being, is the *estrangement of man* from *man*" as "[w]hen man confronts himself, he confronts the *other* man" and "views the other in accordance with the standard and the relationship in which he finds himself". As a result, market "[p]roduction does not simply produce man as a commodity… it produces him in keeping with this role as a *mentally* and physically *dehumanized* being" (Ibid.: 36). Markets dehumanize us, and as a result we dehumanize others and fail to treat people in the appropriate way.

Unlike Rousseau, Marx does not attribute the deterioration of morals to the creation of private property. In fact, for Marx (Ibid.: 33), "*Private property* is … the product, the result, the necessary consequence, of *alienated labor*", not the other way around. However, he does make the connection between "estrangement and the *money* system", a core component of a market society (Ibid.: 28). Money allows the separation of use-value and exchange-value and thus the exploitation of surplus value, ending in commodification, alienation, and estrangement. Money in the Marxist framework has a "*distorting power* both against the individual and against the bonds of society" as it "transforms fidelity into infidelity, love into hate, hate into love, virtue into vice, vice into virtue, servant into master, master into servant, idiocy into intelligence, and intelligence into idiocy" (Ibid.: 61). If we are to have a "human" relationship to the world, "then [we] can exchange love only for love, [and] trust for trust" (Ibid.: 62). Commodification and monetary exchange corrupt our values, including how we value and interact with other human beings.

2.3. Sandel: markets encourage degradation and undermine fairness

Modern critics of markets, like Samuel Bowles (2016), Michael Sandel (2012), Elizabeth Anderson (1993), and Margaret Radin (1987, 1989), have carried on the idea of the distortionary power of markets and money. Michael Sandel is perhaps the most famous in this regard. Sandel (2012: 3) argues that the "moral failing at the heart of market triumphalism" is not greed, but rather the expansion of markets "into spheres of life where they don't belong." In his view, the expansion of markets crowds out moral concerns as "market values corrupt, dissolve, or displace nonmarket norms" (Ibid.: 82). Unlike Marx or Rousseau, Sandel does not provide a grand theory of how markets deteriorate morality. Instead, he primarily argues from example, and highlights two concerns that come with expanding markets: fairness and corruption, or the degradation of something by treating it "according to a lower mode of valuation than is appropriate" (Ibid.: 24).

Consider the moral value of fairness and the problem that pricing and exchanging goods in a market can have for it, particularly when severe inequalities are present. Sandel (Ibid.: 5) suggests that inequality by itself would not cause much concern if "the only advantage of affluence were the ability to buy yachts, sports cars, and fancy vacations." However, "as money comes to buy more and more—political influence, good medical care, a home in a safe neighborhood rather than a crime-ridden one, access to elite schools rather than failing ones", inequality gains in moral relevance. The problem is that "inequalities of bargaining power coerce the disadvantaged", undermine consent, and turn some market transactions into

something other than "truly voluntary". A poor person may be willing to sell their kidney to survive, but our moral intuition views this action as being "not really voluntary" and "unfairly coerced… by the necessities of his situation" (Ibid.: 80-81). If we allowed this form of exchange anyway, if we embraced markets in the presence of severe bargaining inequalities, we undermine our value of fairness.

Sandel, like Marx, also believes in the corrupting effect of commodification, only he focuses on particular goods rather than labor (and thus man himself). Sandel (Ibid.: 5-6) claims that "when we decide that certain goods may be bought and sold, we decide, at least implicitly, that it appropriate to treat them as commodities, as instruments of profit and use. But not all goods are properly valued in this way." Which moral values are corrupted by commodification depends on "the moral meaning of these goods and the proper way of valuing them" (Ibid.: 5). For example, "[t]reating religious rituals, or natural wonders, as marketable commodities is a failure of respect", whereas commodifying kidneys, as in the above example, "promote[s] a degrading, objectifying view of the human person" and erodes the "spirit of altruism" (Ibid.: 26, 80, 97). This means that, unlike for Marx and Rosseau, we cannot identify specific moral values (or vices) which Sandel would predict to be lower (or higher) in societies that embrace markets. However, as a market society is one "in which market values seep into every aspect of human endeavor", it is likely that we should see a decline in any and all moral values the further a society drifts from "*having* a market economy to *being* a market society" (Ibid.: 6).

2.4. Empirical evidence of moral deterioration

All three scholars explored above provide theoretical reasons for the morally deteriorative effects of markets. There is also some empirical support for their hypothesis.

Falk and Szech (2013) find experimental evidence that suggests market interactions erode moral values. In their study, participants were faced with a choice that pitted monetary gain against the life of a mouse. When participants were offered a relatively small amount of money to let an otherwise healthy mouse die, 45.9% took the money instead of preventing the harm. However, when the experiment was altered to invoke the buying and selling of the mouse's life between two or more participants, closer to 75% of the participants were willing to let the mouse die for the same or even less amount of money than was offered in the first design. In other words, their experiment suggests that exchanging the ability to allow or prevent harm fundamentally changes how participants perceive the act. An updated study by Bartling et al. (2021: 17), however, casts some doubt on Falk and Szech's conclusion and suggest their results may have been "caused by repeated play and not by the market institution."

As Johnsen and Kvaløy (2016: 1) suggest, "it is hard to distinguish true prosocial behavior from strategic behavior" in repeated games as "a player does not know whether a reciprocal action is intrinsically or strategically motivated." In their experiment designed to separate these two motivations, they find that cooperation is higher when reciprocity is perceived as non-strategic. As such, prosocial cooperation may be crowded out by strategic motivations in a competitive setting like a market. Similarly, Lowes et al. (2017) study the long-term impact of institutions on prosocial behavior. By leveraging historical variation in state centralization, they find that experimental participants whose ancestors lived in the then more-established society demonstrated a weaker preference for rule following and a greater propensity to cheat for material gain. And while their result is not directly about markets or pricing, the types of institutions that defined the historically centralized state—a constitution, the separation of power, a judicial system, a police and military force, the ability to tax, and public goods—are ones that are commonly associated with a well-functioning market society.[5]

Often referenced by Sandel (2012), Gneezy and Rustichini (2000) evidence the deteriorative effects of commodification. They perform a field study in which parents are fined for being late to pick up their child from day-care. Counter to standard deterrence theory, they found that monetizing lateness through a fine increased the number of parents who were late. Furthermore, this effect remained even after the fine was removed. A proposed explanation for their finding is that by pricing the behavior, the social norm surrounding lateness changed from one of shame and guilt to one that says, "When a service is offered for a price, buy as much as you find convenient." As to why the behavior did not return to normal following the removal of the fine, they suggest that another norm may be in play, one that says, "Once a commodity, always a commodity" (Gneezy and Rustichini 2000: 14). This perhaps evidences the lasting effects of moral corruption.

Others have relied on survey-level data to contribute to this literature. Elías et al. (2019), for example, surveyed thousands of US residents to examine preferences for legalizing markets in kidneys. Overall support for this market was low due to expressed concerns of fairness, yet nearly 18 percent of the respondents were willing to switch their position to support the policy if it sufficiently increased the number of transplants. One interpretation of this result is that people will ignore a moral principle if its violation results in sufficiently high benefits. Falk et al. (2018), on the other hand, use survey data from over 76 countries to examine how heterogeneity in preferences related to trust, risk-taking, reciprocity, and altruism can impact a variety of important outcomes. And while they focus on the effect these preferences have on market outcomes, they nevertheless evidence strong correlations between market behaviors and these value preferences.

These studies were well designed given the limitations they faced. Nonetheless, experimental designs suffer from problems of questionable external validity (see Guala and Mittone 2005) and the survey studies are often limited to a cross-

[5] Storr and Choi (2019: 9) suggest that "[w]ell-functioning markets … depend on clear and respected property rights, reliable contract enforcement, and mechanisms for resolving disputes." Similarly, some of the variables included in the index measures for "market orientation" map closely to the institutions listed here. See sections 3.2 and 5.4.

section with no time variation. Still, there remains a further and more direct problem with these studies for evidencing the moral deterioration caused by market institutions. Other than Lowes et al. (2017), the market treatment in these studies is typically *pricing* rather than the whole set of *market institutions*.[6] And while monetary exchange is a fundamental part of a market society, it does not constitute the whole.

A market society is more than just a group of buyers and sellers, it is conglomerate of institutional features that together create a space for voluntary exchange and value discovery. Markets are necessarily "shaped by and embedded in the political, legal, and social environment" (Boettke et al. 2004: 3). Few supporters of markets, save for maybe Brennan and Jaworski (2016) [7], argue in favor of pricing any good imaginable or that market values should engulf every aspect of our social life. And while it is entirely possible that the moral deterioration that results from pricing lateness is indicative of the moral rot that will result from a society adopting more market-oriented institutions, it is not obvious on the face of it. These studies may remain good evidence that some goods should not be exchanged monetarily, but they do not necessarily provide good evidence that "the wealth that societies gain by embracing markets comes at too high a moral cost" (Storr and Choi 2019: 11).

