



On Rule of Law, Civic Virtues, Trust, and Happiness

Johan Graafland¹

Received: 26 April 2022 / Accepted: 10 March 2023 / Published online: 15 April 2023
© The Author(s) 2023

Abstract

In literature, there is a long and ongoing dispute over whether free market institutions encourage or discourage civic virtues. On the one hand, the so-called *doux commerce* thesis states that free market institutions have a favorable influence on civic virtues, such as honesty, respect for private property, and fair dealings. This idea goes back to, amongst others, Adam Smith who famously argued that where commerce is introduced, people are more faithful to their word. Smith also believed that civic virtues foster human happiness. The policy implication would be that free market institutions increase happiness by stimulating civic virtues. On the other hand, the so-called *self-destruction* thesis states that free market institutions are inimical to the civic virtues, which would mean that free markets decrease human happiness by crowding out civic virtues. Although the debate on free market institutions and civic virtues is very relevant to policy makers, empirical evidence on these opposing propositions is still scarce. In this paper we test both relationships on a sample of 212,431 individuals from 80 countries by using data from the World Values Survey and the European Values Survey over the 1990–2020 period. We focus on one important dimension of free market institutions: rule of law. We find that civic virtues are positively related to rule of law and that happiness increases with civic virtues. In addition, civic virtues indirectly increase happiness by stimulating trust. In addition, trust is directly positively related to rule of law, indicating that both formal institutions (rule of law) and informal institutions (civic virtues) affect trust. An analysis of all the effects of rule of law on happiness shows, however, that the indirect effects through civic virtues and trust are of relatively minor importance in comparison to its total effect.

Keywords Adam Smith · Civic virtues · *Doux commerce* · Happiness · Rule of law · Trust

✉ Johan Graafland
j.j.graafland@uvt.nl

¹ Department of Economics, Department of Philosophy, Tilburg Sustainability Center, Tilburg University, CentER, P.O. Box 90153, 5000 LE Tilburg, The Netherlands

Introduction

In the literature on market institutions, virtues, and human happiness, two debates have attracted the attention of philosophers and economists. First, there is a long and ongoing dispute over whether free market institutions encourage or discourage civic virtues (Fourcade & Healy, 2007; Storr & Choi, 2019). Civic virtues can be defined as “those social norms, ethical commitments, and other-regarding preferences that facilitate the workings of the institutions advocated by liberals.” (Bowles, 2011, p. 50) Civic virtues or “bourgeois” virtues do not include so-called “higher virtues,” such as beneficence and magnanimity (Herzog, 2014), but virtues that are commonly held to be among the cultural foundations of a well-functioning liberal order, such as voluntarily paying taxes and contributing to public goods, respect for private property, honesty, and fair treatment. For most of the eighteenth century, market relations were assumed to make people more cordial. As Montesquieu states: “[...] wherever there is commerce, manners are gentle.” (Cited in Hirschman, 1982: 1464.) Adam Smith largely sides with this view (Graafland & Wells, 2020). In his *Lectures on Jurisprudence* (§ 17) Smith (1763) states: “whenever commerce is introduced into any country, probity and punctuality always accompany it. . . . Of all the nations of Europe, the Dutch, the most commercial, are the most faithful to their word.” Fourcade and Healy (2007) call this the liberal dream. Today, McCloskey (2006) is one of the best-known defenders of this so-called *doux commerce* thesis that commerce fosters the civic virtues. She argues that free markets nurture several bourgeois virtues, such as integrity, honesty, trustworthiness, enterprise, respect, modesty, and responsibility. The antithesis to the *doux commerce* thesis is the so-called parasitic liberalism (or self-destruction) thesis, which states that market institutions favor a cultural learning process that is inimical to the virtues needed for liberal institutions to function well (Bowles, 2011). Markets will crowd out traditional institutions that sustain the civic virtues, such as family life and religious communities, while endorsing the pursuit of self-interest.

The second debate that is related to, but has to be distinguished from, the debate between defenders of the liberal dream and the parasitic liberalism thesis, concerns the effect of civic virtues on human or societal happiness. In classical virtue ethics, virtues enable people to become happy. In Aristotle’s view, excellence, or virtue, is an essential condition of happiness. As a virtue ethicist, Adam Smith also believed that virtues enhance human and societal happiness. For example, in his *Theory of Moral Sentiments* (TMS), he stated that “By acting according to the dictates of our moral faculties, we necessarily pursue the most effectual means for promoting the happiness of mankind, and may therefore be said, in some sense, to co-operate with the Deity, and to advance as far as in our power the plan of Providence.” (TMS, III.5.7) Smith believed that it is not great fortunes that make people truly happy in the first place, but rather simpler pleasures such as knowing one has acted in a proper way (Rasmussen, 2006). In contrast, Mandeville argued in his *Fable of the Bees* that the practice of private virtues leads to societal disaster and therefore, ultimately, to human unhappiness,

because without vices a nation will not prosper. In his view, private vices, like pride and vanity, have built more hospitals than all the virtues put together.

Empirical evidence on the relationships between free market institutions, civic virtues and happiness is still very scant. Previous research has mostly focused on studying how formal institutions affect life satisfaction (Veenhoven, 2000; Ovaska & Takashima, 2006; Gropper et al., 2011; Graafland & Compen, 2015), without reference to informal institutions, such as culture and morality. The first attempt to come close is Graafland and Compen (2015). They showed that generalized trust (defined as trusting people you do not know) positively mediates the influence of the quality of the legal system (in short, rule of law) on happiness. The ingredients of such a legal system are rule of law, security of property rights, an independent and unbiased judiciary, and impartial and effective enforcement of the law. It is a key dimension of the so-called economic freedom. Individuals have economic freedom when their property rights are well protected and when “they are free to use, exchange, or give their property as long as their actions do not violate the identical rights of others” (<https://www.fraserinstitute.org/economic-freedom/economic-freedom-basics>). Economic freedom comprises four other subdimensions (small size of government, sound money, free trade, and freedom from government regulation), but it is particularly rule of law that has been found to affect trust (Knack & Keefer, 1997; Zak & Knack, 2001; Berggren & Jordahl, 2006; Graafland & Compen, 2015). Indeed, it is well known that generalized trust is affected by the quality of the law, as it makes it harder for people to deceive others (Beugelsdijk, 2006). In our paper, we therefore focus on this dimension of free market institutions. However, it is likely that trust is also influenced by civic virtues, such as honesty and justice. If many members of a society are reliable, people living in that society will be more inclined to trust others. Besides rule of law, it is therefore likely that civic virtues affect happiness by increasing trust.

The research questions that this paper focuses on are therefore threefold: 1 How does rule of law influence civic virtues? 2. To what extent is trust affected by rule of law, as an indicator of formal institutions, and by civic virtues, as an indicator of informal institutions? 3. How do civic virtues influence happiness? To answer these research questions, we will test the relationships between rule of law, civic virtues, trust, and happiness using data from the World and European Value Studies between 1990 and 2020. In what follows, we first present the hypotheses. Section 3 describes the methodology of our empirical research. Section 4 reports the results of the empirical analysis. In Section 5 we summarize and discuss the main findings.

Hypotheses

Rule of Law, Trust and Civic Virtues

Previous research has shown that free market institutions may increase trust (Helliwell & Barrington-Leigh, 2010; Oishi et al., 2011; Graafland & Compen, 2015). Trust can be defined as a psychological state comprising the intention to accept vulnerability, based on positive expectations of the intentions or

behavior of another person (Rousseau et al., 1998). It is an expectation of the reliability of others to live up to their obligations, the predictability of their behavior and the fairness of their actions (Beugelsdijk, 2006). The literature distinguishes between particularized trust and generalized trust (Berggren & Jordahl, 2006). The former entails trusting people you know, the latter trusting people you do not know. Most economic literature uses the concept of generalized trust. It constitutes an evaluation of individuals' attitudes towards their surroundings and the community of which they are a part and affects how people interact with each other. It fosters so-called bridging social capital, which refers to the connections between dissimilar people (Jen et al., 2010). Generalized trust is a prerequisite for a well-functioning economy, as it enables people to engage in trade and other constructive activities, lowers transaction costs, and enhances stability and peaceful interaction among members of a society.