Our goal then is to test the deterioration hypothesis in the context of a societal choice to embrace markets rather than in individual instances of market exchange. In order to test this hypothesis, we use panel data with both fixed effects and matching methods to estimate the impact of market institutions on moral values. We explain our data, methods, and results in the following sections.

3. Data

We split the data section into three main categories: main outcome variables (moral values), main independent variable of interest (market institutions), and control variables. Our entire sample includes five-year periods ranging from 1990-2010 for forty-nine countries. However, different countries report different years of morality measures, so each country's time period in our sample varies. Depending on the specification, we have between 139 to 128 country-year observations.

3.1. Measuring moral values

Unlike Storr and Choi (2019), we choose to only examine the direct measures of moral values. We do this for two reasons. The first is that there is already a large and rigorous empirical literature that uses the indirect measures to explore the material gains of markets (see Hall and Lawson 2014 for a thorough summary). There is also a considerable and growing literature on the causal effects of markets on the indirect measures. Grier and Grier (2021), for example, find causal evidence that sustained increases in economic freedom greatly improves average incomes while Callais and Young (2022) find that this holds for everyone across the income distribution. Similarly, Lawson et al. (2019) examine a specific case of market reform in Georgia and find that pro-market reforms increased incomes and lowered infant mortality.

The second and more important reason, however, is that our goal differs slightly from Storr and Choi (2019). Our aim is not to assess the *overall* moral character of markets and the impact that market institutions have on morality. Instead, our goal is to empirically test the specific causal claim that markets will deteriorate moral values. This can be assessed regardless of whether markets are found to be morally good or morally bad for other reasons. The inclusion of every piece of evidence with any moral significance is thus not relevant for our investigation. As such, the indirect measures of morality are beyond the scope of this paper.

Storr and Choi (2019) still present the most expansive set of direct measures for moral values. Of those suggested, seven fit the appropriate range of availability from a multi-year and multi-country perspective needed for the panel and matching methods.[8] Specifically, we are able to use the generalized trust measurement, views on discrimination (against those of a different race, foreign workers, and homosexuals), attitudes towards women (should preference be given to men), and level of acceptability towards unethical acts (avoiding fares on public transport and cheating on taxes).

These measures come from the World Values Survey (WVS) which is administered in three to five-year period waves starting in 1981. We collect from waves 2 (1990-1994) through 6 (2010-2014) to match with the availability of our market measure. We also force the average answer from the wave to be equal to one of the five-year time periods.[9] Generalized trust is perhaps the most commonly used WVS measurement due to its wide coverage (see e.g., Berggren and Jordahl 2006; Berggren and Nilsson 2014; Graafland 2020; Williamson 2009). In the survey, participants are asked "generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?" Responses are either shown as "most people can be trusted," "need to be very careful," or "don't know." Some respondents report no answer and others are not asked the question. We generate the "trust" variable as the percentage of respondents in

[6] In Johnsen and Kvaløy (2016), the "strategic treatment" is knowledge that the game will repeat while the "non-strategic treatment" is that the repeated play comes as a surprise.

[7] More specifically, they argue that if it is morally permissible to do something for free, it is also morally permissible to do it for money.

[8] We originally planned to include every proposed measure. However, this was not feasible due to the limited coverage of the WVS. Questions related to fairness or materialism, for example, are not asked to every country in every wave.

[9] In practice, this means that information from Wave 2's data corresponds to 1990; Wave 3 matches to 1995, Wave 4 to 2000, Wave 5 to 2005, and Wave 6 to 2010.

Table 1a
Summary Statistics (Morality Measures).

Variable	N	Mean	Std Dev	Min	Max
Trust	139	27.000	16.244	2.819	68.017
Trust (5-year change)	86	-2.029	9.619	-54.733	22.939
Discrimination (Different Race)	130	16.562	12.627	0.874	71.667
Discrimination (Different Race; 5-year change)	76	0.467	10.663	-33.291	54.355
Discrimination (Foreign Worker)	130	20.771	15.735	1.571	67.133
Discrimination (Foreign Worker; 5-year change)	77	1.291	10.874	-30.530	49.312
Discrimination (Homosexual)	127	46.715	27.320	0	99.600
Discrimination (Homosexual; 5-year change)	73	-4.245	17.626	-78.804	91.512
Attitudes Towards Women (Men job priority)	137	36.322	20.195	2.106	89.600
Attitudes Towards Women (Men job priority; 5-year change)	85	-1.418	6.844	-35.173	17.208
Justifiable Actions (Avoid Fare on Transit)	131	8.350	6.829	0.312	29.940
Justifiable Actions (Avoid Fare on Transit; 5-year change)	76	-0.152	4.263	-12.951	10.379
Justifiable Actions (Cheat on Taxes)	134	5.825	5.314	0	34.166
Justifiable Actions (Cheat on Taxes; 5-year change)	80	-0.839	3.225	-9.699	9.085

a country in a given wave who answered "most people can be trusted," where the total responses are those that either answered "most people can be trusted" or "need to be very careful." In essence, we drop all observations that were not asked, did not answer, or did not know how to respond.

The three discrimination variables are asked in the following manner: "On this list of various groups of people, could you please mention any that you would not like to have as neighbors?" Respondents are then given the list of groups. Data availability allows us to examine three such groups: people of a different race, immigrants/foreign workers, and homosexuals. The potential responses are: "not mentioned", "mentioned," "don't know," "no answer," or "not asked." The scores for these variables, much like trust, are measured by the following equation: "not mentioned"/("not mentioned" + "mentioned"). In this case, though, note that *more* moral societies would have *lower* scores of this measurement (unlike the trust variable).

The attitudes towards women measurement is found using the question "do you agree, disagree, or neither agree nor disagree with the following statement? When jobs are scarce, men should have more right to a job than women." The score is the proportion of those who answered "agreed" instead of "disagree" or "neither". Again, *lower* scores here correspond to *more* moral societies. The justifying immoral behavior variables ask on a scale of 1 (never justifiable) to 10 (always justifiable) if a given action is justified. The two we able to use are: avoiding a fare on public transport and cheating on taxes. The score is the percentage of those who did respond and answered a 6 or higher. Once more, *lower* scores proxy for *more* moral values.

While these variables do not necessarily match one-to-one with the moral values that the critics of markets believe will decline with the embrace of markets, we believe they at least capture the general sentiment. The trust measure, for example, indicates whether we believe people act deceitfully. Similarly, because Rousseau believed that markets encourage both avarice and deceit, it would not be surprising if people in a market society were more willing to justify unethical acts to get ahead. Alternatively, the justification of unethical acts might better reflect Sandel's point about the pricing: if people are willing to take the risk and pay the appropriate fine if caught, then so be it. The measures for discrimination approximate Marx's concern for the dehumanizing effects of markets as it is morally easier to discriminate against those whom we other. If we don't view certain groups of people (or even people as a whole) as morally relevant agents, we will not think twice about discriminating against them. And because the question about women centers on whether some people should be given preferential treatment, the responses might capture a society's commitment to fairness.

To briefly summarize, lower levels of trust and higher levels of the other morality variables would reflect moral deterioration. A summary statistics tables of the main outcome variables (and the five-year changes of these variables) can be found in Table 1a.

3.2. Measuring markets

To measure a society's market orientation, we utilize the Fraser Institute's *Economic Freedom of the World* index (EFW). This measurement is broadly defined as an institutional environment associated with voluntary exchange (Gwartney et al. 2019) and is commonly used in the academic literature to explore the relationship between market institutions and other outcomes. EFW is comprised as a simple average of five areas: size of government, legal system and protection of property rights, sound monetary policy, freedom to trade internationally, and nonburdensome regulatory policy. EFW is a 0 to 10 index, with higher scores corresponding to greater economic freedom, or more market-oriented societies. Storr and Choi (2019) use additional measures beyond EFW to categorize countries; however, we only use EFW in our main specifications in order to maintain the largest sample possible as it has the widest coverage of the possible market measures

Table 1b
Summary Statistics (Independent Variables).

Variable	N	Mean	Std Dev	Min	Max
Economic Freedom	139	6.695	1.116	3.653	8.667
Government Spending Share	139	0.160	0.057	0.006	0.330
Polity	139	5.978	5.347	-7	10
Human Capital	139	2.607	0.623	1	3.702
Top 10 Income Share	139	0.441	0.095	0.244	0.629
Age Dependency	139	55.795	12.270	36.490	91.774
Urban Population	139	64.526	20.144	17	94.414

in terms of both countries and years.[10] Nevertheless, Section 5.4 presents the results using alternative ways of measuring market orientation.