Research by Knack and Keefer (1997), Zak and Knack (2001), Berggren and Jordahl (2006), Graafland and Compen (2015), and Sapsford et al. (2019) has shown that the rule of law, which is key in the concept of free market institutions, enhances trust. The rule of law refers to a legal system that is durable, complies with the rules and is accountable. Rules that have been established and announced in advance make it possible for individuals to predict with a fair degree of precision how the government will use the coercive forces at its disposal in certain circumstances. In this way, everyone is free, within the known rules of the game, to pursue one's personal purposes in the certainty that the powers of the government will not be used to destroy the activities of the individual (Hayek, 1976). A well-developed legal system that protects property rights and contracts not only reinforces a climate of trust in the government, it also increases trust in other people. The institutions of law and order detect and punish people who break contracts or steal from others. If these institutions work well, then people will have reason to believe that the chance of people getting away with such noncooperative behavior is small. Hence, people will have good reason to refrain from untruthful behavior and, as a result, most people will believe that most other people can be trusted (Rothstein, 2000). This leads to our first hypothesis:

Hypothesis 1 Trust is positively related to rule of law.

The trust generated by rule of law is not necessarily evidence of the presence of civic virtues. People may act in a trustful way out of fear of punishment by the law. The reason that people act faithfully is then a matter of self interest, because cheating one's trading partners may generate more loss than profit in the long term. Civic virtues, such as honesty and reliability, are intrinsically motivated. This follows from the definition of virtue as an acquired disposition that is socially valued as part of the character of a morally good human being, exhibited in the person's habitual behavior (Velasquez, 1998). Virtues go deeper than mere behavior and habits (although this may be important for their development) as they are constitutive of how a person perceives situations and reasons for actions. The reason why the person acted is crucial: persons who act in a virtuous way but intensely dislike considering the interests of others should be judged deficient in virtue.

Although generalized trust is likely to be connected to civic virtues at the macro level (see the next Section), at the micro level it is conceptually different. As noted above, people may trust others, not because those others are intrinsically motivated to be honest, but because they are extrinsically motivated because of fear of punishment or reputation harm. The difference can also be illustrated by the example of a vicious person who operates in an environment where more people have internalized civic virtues, such as reliability and honesty. Because of the reliability of other people, this person is likely to trust others, without being virtuous him or herself.¹

Notwithstanding the conceptual difference between trust and civic virtues, we expect that the influence of rule of law on civic virtues is similar to its influence on trust. We base this argument on habit formation. According to Aristotle (*Ethica Nicomachea*) (n.d.), virtues are learned through a tedious process of trial and error. They become internalized through the regular repetition of certain (good) actions and thinking, often originally motivated by extrinsic motives. When we repeatedly are honest towards others out of self-interest, we develop the habit of being honest, and gradually this habit may crowd in and develop into the civic virtue of honesty. Once the habit of being honest towards others is internalized and becomes a civic virtue, honesty stems from a genuine intrinsic motivation (Paganelli, 2010). Extrinsic motives will therefore slowly crowd in and become internalized. Relations with others that were entered into as means to economic ends become transformed into ends in themselves. Besides habit formation, Aristotle also acknowledges the value of the external pressure from a good and reasonable government to induce virtues. The rule of law may provide cues for appropriate moral behavior, like being reliable, speaking the truth, and keeping your promises, and trigger moral engagement (Bowles & Polania-Reyes, 2012). Governments are, in fact, important institutional players with the ability to influence social norms, values, and societal expectations on behavior (Weaver et al., 1999), thereby enhancing intrinsic motivations and civic virtues. This leads to our second hypothesis:

Hypothesis 2 Civic virtues are positively related to rule of law.