3.3. Controls

For both our panel regressions and matching analysis, we use six controls that were previously found in the literature exploring the role of markets on morality. From the World Development Indicators (WDI), we include the percentage of urban population (from Berggren and Nilsson 2014 and Graafland 2020) and age dependency (Graafland 2020). From the Penn World Tables (PWT), we include human capital and government share of GDP. While typically schooling has been used in the literature (Berggren and Jordahl 2006; Jackson 2017), we chose to include the PWT measure of human capital due to better data coverage. Polity, which scores countries based on their political institutions from -10 to 10, where 10 is highly democratic and -10 is highly autocratic, is included as well. This polity measurement comes from the Polity V database; political institutional quality as a whole has been included in similar studies (Berggren and Nilsson 2014; Teague et al. 2020; Harris et al. 2021). We include a measurement of inequality as well (Berggren and Jordahl 2006; Jackson 2017). The Gini coefficient has been most commonly used; however, we use the pre-tax income share going towards to the top 10 percent from the World Inequality Database. This measurement has a more consistent coverage that is necessary for our panel approach. We report the summary statistics for our main independent variable (EFW) and the controls in Table 1b.

4. Empirical strategy

We rely on three different empirical strategies. First, we run a panel regression with time and country fixed effects. We then perform matching methods with two different treatments: i) high levels of economic freedom, and ii) increases in economic freedom, otherwise known as pro-market reform. For our fixed effects models and (i), we estimate the relationship between market orientation and moral values. However, in performing (ii), we instead are examining how moral values change when countries become more market oriented.

4.1. Panel regressions with fixed effects

We start with a panel regression, where the measures of moral values are our dependent variables. Specifically, we estimate the following model:

$$Moral\ Values_{i,t} = B_0 + B_1 EFW_{i,t} + \Pi X_{i,t} + B_2 V_i + B_3 V_t + e_{i,t},$$

where "X" is the set of controls outlined in Section 3.3, V_i reports the country-level fixed effects, and V_t is the 5-year fixed effects.

Compared to cross-sectional analysis, panel fixed effects models will account for the impact of unobservables. However, fixed effects do not provide consistent estimators when the treatment is staggered or heterogenous (de Chaisemartin and D'Haultfoeuille 2020). As can be seen in Tables A2 and A3, the treatments (either "high levels of economic freedom" or "jumps in economic freedom") are not homogeneous by time. As a result, our fixed effects models cannot fully address endogeneity concerns. For example, how market-oriented a society is might be chosen based on factors that also impact morality. Additionally, it is possible that moral values determine institutions, rather than institutions determining moral values. Either would bias the fixed effects models. As such, we believe we can do better. One method for addressing endogeneity that is feasible given the limited coverage of the WVS data is matching methods, which we explain below.[11]

[10] They use a combination of the Fraser Institute's Economic Freedom of the World index (EFW), Heritage Foundation and The Wall Street Journal's Index of Economic Freedom (IEF), World Economic Forum's Global Competitive Index (GCI), World Bank's Doing Business Project's Distance to Frontier (DTF), and World Justice Project's Rule of Law index (ROL) to categorize countries as market or non-market oriented.

[11] A potential identification strategy not explored in this paper is an instrumental variable approach, such as the one used by Acemoglu et. al (2019). However, as pointed out by Bologna Pavlik et al. (2021: 12), studies that "use instruments (like ethnic fractionalization or political stability) … are unlikely to satisfy the exclusion restriction." This is becoming more apparent recently, as Lee et al., 2022 show that the necessary first stage F-statistic to test a weak instrument is quite larger (closer to 100) than was previously considered (10). The vast majority of instruments that were previously employed would

4.2. Matching methods

We have two matching methods that we utilize in this paper. In 4.2.1, we discuss the treatment of having high levels of economic freedom and compare the difference in moral values between the treated units and its matched controls. In 4.2.2, though, we look at how pro-market reform causes changes to moral values. By "matching" treated countries to relevant controls, we compare countries that are similar in a variety of ways *except* for their level (or change) in market orientation. We then compute the average treatment effect on the treated (ATET) to be the difference in outcomes between the treated, market-oriented countries with the controls that are matched.

We use propensity score matching (PSM) in order to pair up treated countries to matched controls. In PSM, we run a logit equation first. The dependent variable is a dummy showing whether the country-year received the treatment or not. The covariates that we match on are the independent variables. The results from this equation provide us with the probability of the country-year to have received the treatment, where each country-year is given a "propensity score". The treated units, which are explained in more detail below, are matching to neighbors that are close to their own propensity score. We use nearest one neighbor, where each treated unit gets one control as the counterfactual. Similarly, we also use nearest two and three neighbors; here, the counterfactual is the average of the two or three country-years that have the closest propensity scores to the treated units. Finally, we perform normal kernel matching, where all control units are used to create the counterfactual but are weighted based off their closeness in propensity scores to the treated units.[12]

4.2.1. Treatment: Market orientation

We follow Storr and Choi (2019) in defining a market-oriented society as one that scores in the top two-fifths of possible scores in our dataset. We have 139 country-year units, so we count the treated as having the top fifty-six EFW scores. This includes twenty-two countries over the time span of 1990 to 2010. We provide the full list of treated countries in the appendix (Table A2). These units are then used in matching as outlined in the previous section (4.2).

In this matching model, we are comparing the difference in moral values between market-oriented countries and countries that are very similar in every way except for their levels of market orientation. Matching in this way allows us to address the endogeneity issue that could not be accounted for in the fixed effect models; however, it reintroduces the problem of unobservables as we can only include quantifiable covariates. Which "problem" matters more in a given scenario is ultimately dependent on the particulars of the case. However, if we match on changes in the post-treatment outcome (as we explain in 4.2.2 below), we mitigate *both* concerns (An and Winship 2017).

4.2.2. Treatment: Pro-Market reform

With the fixed effects models (section 4.1), we cannot account for the endogeneity of institutions or moral values. With matching on the treatment of market orientation (section 4.2.1), we cannot address unobservables that likely impact both moral values and market orientation. In the empirical approach outlined here, we can better address the shortcomings of both.

For this model, we find countries that had a "pro-market reform", becoming *more* market oriented, and use these as treated units.[13] We define the treatment as a country that increased its EFW score by at least 0.6 over a five-year period. (This is roughly half of a standard deviation). Overall, we find thirty-one cases of pro-market reform (Table A3). These treated units are matched to control units that are similar in every way *except* for the fact that they did not have a pro-market reform in that time period. The ATET in this case is the difference between the treated and matched counterfactuals in the five-year change of moral values. By doing so, we remove any time-invariant unobservables.

We address endogeneity by matching on observable characteristics that could influence both morality and market orientation. And by taking the *difference* of the outcome (change in moral values), we difference-out any time-invariant unobservable factors. By differencing *and* using matching, we remove time-invariant factors and balance covariates necessary for causal inference (An and Winship 2017).

5. Results

5.1. Panel regressions with fixed effects

We start with reporting the results from the panel models with time and country fixed effects (see Tables 2a-2d). We find there to be no substantive relationship between trust and market orientation (Table 2a). In fact, the only variables to

no longer be able to be used under this more stringent threshold. This makes using an IV strategy in this paper difficult. Similarly, a spatial regression discontinuity design, like the one used in Grosjean and Senik (2011) to examine the role of democracy on pro-market beliefs, is, to our knowledge, not feasible given the constraints of the WVS dataset. In order to use a spatial RDD, we would need more granular data on the location of the respondents.

[12] See Grier and Grier (2021) for more information about the specifics of matching methodology.

[13] Previous studies have used this "jump" analysis with matching methods. For example, Grier and Grier (2021) examines jumps in economic freedom and its impact on GDP per capita. Callais and Young (2021a; 2021b) look at increases in constitutional entrenchment and economic growth and changes in economic freedom, respectively. Callais (2021) defines "economic reform" as an increase in state-level economic freedom and examines its subsequent impact on income growth. Bologna Pavlik et al. (2021) examine jumps and drops in corruption on economic growth. Bologna Pavlik and Young (2021) examine the impact of jumps in foreign aid on corruption, and vice versa.

Table 2a
Economic Freedom and Trust (Fixed Effects).

	(1)	(2)	(3)
Variables	Trust	Trust	Trust
Economic Freedom	-0.168	0.404	-0.170
	(1.736)	(1.172)	(1.511)
Gov't Spending Share	-29.169	-18.261	-23.351
	(17.554)	(16.387)	(17.285)
Polity	0.288	-0.295	0.352
	(0.793)	(0.547)	(0.712)
Human Capital	1.349	7.654*	7.159
	(11.547)	(4.324)	(14.225)
Top 10 Inc Share	-23.326	-48.143**	-20.237
	(29.581)	(20.622)	(26.527)
Age Dependency	0.552	0.159	0.497
	(0.437)	(0.218)	(0.386)
Urban Population	0.176	0.021	0.343
	(0.438)	(0.104)	(0.403)
Constant	-4.273	24.719	-24.512
	(52.282)	(24.629)	(49.818)
Observations	139	139	139
Country FE	X		X
Year FE		X	X
R-squared	0.146	0.192	0.259
Number of Countries	49	49	49

Robust standard errors in parentheses
*** p<0.01
** p<0.05
* p<0.1

ever turn out statistically significant are human capital (more trust) and income inequality (less trust), but this only holds when including year fixed effects only (column 2).