Civic Virtues and Trust

Whereas trust may depend on the quality of formal institutions such as rule of law, as discussed above, it will also be informed by the civic virtues of people in the environment in which an individual agent operates. Because they are intrinsically motivated, virtuous people keep their promises even when it would be profitable to break them. The more people in an agent's social environment exhibit civic virtues, the more often this agent confronts honest behavior, and the more likely it is that (s)

¹ Nooteboom (2017) argues, however, that trust in itself can also be an expression of virtues. For example, in a situation of uncertainty it requires the virtue of courage to trust others. It also requires the virtue of faith as one needs to take a leap of faith to trust another. Indeed, generalized trust has also been called moralistic trust (Uslaner, 2002). It is moral because it follows from the moral dictate that people should trust each other.

he trusts others. Moreover, as virtues lead to cross-situational consistency in people's behavior (Alzola, 2008; Bright et al., 2014), it might reduce uncertainty, thus further increasing trust.

Also, empirical research has shown that virtues are important antecedents of trust (Hendriks et al., 2020; Fleckenstein, 2008; Morgan & Hunt, 1994). For example, Van Dalen and Henkens (2018) found that trust in Dutch pension providers depends on their perceived integrity, competence, and benevolence. Van Esterik-Plasmeijer and Van Raaij (2017) found that integrity plays a key role in explaining trust in Dutch banks. Hence, we hypothesize that:

Hypotheses 3 An agent's trust is positively related to civic virtues of people in the agent's social environment.

Civic Virtues, Trust and Happiness

According to Adam Smith, knowing that one has acted in a praiseworthy manner gives peace of mind (Rasmussen, 2006): "To be amiable and to be meritorious; that is, to deserve love and to deserve reward, are the great characters of virtue... The consciousness that it is the object of such favorable regards, is the source of that inward tranquility and self-satisfaction with which it is naturally attended, as the suspicion of the contrary gives occasion to the torments of vice." (Smith, 1759: iii.i.7). This also holds for civic virtues, such as honesty in economic affairs: "In all the middling and inferior professions, real and solid professional abilities, joint to prudent, just, firm, and temperate conduct, can very seldom fail of success.... honesty is the best policy, holds, in such situations, almost always perfectly true." (TMS, I.ii.3.5) Hence, Smith held that civic virtues, such as justice and honesty, contribute to the individual's well-being. Smith's perception that civic virtues foster life satisfaction is also evident in his *Wealth of Nations*. In their semantic-network approach, Graafland and Wells (2020) found that the majority (over 90%) of 240 citations in which Smith relates human flourishing to virtues, the association is positive. This shows that Smith clearly disagreed with Mandeville.

Previous empirical research provides support for the positive relationship between civic virtues and happiness. Doing well is inherently rewarding. An abundant literature shows that prosocial behavior makes a person happier (Dunn et al., 2008). For example, on a sample of US and Swiss citizens, Peterson et al. (2007) and Abasimi and Xiaosong (2016) found that fairness and honesty are significantly related to life satisfaction. Furthermore, Wang and Hackett (2016) provided empirical evidence that virtuous leaders have higher hedonic well-being. Therefore, our fourth hypothesis is:

Hypothesis 4 Happiness is positively related to civic virtues.

Literature has argued and shown that trust also affects life satisfaction (Helliwell, 2003, 2006; Bjørnsvold et al., 2007, 2010; Oishi et al., 2011; Graafland & Compen, 2015; D'Agostino et al., 2019; Piao et al., 2021). People do not only enjoy

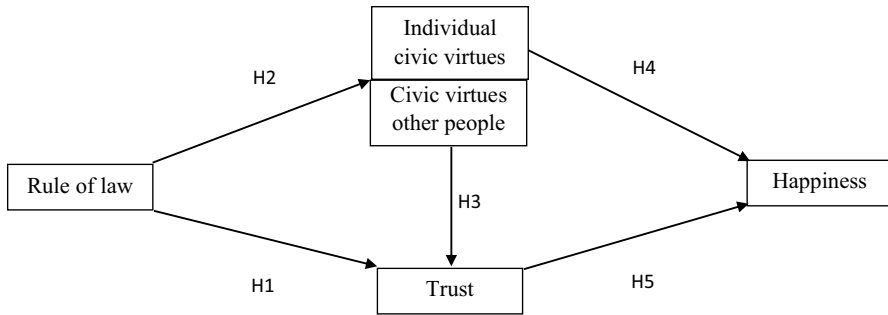


Fig. 1 Overview of set of hypotheses

satisfaction from doing the right thing themselves but are also more happy if they feel that others can be trusted. Trust is a precondition for social order and social cohesion, without which many forms of social interaction are much more difficult (Helliwell & Putnam, 2004; Bjørnskov, 2007). People benefit from living in an environment where other people can be trusted. Helliwell and Barrington-Leigh (2010) explored the determinants of the respondents' sense of belonging to their communities and found that measures of trust explain the extent to which one feels a strong sense of belonging, which in turn increases subjective well-being. Trust reduces information and transaction costs and thus lowers the complexity and uncertainty of decision making in everyday life. Furthermore, trust is likely to increase health, because individuals will be less healthy the greater the lack of social cohesion in a country. Empirical research by Berggren and Jordahl (2006) and Jen et al. (2010) supported a positive relation between trust and health indicators. Since life satisfaction has been found to be positively associated with income and health (Helliwell et al., 2016), one would expect that trust increases life satisfaction. Furthermore, trust is often associated with other beneficial outcomes that increase life satisfaction, such as a reduction in violent crimes (Bjørnskov et al., 2007). This leads to our fifth and last hypothesis:

Hypothesis 5 Happiness is positively related to trust.

Overview of the Set of Hypotheses

Figure 1 presents an overview of the hypotheses.

The figure distinguishes the civic virtues of the individual and the civic virtues of other people in the social environment of the individual. This distinction is important as the trust in other people does not primarily depend on one's own civic virtues, but rather on the (perceived) civic virtues of other people. Whereas Hypothesis 4 concerns the civic virtues of the individual, hypothesis 3 refers to the civic virtues of other people. Hypothesis 2 relates to both: on the one hand, rule of law affects the civic virtues of the individual, but as it affects all individuals in a country, it also affects the civic virtues of other people in one's social environment. In the empirical

analysis we will use different measures for the individual civic virtues and civic virtues of other people.

Figure 1 can be interpreted as a mediation model. Mediation models give insight into how an independent variable (in our model: rule of law) indirectly affects the dependent variable (e.g., happiness) by changing intermediate variables, the so-called mediators. In our model, both civic virtues and trust can mediate the relationship between rule of law and happiness: rule of law may increase civic virtues, which in turn increase happiness, but also raise trust that also increases happiness. Furthermore, civic virtues may also be indirectly related to happiness through trust, as civic virtues may also increase trust (hypothesis 3), which in turn again increases happiness (Hypothesis 5). Trust thus may also mediate the relationship between the civic virtues (of other people) and happiness.

Methodology

Model

To test the hypotheses, we used the following model:

$$CV_{i,k,t} = \alpha_1 + \beta_1 RL_{k,t-5} + \sum \lambda_{1m} X_{m,k,t} + \sum \lambda_{1n} Y_{n,i,t} + \mu_1 F_t + \varepsilon_{i,k,t} \quad (1)$$

$$TR_{i,k,t} = \alpha_2 + \beta_2 CV_{k,t} + \gamma_2 RL_{k,t-5} + \sum \lambda_{2m} X_{m,k,t} + \sum \lambda_{2n} Y_{n,i,t} + \mu_2 F_t + \nu_{i,k,t} \quad (2)$$

$$H_{i,k,t} = \alpha_3 + \beta_3 CV_{i,k,t} + \gamma_3 TR_{i,k,t} + \delta_3 RL_{k,t-5} + \sum \lambda_{3m} X_{m,k,t} + \sum \lambda_{3n} Y_{n,i,t} + \mu_3 F_t + \nu_{i,k,t} \quad (3)$$