Next, we turn to the three measures for discrimination and tolerance (Table 2b). Consistent with the previous table, market orientation is not a statistically powerful predictor of discriminatory views. There is some evidence that more democratic societies are less likely to discriminate against foreign workers (columns 5 and 8), countries with higher human capital tend to view homosexuals less poorly (column 7), and places with a higher concentration of the population in urban areas have more moral views on those of different races or foreign workers (columns 2 and 5).

In Table 2c, we report the relationship between market orientation and attitudes towards women, justifiability of not paying fares on public transit, and justifiability of cheating on taxes. We find some evidence that more market-oriented societies will have a bigger issue with someone not paying for public transportation (column 5) and be less likely to justify cheating on their taxes (column 8). A standard deviation increase in economic freedom corresponds to 45% of a standard deviation decrease in justifying avoiding paying for public transportation, as well as a 41% of standard deviation decrease in justifying cheating on taxes. However, neither relationship holds when including both country and year fixed effects.

5.2. Matching: Market orientation

We now move to the results of matching on the treatment of market orientation. We find that market-oriented societies have much higher levels of trust than the non-market-oriented societies (Table 3a). Having the treatment of being a market-oriented society explains 65 to 80% of a standard deviation increase in trust. However, we find no evidence that market orientation affects discriminatory views (Table 3b). Nor does this treatment drastically impact a society's views on women (Table 3c). We find very strong evidence, though, that market-oriented societies are less likely to justify avoiding paying public transportation fares or cheating on taxes (albeit only for the nearest 3 and kernel methods in the case of taxes).

5.3. Matching: pro-market reform

Here, we examine countries that had substantial increases in economic freedom during a five-year time period (pro-market reform), and then examine the 5-year change in our measures of moral values. We start with the impact of a pro-market reform on trust (Table 4a). In each case, the ATET is positive; however, it is never statistically significant.

This result appears to hold true for our measurements of discrimination (Table 4b), as well as attitudes towards women and justifying unethical behavior (Table 4c). In other words, becoming more market oriented does not cause a significant reduction in a society's moral values. While we cannot categorically claim this result will hold over longer periods of time, we are confident that the null results for our period of observation are not solely due to lack of variation given the standard

Table 2b
Economic Freedom and Discrimination (Fixed Effects).

Variables	(1) Diff. Race	(2) Diff. Race	(3) Diff. Race	(4) Immigrants	(5) Immigrants	(6) Immigrants	(7) Homosexuals	(8) Homosexuals	(9) Homosexuals
Economic Freedom	2.445	0.714	2.053	0.159	-0.663	-0.592	-1.676	-0.147	0.282
	(1.932)	(1.224)	(1.823)	(1.909)	(1.626)	(2.181)	(2.313)	(1.934)	(1.847)
Gov't Spending Share	8.402	11.460	14.355	6.990	3.481	6.465	9.807	26.786	27.060
	(44.581)	(22.635)	(45.571)	(36.259)	(25.561)	(38.035)	(47.908)	(42.106)	(46.318)
Polity	-0.365	-0.165	-0.431	-1.359	-0.979*	-1.432	-2.672	-1.888*	-2.179
	(0.362)	(0.319)	(0.391)	(0.886)	(0.581)	(0.897)	(1.732)	(0.980)	(1.575)
Human Capital	-5.381	-3.650	1.046	-2.349	1.568	-3.395	-34.584*	-4.154	9.246
	(12.812)	(4.052)	(17.002)	(16.832)	(5.728)	(18.617)	(19.419)	(7.304)	(22.189)
Top 10 Inc Share	1.263	9.299	0.154	37.957	30.550	40.006	4.989	30.037	-14.970
	(30.259)	(13.102)	(27.715)	(30.384)	(18.573)	(29.282)	(33.655)	(25.431)	(30.872)
Age Dependency	0.164	-0.075	0.193	-0.312	-0.235	-0.352	-0.590	-0.464	-0.592
	(0.267)	(0.183)	(0.268)	(0.503)	(0.294)	(0.521)	(0.996)	(0.431)	(0.961)
Urban Population	0.093	-0.247***	0.239	-0.006	-0.199*	-0.031	-0.268	-0.235	0.117
	(0.368)	(0.079)	(0.405)	(0.622)	(0.119)	(0.631)	(0.632)	(0.177)	(0.605)
Constant	-0.812	36.705*	-23.163	33.877	37.478	43.183	210.249	108.808**	82.399
	(35.905)	(21.906)	(47.243)	(70.821)	(33.164)	(70.614)	(133.662)	(43.175)	(124.761)
Observations	131	131	131	131	131	131	128	128	128
Country FE	X		X	X		X	X		X
Year FE		X	X		X	X		X	X
R-squared	0.027	0.024	0.056	0.120	0.123	0.129	0.283	0.358	0.375
Number of Countries	49	49	49	49	49	49	49	49	49

Robust standard errors in parentheses
*** p<0.01, ** p<0.05
* p<0.1

deviations of our morality measures range from 3.225 (justifiable actions: cheat on taxes) to 17.626 (discrimination: homosexual). Our null results here are important and are new to the literature. Becoming a more market-oriented society may not enhance our morals in the short run, but it does not appear to cause their deterioration either.

5.4. Robustness checks: other measures of market orientation

Our preferred measure of market orientation is the Fraser Institute's EFW index. This is the case for three main reasons. First, each of the variables that are used in the index is collected from third party data, so the index is not dependent on subjective values from the authors. Second, it is most commonly used index for market orientation in the academic literature. According to Hall and Lawson (2014), since the index's start in 1996 through mid-2011, the index was cited in over 400 articles and used as an independent variable in an empirical study in 198 of them. Finally, from a practical standpoint, this index (compared to similar ones mentioned below) has the greatest coverage across country and time.

Nevertheless, we check the robustness of our results to using different measures for market orientation. We use two: the Heritage Foundation's Index of Economic Freedom (IEF) and the World Development Indicator's Rule of Law index (RoL). The IEF is scored from 0 through 100, with higher scores corresponding to greater economic freedom. The index is an average of twelve areas, which are equally weighted and has data going back to 1995.[14] We use the World Development Indicator's RoL index as opposed to the World Justice Project's Role of Law Index, as is used in Storr and Choi (2019), due to time coverage. RoL has data going back to 1996, while the World Justice Project's index only goes back to 2012. RoL ranges from -2.5 to 2.5 (higher scores corresponding to higher quality rule of law), where the units are those of a standard normal random variable (mean of zero and unit standard deviation).

We report our baseline fixed effects and matching analysis results with IEF and RoL replacing EFW in the appendix (Tables B1-B12). However, we cannot look at pro-market reforms (increases in IEF and RoL) as not enough countries in our sample had a reform using these measures to properly perform matching.

We start with IEF using fixed effects models (Tables B1-B3). We find no significant relationship between trust and IEF (Table B1). Similarly, discrimination does not appear to be impacted by IEF either (Table B2). Only one specification is significant when examining the relationship between IEF and justifying unethical behavior (Column 5, Table B3). When including only year fixed effects, we find that countries with higher IEF scores are less likely to justify avoid fares on public transportation. These results suggest that while market orientation (as measured by IEF) does not greatly improve our morals, we can say that it does not harm them either.

[14] The areas used in IEF are property rights, government integrity, judicial effectiveness, tax burden, government spending, fiscal health, business freedom, labor freedom, monetary freedom, trade freedom, investment freedom, and financial freedom.

Table 2c
Economic Freedom, Attitudes Towards Women, and Justifying "Immoral" Activity (Fixed Effects).

Variables	(1) Men Jobs	(2) Men Jobs	(3) Men Jobs	(4) Avoid Fares	(5) Avoid Fares	(6) Avoid Fares	(7) Cheat on Taxes	(8) Cheat on Taxes	(9) Cheat on Taxes
Economic Freedom	-1.215	-2.139	-2.607	-1.362	-2.683***	-2.145	-0.859	-1.952**	-1.406
	(1.926)	(2.028)	(2.078)	(1.444)	(0.927)	(1.558)	(1.174)	(0.765)	(1.165)
Gov't Spending Share	-34.842*	-24.687	-38.905*	-10.804	2.851	-4.953	4.482	12.214	7.828
	(20.229)	(20.011)	(21.280)	(10.987)	(9.845)	(10.794)	(8.761)	(8.862)	(9.503)
Polity	0.516***	-0.013	0.576***	-0.172	0.110	-0.200*	-0.366	0.016	-0.342
	(0.182)	(0.333)	(0.183)	(0.129)	(0.115)	(0.102)	(0.226)	(0.136)	(0.235)
Human Capital	-25.144***	-14.780***	-4.580	4.009	3.581	12.506	-3.831	5.509**	6.055
	(7.962)	(5.150)	(11.752)	(5.560)	(2.314)	(11.129)	(5.577)	(2.453)	(10.467)
Top 10 Inc Share	-25.426	1.167	-24.143	11.380	28.061***	7.473	31.156***	22.045**	29.017***
	(28.512)	(21.964)	(29.601)	(14.987)	(9.609)	(13.461)	(11.117)	(9.576)	(8.914)
Age Dependency	-0.053	-0.101	-0.137	-0.226**	-0.123**	-0.216***	-0.102	-0.056	-0.097
	(0.147)	(0.167)	(0.139)	(0.094)	(0.054)	(0.078)	(0.077)	(0.057)	(0.079)
Urban Population	0.607**	-0.062	0.771***	0.026	0.066	0.149	0.063	-0.022	0.153*
	(0.259)	(0.144)	(0.260)	(0.134)	(0.042)	(0.118)	(0.120)	(0.044)	(0.085)
Constant	87.514***	101.355***	42.267	15.543	5.138	-6.978	10.935	-1.606	-14.850
	(18.048)	(23.838)	(30.699)	(10.911)	(8.258)	(23.660)	(9.384)	(8.804)	(22.495)
Observations	138	138	138	132	132	132	135	135	135
Country FE	X		X	X		X	X		X
Year FE		X	X		X	X		X	X
R-squared	0.323	0.303	0.410	0.172	0.210	0.303	0.142	0.177	0.251
Number of Countries	49	49	49	49	49	49	49	49	49

Robust standard errors in parentheses
*** p<0.01
** p<0.05
* p<0.1

Table 3a
Market Societies and Trust.

Matching Method	Trust
PSM: Nearest Neighbor	12.999***
	(3.676)
PSM: Nearest 2 Neighbors	10.608***
	(3.067)
PSM: Nearest 3 Neighbors	11.272***
	(3.109)
PSM: Normal Kernel	2.377
	(7.100)

Notes: ***, **, & * indicate significance at the .01, .05, and .10 levels, respectively. Bootstrapped standard errors are in parentheses using 200 replications.

Table 3b
Market Societies and Discrimination.

Matching Method	Different Race	Foreign Workers	Homosexuals
PSM: Nearest Neighbor	3.257	3.750	0.315
	(3.772)	(6.634)	(9.790)
PSM: Nearest 2 Neighbors	2.407	5.263	-5.123
	(3.513)	(5.797)	(8.555)
PSM: Nearest 3 Neighbors	0.556	2.353	-4.325
	(3.369)	(5.196)	(7.448)
PSM: Normal Kernel	1.717	2.321	-0.268
	(3.657)	(5.306)	(7.574)

Notes: ***, **, & * indicate significance at the .01, .05, and .10 levels, respectively. Bootstrapped standard errors are in parentheses using 200 replications.

Now, we move on to RoL in fixed effect regressions (Tables B4-B6). We find in one model (year fixed effects only) that trust is statistically and meaningfully greater in areas with higher quality rule of law (Column 2, Table B4). Places with greater rule of law also seem to discriminate against foreign workers less (Column 6, Table B5). No other specification in this table is significant; however, each coefficient is negative (less discriminatory views). Much like the previous two tables, we find only mild evidence that places with greater rule of law scores are less likely to justify avoiding fares on public transportation and cheating on taxes (Columns 5 and 8, Table B6).

Table 3c
Market Societies, Attitudes Towards Women, and Justifying "Immoral" Activity.

Matching Method	Men's Jobs Prioritized	Avoid Fare	Cheat on Taxes
PSM: Nearest Neighbor	-2.355	-6.744***	2.310
	(4.532)	(2.322)	(1.882)
PSM: Nearest 2 Neighbors	-3.224	-6.136***	-2.217
	(4.133)	(2.153)	(1.579)
PSM: Nearest 3 Neighbors	-0.481	-6.306***	-3.058**
	(4.136)	(2.022)	(1.474)
PSM: Normal Kernel	-0.327	-7.163***	-3.992***
	(4.981)	(2.086)	(1.509)

Notes: ***, **, & * indicate significance at the .01, .05, and .10 levels, respectively. Bootstrapped standard errors are in parentheses using 200 replications.

Table 4a
Economic Reforms and Trust.

Matching Method	Trust (5-year change)
PSM: Nearest Neighbor	4.313
	(5.156)
PSM: Nearest 2 Neighbors	2.477
	(4.730)
PSM: Nearest 3 Neighbors	0.655
	(4.508)
PSM: Normal Kernel	4.478
	(4.396)

Notes: ***, **, & * indicate significance at the .01, .05, and .10 levels, respectively. Bootstrapped standard errors are in parentheses using 200 replications.

Table 4b
Economic Reforms and Discrimination.

Matching Method	Different Race (5-year change)	Foreign Workers (5-year change)	Homosexuals (5-year change)
PSM: Nearest Neighbor	6.252	9.630	1.469
	(7.329)	(7.924)	(9.440)
PSM: Nearest 2 Neighbors	7.558	6.030	1.769
	(5.537)	(4.876)	(8.752)
PSM: Nearest 3 Neighbors	2.676	5.358	-1.134
	(5.331)	(4.158)	(8.440)
PSM: Normal Kernel	3.941	5.295	-6.766
	(8.617)	(6.297)	(10.848)

Notes: ***, **, & * indicate significance at the .01, .05, and .10 levels, respectively. Bootstrapped standard errors are in parentheses using 200 replications.

We now move to matching methods, where a market-oriented society is defined as being in the top 2/5th of country-years of IEF (Tables B7-B9), as well as for RoL (Tables B10-B12). Much like the results from the fixed effects regressions, we find no evidence that places with higher IEF scores have lower levels of moral values. We also find consistent results between the matching methods and fixed effect results for RoL. Trust is significantly higher in places with high RoL scores (Table B10) but being a high RoL country has no impact on discrimination (Table B11). We only find significant values for justifying avoiding fares on public transportation; however, the coefficients on the ATET, while insignificant, are also always negative for prioritizing men's jobs and justifying cheating on taxes (Table B12).

5.5. Robustness checks: remove autocratic regimes

Democracy is a possible confounder in determining our moral values. Liberal democracies often emerged from the distrust of the political systems, so perhaps trust and other moral values can be explained by a country's level of democracy (Warren 1999). We partially address this in our baseline analysis by including a measure of democracy (polity) as a covariate. However, we can more directly address this by dropping countries with polity scores less than 5 (recall that polity is scored from -10 to 10, with higher scores indicating a more democratic regime). In doing so, we assess if democratic regimes that implement pro-market reforms (or are market oriented) have greater moral values *relative to democratic regimes that do not implement such a reform.*

Table 4c
Economic Reforms, Attitudes Towards Women, and Justifying "Immoral" Activity.

Matching Method	Men's Jobs Prioritized (5-year)	Avoid Fare (5-year change)	Cheat on Taxes (5-year change)
PSM: Nearest Neighbor	4.219	-1.360	1.767
	(3.456)	(3.543)	(1.768)
PSM: Nearest 2 Neighbors	0.466	-0.232	1.660
	(2.801)	(2.708)	(1.627)
PSM: Nearest 3 Neighbors	0.914	-1.650	1.402
	(2.583)	(2.526)	(1.469)
PSM: Normal Kernel	4.781	1.070	1.758
	(3.558)	(2.403)	(1.399)

Notes: ***, **, & * indicate significance at the .01, .05, and .10 levels, respectively. Bootstrapped standard errors are in parentheses using 200 replications.

In the appendix, we report the results from our matching methods only (Tables C1-C6). We start with the treatment being a market-oriented society (Tables C1-C3). We find similar results from the baseline with respect to trust. Trust is higher in democratic, market-oriented societies than it is in democratic, non-market-oriented ones. We find statistically significant (at the 1% level) results for two of the four matching methods (NN2 and NN3). This appears to be economically meaningful as well, as shown by the fact that being a market-oriented society corresponds to 67 to 79% of a standard deviation increase in trust.

We now move to market orientation and discrimination (Table C2). In the comparable baseline result (Table 3b), the coefficients were always statistically insignificant and often positive (lower moral values). However, when we exclude autocracies, the results (while still statistically insignificant) are almost always negative (higher moral values). With respect to attitudes towards women and justifying unethical behavior (Table C3), the results stay largely the same as in the baseline. Democratic market-oriented societies are less likely to justify unethical behaviors.

We now move to democratic countries that implemented a pro-market reform and match them to similar democratic countries that did not experience a pro-market reform (Table C4). In one instance (nearest neighbor), we find statistically significant evidence that pro-market reform causes an increase in trust. While this result is only significant in one case, it can be compared to the baseline analysis (Table 4a) in which no coefficients were significant. In the case of discrimination (Table C5) and attitudes towards women and justifying immoral actions (Table C5-C6), we find no statistically significant results. This corresponds with the comparable baseline results (Table 4b-4c).

When we account for the importance of democratic institutions, it appears that market orientation and pro-market reforms occasionally impact a society's moral values positively. More importantly, like our earlier results, there are no specifications in which market institutions cause moral deterioration.