CV denotes civic virtue, RL rule of law, and H happiness. The index *i* denotes individual level, *k* country level, and *t* time period (year). For rule of law, we used 5 and 10 years lagged values (see below). *X* denotes (*m*) control variables at the country level, *Y* (*n*) control variables at the individual level (see below), and *F_t* time dummies for each wave. As discussed above, we use individual civic virtues in Eqs. (1) and (3) and civic virtues of other people in Eq. (2). Given the limitations of the dataset, the average civic virtues in a country is used as a proxy of the civic virtues of other people as perceived by individuals in that country. To test this model, we therefore need data on the civic virtues of individuals as well as country averages. If we were to estimate the model using country averages of civic virtues, trust and happiness only, we would not be able to identify how the civic virtues of other people affect individual trust.

Data Sources and Measurement

The dataset consists of 212,431 individuals from 80 countries and is taken from the World Values Survey (WVS) and European Value Survey (EVS), complemented by

Table 1 Data sources and descriptives

	Mean	SD	Min	Max	Source
Main variables					
Rule of law	6.21	1.65	2.41	8.93	Fraser Institute
No cheating on taxes	8.76	2.18	1	10	WVS/EVS
No bribing	9.26	1.69	1	10	WVS/EVS
No claiming benefit	8.62	2.29	1	10	WVS/EVS
Trust	0.31	0.46	0	1	WVS/EVS
Life satisfaction	6.98	2.32	1	10	WVS/EVS
Individual control variables					
Income scale	4.75	2.32	1	10	WVS/EVS
Age	43.13	16.95	15	99	WVS/EVS
Marital status	0.61	0.49	0	1	WVS/EVS
Gender (male)	0.48	0.50	0	1	WVS/EVS
Full employed	0.39	0.48	0	1	WVS/EVS
Unemployed	0.08	0.28	0	1	WVS/EVS
Religiosity	7.18	3.22	1	10	WVS/EVS
Protestant	0.14	0.35	0	1	WVS/EVS
Muslim	0.14	0.34	0	1	WVS/EVS
Non-religious	0.16	0.37	0	1	WVS/EVS
Country control variables					
Small size government	6.56	1.01	3.03	9.04	Fraser Institute
GDP per capita (ppp)	25,495	18,011	1,286	94,115	World Bank
Political rights	5.69	1.70	1	7	Freedom House
Civil liberty	5.46	1.57	1	7	Freedom House
South America	0.14	0.34	0	1	
Post Communist	0.17	0.38	0	1	
Latitude	36.55	16.72	0	1	https://latitude.to
Landlocked	0.10	0.30	0	1	

data from the Fraser Institute and other data sources.² We have data from six waves (wave 2–7) of the EVS/WVS (2021) between 1990 and 2020, surveys being carried out approximately every five years.

For rule of law, we used the sub dimension “legal system and property rights” of the Economic Freedom of the World Index of the Fraser Institute (Gwartney et al., 2017), that ranges from 1 (least free) to 10 (most free). The index is a composite score of 10 policy areas: judicial independence, impartial courts, protection of property rights, no military interference in rule of law and politics, integrity of the legal system, legal enforcement of contracts, low regulatory costs of the sale of

² Appendix Table 6 presents an overview of the countries included in the dataset and the number of observations per country.

real property, reliability of policy, low business costs of crime, and gender disparity adjustment.³ The descriptives reported in Table 1 show that there is substantial variation in the index of rule of law, from a minimum of 2.41 to a maximum value of 8.93.

To measure civic virtues, we used indicators from the illegal – dishonesty domain of the Morally Debatable Behaviors Scale (Katz et al., 1994), which have also been used in the WVS/EVS. These indicators have been used in previous literature as “civic norms” (Knack & Keefer, 1997), “civic traditions” (Putnam et al., 1994), “civic culture” (Algan & Cahuc, 2009), or “civic virtues” (Frey, 2012). They reflect the civic mindedness of the respondents, i.e., responsibility towards their society. Selecting the survey questions that are available for most waves of WVS, we could use three questions from the illegal – dishonesty domain of the Morally Debatable Behaviors Scale, one on cheating on taxes, one on accepting a bribe, and one on claiming government benefits to which one is not entitled. In these questions, respondents were asked to what extent cheating on taxes, accepting a bribe in the course of one’s duties, and claiming government benefits to which one is not entitled is justifiable. The scale ranges from 1 (never justifiable) up to 10 (always justifiable).⁴ Correlation analysis showed that the answers to the three questions are highly correlated. To reduce multicollinearity, we used the mean response to the three questions.⁵

Generalized trust is measured by the (binary) response to the question “In general, do you think most people can be trusted?” – a standard approach in literature. The answer options were “Most people can be trusted” (1) and “You can’t be too careful” (0). This measure has proved to be a valid and powerful measure of social trust (Özcan & Bjørnskov, 2011).

The dependent variable, happiness, is measured by the survey question from WVS/EVS on life satisfaction (“How satisfied are you with your life?”), measured as a number on a scale from 1 (dissatisfied) to 10 (satisfied). Life satisfaction provides an evaluation of life as it is in comparison to how life should be (Veenhoven, 2000) and is a prominent standard for measuring subjective well-being.

Control Variables

As macro control variables, we included (the natural logarithm of) GDP per capita, political rights, and civil liberty (Veenhoven, 2000; Ovaska & Takashima, 2006), a dummy for South American countries and post-communist countries (Bjørnskov et al., 2007, 2010; Helliwell, 2003), and two geographical

³ For details of the methodology, see <https://www.fraserinstitute.org/economic-freedom/approach>.

⁴ We reversed the original scale so that answers with a higher number reflect more “civic virtuousness.”

⁵ If we perform factor analysis, we found one factor that comprises the three questions from the Morally Debatable Behaviors Scale. The Cronbach alpha, construct reliability and convergence validity support the validity of this factor.

factors, latitude and landlocked (Bjørnskov et al., 2008). We also included (small) size of the government as a control variable (one of the other subdimensions of economic freedom), as Graafland and Compen (2015) and Oishi et al. (2018) have found that it significantly affects trust and life satisfaction.⁶

As control variables at the individual level, we used personal income, age, marital status, religion, gender, and (un)employment status (Bjørnskov et al., 2008; Fahey & Smyth, 2004; Haller & Hadler, 2006; Yeniaras & Akarsu, 2017). Since absolute income statistics are lacking in the WVS data, we used income quintiles (Bjørnskov et al., 2008; Fahey & Smyth, 2004; Haller & Hadler, 2006). Religion is measured by the religiosity of individuals as indicated by the response to the question “How important is God in your life?” (measured on a Likert scale from 1 to 10), and by three dummies for religious affiliation (protestant Christianity, Muslim, and a-religious, with all other religions as the reference) (Bjørnskov et al., 2008; Haller & Hadler, 2006).

Estimation Technique

Since the respondents participating in the World Values Survey and European Values Survey differ per wave, we cannot use a standard panel regression model. But as rule of law is a country-level variable, we should correct standard errors (Peterson et al., 2012; Boudreaux et al., 2019). In the regression analysis we therefore used country clustered standard errors. This estimation method only requires that observations across countries are independent (Primo et al., 2007). Furthermore, we used robust standard errors to rule out biases due to heteroscedasticity.