6. Conclusion

As the world becomes more interconnected through the expansion of markets, as more countries embrace market institutions and gain materially, as we drift further from *having* a market economy to *being* a market society, the question as to the moral costs of markets only increases in its importance. Has it been worth it? Have we lost our souls in the pursuit of a higher standard of living?

Our results suggest that we have not. Contrary to the deterioration hypothesis, we find no evidence that market-oriented societies are associated with lower levels of morality and instead find consistent evidence that market societies tend to have higher levels of trust and a greater aversion to unethical behavior. Furthermore, we find no evidence that becoming more market-oriented causes moral deterioration. In fact, for democratic regimes, pro-market reform might improve their moral character on some dimensions. While we cannot emphatically say that being or becoming a market-oriented society will dramatically improve a society's moral character, we can say that market institutions are unlikely to cause significant moral deterioration. In other words, the moral costs of embracing markets are likely lower than it has been hypothesized.

Like Storr and Choi (2019), our efforts are fundamentally limited by data quality and availability issues. Unless we want to wait another 25 years for five more waves of the WVS, the best way to address the question of the moral costs of markets may be to identify or create different measures of morality.[15] Nevertheless, and until then, our results should give some pause to those who morally condemn markets for fears about moral deterioration.

Declaration of Competing Interest

The authors have no conflict of interest to report.

[15] Harris et al. (2021), for example, propose a method of measuring moral sentiments by extracting the moral salience of newspaper articles using text analysis. They create panel data with 179 countries and 20 years; however, they are limited to only capturing the use of moral language in one newspaper (the *New York Times*) due to current data availability.

Appendix

Table A1
Sample of Countries.

Country	Years	Country	Years	Country	Years
Albania	1995-2000	Japan	1990-2010	Slovakia	1995
Argentina	1990-2010	Jordan	2000-2010	Slovenia	2005-2010
Australia	2005-2010	Malaysia	2005-2010	South Africa	1990-2010
Bangladesh	1995-2000	Mexico	1990-2010	South Korea	1990-2010
Brazil	1990-1995; 2005-2010	Moldova	2005	Spain	1990-2010
Canada	2000-2010	Morocco	2000-2010	Sweden	1995-2010
Chile	1990-2010	Netherlands	2005-2010	Switzerland	1990-1995
China	1990-2010	New Zealand	2005-2010	Thailand	2005-2010
Colombia	2005-2010	Nigeria	1990-2010	Trinidad & Tobago	2005-2010
Cyprus	2005-2010	Pakistan	1995-2000	Turkey	1990-2010
Czech Republic	1995	Peru	1995-2010	Ukraine	2005-2010
Egypt	2000-2010	Philippines	1995-2000	United States	1990-2010
Germany	2005-2010	Poland	1990-1995; 2005-2010	Uruguay	2005-2010
Ghana	2005-2010	Romania	2005-2010	Venezuela	1995-2000
India	1990-2010	Russia	1995-2005-2010	Vietnam	2000-2005
Indonesia	2000-2005	Rwanda	2005-2010		
Iran	2000-2005	Serbia	2005		

Table A2
Treated Units (Market Societies)

Country	Year	Country	Year	Country	Year
Argentina	2000	Jordan	2005	Spain	2000
Australia	2005	Jordan	2010	Spain	2005
Australia	2010	Netherlands	2005	Spain	2010
Canada	2000	Netherlands	2010	Sweden	1995
Canada	2005	New Zealand	2005	Sweden	2000
Chile	1995	New Zealand	2010	Sweden	2005
Chile	2000	Peru	2000	Sweden	2010
Chile	2005	Peru	2005	Switzerland	1990
Chile	2010	Peru	2010	Switzerland	1995
Cyprus	2005	Philippines	1995	Trinidad & Tobago	2005
Cyprus	2010	Poland	2010	Trinidad & Tobago	2010
Germany	2005	Romania	2005	United States	1990
Germany	2010	Romania	2010	United States	1995
Japan	1990	Slovenia	2010	United States	2000
Japan	1995	South Korea	1995	United States	2005
Japan	2000	South Korea	2000	United States	2010
Japan	2005	South Korea	2005	Uruguay	2005
Japan	2010	South Korea	2010	Uruguay	2010
Jordan	2000	Spain	1995		

Table A3
Treated Units (Economic Reforms).

Country	Jump Year	Country	Jump Year
Albania	2000	Peru	1995
Argentina	1990	Peru	2000
Argentina	1995	Philippines	1995
Bangladesh	1995	Poland	1995
Bangladesh	2000	Romania	2005
Brazil	1990	Russia	1995
Chile	1990	Russia	2005
Chile	1995	Rwanda	2010
China	1995	South Africa	1995
Cyprus	2005	South Korea	1990
Egypt	2000	Spain	1995
Iran	2000	Turkey	1995
Jordan	2000	Turkey	2010
Mexico	1990	Ukraine	2005
Mexico	1995	Venezuela	2000
Nigeria	2000		

Table B1
Heritage Economic Freedom and Trust (Fixed Effects).

Variables	(1) Trust	(2) Trust	(3) Trust
Heritage Economic Freedom	-0.211	-0.273	-0.333
	(0.230)	(0.282)	(0.233)
Gov't Spending Share	-35.220	-27.804	-36.454*
	(22.332)	(17.156)	(21.621)
Polity	0.555	-0.144	0.545
	(0.815)	(0.545)	(0.659)
Human Capital	8.209	9.259**	0.578
	(12.894)	(4.137)	(13.942)
Top 10 Inc Share	-6.963	-49.025*	1.199
	(40.980)	(25.371)	(39.775)
Age Dependency	0.602	0.135	0.462
	(0.490)	(0.235)	(0.427)
Urban Population	0.018	0.043	0.039
	(0.554)	(0.121)	(0.526)
Constant	-10.914	34.790	17.445
	(57.892)	(26.647)	(50.142)
Observations	122	122	122
Country FE	X		X
Year FE		X	X
R-squared	0.127	0.150	0.241
Number of Countries	47	47	47

Robust standard errors in parentheses
*** p<0.01
** p<0.05
* p<0.1

Table B2
Heritage Economic Freedom and Discrimination (Fixed Effects).

Variables	(1) Diff. Race	(2) Diff. Race	(3) Diff. Race	(4) Immigrants	(5) Immigrants	(6) Immigrants	(7) Homosexuals	(8) Homosexuals	(9) Homosexuals
Heritage Economic Freedom	0.072	-0.143	0.047	0.195	0.178	0.194	0.239	0.241	0.474
	(0.190)	(0.113)	(0.139)	(0.201)	(0.198)	(0.199)	(0.348)	(0.402)	(0.332)
Gov't Spending Share	6.919	2.252	15.287	7.639	-0.217	11.289	12.555	13.590	32.216
	(51.108)	(25.639)	(53.903)	(42.798)	(31.414)	(46.801)	(48.651)	(46.600)	(52.966)
Polity	-0.233	-0.096	-0.336	-1.447	-1.045*	-1.393	-2.984*	-2.067**	-2.337
	(0.524)	(0.363)	(0.525)	(0.952)	(0.622)	(0.907)	(1.730)	(1.007)	(1.463)
Human Capital	-0.149	-1.177	10.903	-15.271	0.765	-4.203	-33.154	-3.682	6.203
	(14.921)	(4.552)	(18.486)	(16.654)	(6.418)	(17.720)	(22.769)	(8.083)	(24.869)
Top 10 Inc Share	-15.200	12.045	-11.833	44.678	36.264*	44.174	28.949	40.747	2.692
	(43.102)	(14.508)	(38.347)	(38.805)	(20.021)	(37.817)	(53.528)	(30.319)	(57.764)
Age Dependency	-0.064	-0.092	-0.112	-0.998*	-0.360	-1.120*	-0.704	-0.477	-0.828
	(0.453)	(0.192)	(0.425)	(0.557)	(0.301)	(0.558)	(1.063)	(0.475)	(0.993)
Urban Population	-0.107	-0.239***	0.096	-0.673	-0.258**	-0.568	-0.630	-0.298	-0.278
	(0.471)	(0.084)	(0.537)	(0.670)	(0.115)	(0.711)	(0.709)	(0.182)	(0.697)
Constant	29.910	42.634**	-8.125	135.361*	36.768	109.091	199.901	86.886**	84.058
	(61.904)	(21.604)	(74.803)	(78.007)	(32.619)	(81.571)	(139.568)	(42.362)	(130.624)
Observations	116	116	116	116	116	116	114	114	114
Country FE	X		X	X		X	X		X
Year FE		X	X		X	X		X	X
R-squared	0.009	0.024	0.055	0.201	0.194	0.214	0.234	0.302	0.319
Number of Countries	47	47	47	47	47	47	46	46	46

Robust standard errors in parentheses
*** p<0.01
** p<0.05
* p<0.1

Table B3
Heritage Economic Freedom, Attitudes Towards Women, and Justifying "Immoral" Activity (Fixed Effects).

Variables	(1) Men Jobs	(2) Men Jobs	(3) Men Jobs	(4) Avoid Fares	(5) Avoid Fares	(6) Avoid Fares	(7) Cheat on Taxes	(8) Cheat on Taxes	(9) Cheat on Taxes
Heritage Economic Freedom	0.312	0.102	0.299	-0.043	-0.123*	-0.016	-0.007	-0.062	0.026
	(0.188)	(0.145)	(0.187)	(0.072)	(0.071)	(0.071)	(0.067)	(0.044)	(0.066)
Gov't Spending Share	-41.205**	-25.475	-39.803*	-11.671	3.967	-1.225	7.480	17.981*	14.862
	(19.964)	(19.445)	(20.687)	(15.867)	(11.449)	(14.445)	(11.546)	(9.589)	(12.329)
Polity	0.407***	-0.078	0.462***	-0.180	0.117	-0.228	-0.097	0.148*	-0.034
	(0.103)	(0.302)	(0.100)	(0.203)	(0.125)	(0.146)	(0.143)	(0.086)	(0.078)
Human Capital	-20.693**	-13.750***	-4.951	0.721	0.865	7.787	-9.361*	1.402	1.988
	(7.816)	(4.618)	(11.727)	(5.859)	(2.374)	(12.537)	(5.439)	(1.867)	(11.967)
Top 10 Inc Share	-16.803	5.611	-13.100	1.410	26.088**	-4.778	27.218	17.757*	22.846
	(26.760)	(18.702)	(27.926)	(22.805)	(10.641)	(21.831)	(17.884)	(9.448)	(16.951)
Age Dependency	0.268	0.088	0.173	-0.260**	-0.123**	-0.228*	-0.185***	-0.084*	-0.175***
	(0.207)	(0.190)	(0.182)	(0.129)	(0.056)	(0.115)	(0.066)	(0.050)	(0.062)
Urban Population	0.324	-0.180	0.547**	0.103	0.086**	0.276*	0.086	-0.008	0.273***
	(0.217)	(0.136)	(0.241)	(0.176)	(0.040)	(0.148)	(0.124)	(0.036)	(0.096)
Constant	47.308*	76.674***	0.380	19.041	1.895	-12.221	22.420*	0.636	-19.194
	(26.982)	(23.737)	(40.036)	(15.688)	(9.386)	(35.681)	(11.172)	(7.299)	(32.015)
Observations	122	122	122	117	117	117	118	118	118
Country FE	X		X	X		X	X		X
Year FE		X	X		X	X		X	X
R-squared	0.362	0.362	0.415	0.156	0.162	0.284	0.089	0.137	0.222
Number of Countries	47	47	47	47	47	47	47	47	47

Robust standard errors in parentheses
*** p<0.01
** p<0.05
* p<0.1

Table B4
Rule of Law and Trust (Fixed Effects).

Variables	(1) Trust	(2) Trust	(3) Trust
Rule of Law	9.557	8.330***	4.554
	(6.594)	(2.583)	(7.736)
Gov't Spending Share	-13.338	5.167	-29.575
	(30.556)	(37.080)	(34.958)
Polity	2.175*	-0.400	2.376**
	(1.193)	(0.797)	(1.174)
Human Capital	-3.152	1.474	-0.216
	(15.949)	(6.721)	(23.075)
Top 10 Inc Share	-29.409	-45.193*	-26.896
	(46.057)	(25.112)	(48.133)
Age Dependency	0.850*	0.100	0.757
	(0.483)	(0.255)	(0.483)
Urban Population	0.278	-0.082	0.299
	(0.682)	(0.100)	(0.712)
Constant	-28.854	45.638	-29.336
	(68.945)	(30.505)	(87.031)
Observations	99	99	99
Country FE	X		X
Year FE		X	X
R-squared	0.352	0.118	0.378
Number of Countries	46	46	46

Robust standard errors in parentheses
*** p<0.01
** p<0.05
* p<0.1

Table B5
Rule of Law and Discrimination (Fixed Effects).

Variables	(1) Diff. Race	(2) Diff. Race	(3) Diff. Race	(4) Immigrants	(5) Immigrants	(6) Immigrants	(7) Homosexuals	(8) Homosexuals	(9) Homosexuals
Rule of Law	-9.277	-1.693	-8.168	-11.084	-1.134	-13.102*	-4.693	-7.229	-3.147
	(9.165)	(1.728)	(8.671)	(8.073)	(2.584)	(7.763)	(8.676)	(4.794)	(10.363)
Gov't Spending Share	12.638	6.170	22.941	18.886	0.238	14.126	-82.975*	-58.377	-81.530
	(72.959)	(44.239)	(84.638)	(61.646)	(49.362)	(72.002)	(44.032)	(56.868)	(51.834)
Polity	-0.300	-0.049	-0.143	-3.030***	-1.423*	-2.872***	-5.886***	-3.194**	-6.074***
	(0.630)	(0.474)	(0.650)	(0.927)	(0.845)	(0.972)	(1.629)	(1.432)	(1.668)
Human Capital	-5.060	-2.970	5.606	-9.511	4.598	-4.245	-29.986	10.372	-37.841
	(22.614)	(5.472)	(16.640)	(19.234)	(6.348)	(19.497)	(22.399)	(10.506)	(25.871)
Top 10 Inc Share	-21.536	-3.947	-24.635	87.480**	39.030**	86.467**	102.477	33.834	104.417
	(50.446)	(16.114)	(46.930)	(40.626)	(19.804)	(40.203)	(62.798)	(38.571)	(65.094)
Age Dependency	0.090	-0.056	0.013	-0.771*	-0.265	-0.891**	-1.479*	-0.714	-1.353
	(0.290)	(0.207)	(0.324)	(0.417)	(0.309)	(0.435)	(0.806)	(0.517)	(0.808)
Urban Population	0.191	-0.274***	0.397	-0.874	-0.243	-0.878	-2.346**	-0.191	-2.405*
	(0.715)	(0.104)	(0.922)	(0.860)	(0.150)	(1.029)	(1.130)	(0.226)	(1.226)
Constant	24.909	47.828*	-12.361	124.658*	32.128	119.779	361.154***	87.240**	376.746***
	(39.756)	(25.197)	(57.345)	(69.067)	(34.680)	(92.167)	(129.354)	(44.158)	(135.445)
Observations	96	96	96	95	95	95	94	94	94
Country FE	X		X	X		X	X		X
Year FE		X	X		X	X		X	X
R-squared	0.077	0.023	0.093	0.413	0.362	0.419	0.560	0.440	0.562
Number of Countries	46	46	46	46	46	46	45	45	45

Robust standard errors in parenthese
*** p<0.01
** p<0.05
* p<0.1

Table B6
Rule of Law, Attitudes Towards Women, and Justifying "Immoral" Activity (Fixed Effects).

Variables	(1) Men Jobs	(2) Men Jobs	(3) Men Jobs	(4) Avoid Fares	(5) Avoid Fares	(6) Avoid Fares	(7) Cheat on Taxes	(8) Cheat on Taxes	(9) Cheat on Taxes
Rule of Law	4.624	-0.991	2.607	-4.198	-5.023***	0.228	-2.540	-2.601**	1.301
	(5.225)	(2.591)	(4.523)	(2.928)	(1.184)	(3.437)	(2.833)	(1.293)	(3.459)
Gov't Spending Share	-85.490***	-70.139***	-89.328***	-20.659	-0.001	0.582	-6.160	10.803	13.873
	(13.221)	(21.968)	(15.691)	(16.656)	(12.065)	(17.894)	(13.126)	(12.373)	(14.323)
Polity	0.222	-0.557	0.380	-0.094	0.343***	0.032	-0.024	0.232**	0.186
	(0.430)	(0.342)	(0.431)	(0.244)	(0.129)	(0.239)	(0.195)	(0.111)	(0.179)
Human Capital	7.086	-6.329	13.465*	3.389	2.189	19.545	-2.254	2.979	17.623
	(4.990)	(5.583)	(7.367)	(12.327)	(2.273)	(19.960)	(11.162)	(2.471)	(17.929)
Top 10 Inc Share	-23.086	4.834	-21.769	-2.326	21.479*	-7.192	8.552	10.666	4.098
	(19.748)	(17.721)	(18.256)	(35.720)	(11.378)	(28.469)	(32.007)	(12.663)	(24.539)
Age Dependency	0.564***	0.329*	0.477***	-0.074	-0.080	-0.094	-0.075	-0.073	-0.149**
	(0.172)	(0.185)	(0.169)	(0.159)	(0.051)	(0.148)	(0.115)	(0.052)	(0.073)
Urban Population	-0.267	-0.247*	-0.139	0.008	0.119***	0.367	0.002	-0.019	0.433**
	(0.192)	(0.143)	(0.219)	(0.274)	(0.042)	(0.271)	(0.210)	(0.043)	(0.185)
Constant	24.953	63.670***	6.078	8.977	-10.970	-57.430	13.330	-4.058	-63.894
	(18.698)	(22.805)	(27.581)	(36.125)	(10.768)	(66.859)	(34.332)	(10.189)	(59.306)
Observations	99	99	99	96	96	96	97	97	97
Country FE	X		X	X		X	X		X
Year FE		X	X		X	X		X	X
R-squared	0.426		0.447	0.074		0.237	0.027		0.275
Number of Countries	46	46	46	46	46	46	46	46	46

Robust standard errors in parentheses
*** p<0.01
** p<0.05
* p<0.1

Table B7
Market Societies and Trust (Heritage Economic Freedom).

Matching Method	Trust
PSM: Nearest Neighbor	1.620
	(6.003)
PSM: Nearest 2 Neighbors	0.541
	(5.973)
PSM: Nearest 3 Neighbors	-0.477
	(5.775)
PSM: Normal Kernel	1.833
	(5.038)

Notes: ***, **, & * indicate significance at the .01, .05, and .10 levels, respectively. Bootstrapped standard errors are in parentheses using 200 replications.

Table B8
Market Societies and Discrimination (Heritage Economic Freedom).

Matching Method	Different Race	Foreign Workers	Homosexuals
PSM: Nearest Neighbor	0.152	0.602	1.752
	(4.327)	(5.753)	(7.999)
PSM: Nearest 2 Neighbors	-0.022	0.981	1.246
	(3.443)	(5.103)	(7.492)
PSM: Nearest 3 Neighbors	0.581	3.076	1.959
	(3.166)	(4.424)	(7.387)
PSM: Normal Kernel	-0.130	1.184	2.002
	(3.065)	(4.119)	(6.476)

Notes: ***, **, & * indicate significance at the .01, .05, and .10 levels, respectively. Bootstrapped standard errors are in parentheses using 200 replications.

Table B9
Market Societies, Attitudes Towards Women, and Justifying "Immoral" Activity (Heritage Economic Freedom).

Matching Method	Men's Jobs Prioritized	Avoid Fare	Cheat on Taxes
PSM: Nearest Neighbor	-4.177	-1.441	-0.344
	(4.933)	(1.546)	(1.052)
PSM: Nearest 2 Neighbors	-0.650	-2.442	-0.274
	(4.162)	(1.536)	(0.994)
PSM: Nearest 3 Neighbors	0.258	-2.185	-0.562
	(3.958)	(1.533)	(0.987)
PSM: Normal Kernel	-1.525	-2.508	-0.727
	(3.993)	(1.558)	(0.911)

Notes: ***, **, & * indicate significance at the .01, .05, and .10 levels, respectively. Bootstrapped standard errors are in parentheses using 200 replications.

Table B10
Market Societies and Trust (Rule of Law).

Matching Method	Trust
PSM: Nearest Neighbor	11.713***
	(2.938)
PSM: Nearest 2 Neighbors	9.981***
	(2.701)
PSM: Nearest 3 Neighbors	11.315***
	(2.553)
PSM: Normal Kernel	10.606***
	(2.778)

Notes: ***, **, & * indicate significance at the .01, .05, and .10 levels, respectively. Bootstrapped standard errors are in parentheses using 200 replications.

Table B11
Market Societies and Discrimination (Rule of Law).

Matching Method	Different Race	Foreign Workers	Homosexuals
PSM: Nearest Neighbor	-0.088	2.438	-0.190
	(3.612)	(3.471)	(7.073)
PSM: Nearest 2 Neighbors	1.464	3.075	3.251
	(3.488)	(3.571)	(7.492)
PSM: Nearest 3 Neighbors	0.819	2.528	2.262
	(3.226)	(3.826)	(7.658)
PSM: Normal Kernel	0.668	2.756	2.241
	(2.917)	(2.916)	(5.759)

Notes: ***, **, & * indicate significance at the .01, .05, and .10 levels, respectively. Bootstrapped standard errors are in parentheses using 200 replications.

Table B12
Market Attitudes Towards Women, and Justifying "Immoral" Activity (Rule of Law).

Matching Method	Men's Jobs Prioritized	Avoid Fare	Cheat on Taxes
PSM: Nearest Neighbor	-3.742	-3.795**	-1.286
	(4.503)	(1.687)	(1.684)
PSM: Nearest 2 Neighbors	-1.210	-4.484***	-0.743
	(3.966)	(1.584)	(1.501)
PSM: Nearest 3 Neighbors	-1.276	-4.693***	-0.882
	(4.167)	(1.511)	(1.470)
PSM: Normal Kernel	-1.659	-4.567***	-0.757
	(3.555)	(1.529)	(1.459)

Notes: ***, **, & * indicate significance at the .01, .05, and .10 levels, respectively. Bootstrapped standard errors are in parentheses using 200 replications.

Table C1
Market Societies and Trust (Dropping Autocracies).

Matching Method	Trust
PSM: Nearest Neighbor	4.279
	(5.389)
PSM: Nearest 2 Neighbors	12.880***
	(4.058)
PSM: Nearest 3 Neighbors	10.818***
	(3.706)
PSM: Normal Kernel	5.997
	(8.490)

Notes: ***, **, & * indicate significance at the .01, .05, and .10 levels, respectively. Bootstrapped standard errors are in parentheses using 200 replications.

Table C2
Market Societies and Discrimination (Dropping Autocracies).

Matching Method	Different Race	Foreign Workers	Homosexuals
PSM: Nearest Neighbor	-4.061	-2.104	-6.881
	(3.679)	(5.989)	(10.896)
PSM: Nearest 2 Neighbors	-2.226	-1.271	-1.152
	(3.489)	(5.383)	(9.334)
PSM: Nearest 3 Neighbors	-2.835	-3.797	-6.854
	(3.301)	(5.011)	(8.209)
PSM: Normal Kernel	-2.061	0.946	-0.699
	(5.124)	(6.711)	(12.022)

Notes: ***, **, & * indicate significance at the .01, .05, and .10 levels, respectively. Bootstrapped standard errors are in parentheses using 200 replications.

Table C3
Market Societies, Attitudes Towards Women, and Justifying "Immoral" Activity (Dropping Autocracies).

Matching Method	Men's Jobs Prioritized	Avoid Fare	Cheat on Taxes
PSM: Nearest Neighbor	3.420	-5.870**	-3.173
	(8.180)	(2.990)	(2.547)
PSM: Nearest 2 Neighbors	-2.482	-4.557	-3.540
	(6.103)	(2.868)	(2.364)
PSM: Nearest 3 Neighbors	-4.627	-5.404*	-4.520**
	(5.421)	(2.799)	(2.249)
PSM: Normal Kernel	3.401	-5.654*	-3.737*
	(6.826)	(3.049)	(1.986)

Notes: ***, **, & * indicate significance at the .01, .05, and .10 levels, respectively. Bootstrapped standard errors are in parentheses using 200 replications.

Table C4
Economic Reforms and Trust (Dropping Autocracies).

Matching Method	Trust (5-year change)
PSM: Nearest Neighbor	8.646*
	(4.558)
PSM: Nearest 2 Neighbors	6.070
	(3.902)
PSM: Nearest 3 Neighbors	4.951
	(3.554)
PSM: Normal Kernel	6.066
	(3.987)

Notes: ***, **, & * indicate significance at the .01, .05, and .10 levels, respectively. Bootstrapped standard errors are in parentheses using 200 replications.

Table C5
Economic Reforms and Discrimination (Dropping Autocracies).

Matching Method	Different Race (5-year change)	Foreign Workers (5-year change)	Homosexuals (5-year change)
PSM: Nearest Neighbor	-2.017	3.335	-11.918
	(6.285)	(4.691)	(8.705)
PSM: Nearest 2 Neighbors	1.648	2.994	-7.949
	(5.305)	(4.170)	(7.873)
PSM: Nearest 3 Neighbors	3.215	5.457	-6.817
	(4.885)	(3.829)	(7.484)
PSM: Normal Kernel	5.728	9.208*	-10.956
	(6.539)	(4.749)	(9.519)

Notes: ***, **, & * indicate significance at the .01, .05, and .10 levels, respectively. Bootstrapped standard errors are in parentheses using 200 replications.

Table C6
Economic Reforms, Attitudes Towards Women, and Justifying "Immoral" Activity (Dropping Autocracies).

Matching Method	Men's Jobs Prioritized (5-year)	Avoid Fare (5-year change)	Cheat on Taxes (5-year change)
PSM: Nearest Neighbor	2.798	-1.664	2.313
	(3.852)	(3.548)	(2.146)
PSM: Nearest 2 Neighbors	1.471	-3.928	1.645
	(3.360)	(2.971)	(1.952)
PSM: Nearest 3 Neighbors	1.409	-1.413	1.386
	(3.215)	(2.605)	(1.723)
PSM: Normal Kernel	3.688	-0.032	2.049
	(3.865)	(3.161)	(1.534)

Notes: ***, **, & * indicate significance at the .01, .05, and .10 levels, respectively. Bootstrapped standard errors are in parentheses using 200 replications.

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