As social trust has been found to increase economic freedom (Berggren & Bjørnskov, 2017), the results may be subject to endogeneity due to reverse causality. Endogeneity may also arise from unobserved variable bias. For example, as noted in footnote 1, trust may require the virtue of courage. As civic virtues like honesty may also demand some courage, the relationship between public virtues and trust may be due to their relationship with the unobserved virtue of courage. Unfortunately, instrumental variables that prevent simultaneity bias are lacking, as the exclusion restriction is too problematic (Alesina & Giuliano, 2015). To reduce endogeneity caused by the possible reverse effect from public virtues and trust on rule of law, we instrumented rule of law with the five and ten years lagged rule of law (Bhattacharyya & Hodler, 2014). However, this approach does not guarantee excluding all simultaneity bias and we should therefore be careful in the interpretation of the results in terms of causality.

⁶ In a robustness analysis, we also tested the three other dimensions of economic freedom (sound money, freedom to trade internationally, and freedom from regulations), but the results showed no significant effects on public virtues and trust.

Table 2 Bivariate correlation analysis: core variables

	Rule of law	Civic virtues	Trust	Life satisfaction
Rule of law	1			
Civic virtues	0.04	1		
Trust	0.24	0.06	1	
Life satisfaction	0.20	0.03	0.11	1

bold: $p < 0.01$. Number of observations is 212,431. The number of countries is 80. For the bivariate correlation analysis of all other variables, see Appendix Table 7

Results

This section presents the bivariate and multivariate regression analysis. In the correlation and regression analysis we used standardized values of all variables (except the dummy variables).

Bivariate Correlation Analysis

The bivariate correlation analysis in Table 2 shows that rule of law is significantly positively related to civic virtues, trust, and life satisfaction. Furthermore, life satisfaction is positively related to civic virtues and trust. Interestingly, the correlation between civic virtues and generalized trust is rather small (0.06). This finding shows that trust and civic virtues are weakly correlated at the individual level and that research on trust cannot be extrapolated to civic virtues.

Regression Analysis

Table 3 and Fig. 2 report the estimation results of the regression analysis.

The estimation results in column 1 of Table 3 show that civic virtues are positively related to rule of law. This result provides support for hypothesis 2. Furthermore, civic virtues are positively related to the age of the respondent, marital status, religiosity (particular Muslim and Protestant), and negatively related to gender (indicating that men are slightly more prepared to cheat the tax authorities or to accept bribing) and unemployment. For the macro control variables, only GDP per capita shows a small negative effect, which suggests that income has a slightly corrupting effect on the virtuousness of people.

Column 2 shows that trust is also significantly positively related to rule of law, supporting hypothesis 1. Furthermore, we find a significant positive effect of civic virtues at the country level, which provides support for hypothesis 3. Besides country civic virtues, we find a small but significant effect of the individual civic virtues. This seems to suggest that people that exhibit civic virtues themselves are more inclined to trust others, as the saying goes: “just as the innkeeper is himself, he

Table 3 Estimation results

	1	2	3	4
	Civic virtues	Trust	Life satisfaction	
Rule of law	0.15**	0.19***	0.02	0.11**
Civic virtues _{individual}		0.01*	0.06***	0.05**
Civic virtues _{country}		0.04*		
Trust			0.06***	0.06***
Individual control variables				
Income scale	-0.00	0.06***	0.12***	0.13***
Ln age	0.12***	0.02	-0.08***	-0.07***
Marital status	0.05**	0.01	0.15***	0.14***
Gender (male)	-0.08***	0.01	0.00	-0.00
Full employed	0.00	0.04**	-0.01	-0.01
Unemployed	-0.15*	-0.09***	-0.26***	-0.27***
Religiosity	0.06***	-0.06***	0.09***	0.10***
Protestant	0.15**	0.08	0.02	0.00
Muslim	0.30**	0.06	-0.13	-0.12
Non-religious	0.07*	0.04	-0.05	-0.05
Country control variables				
Small size government	-0.01	-0.06	-0.02	-0.02
GDP per capita (ppp)	-0.14*	-0.05	0.13*	
Political rights	0.13	-0.14*	-0.06	-0.05
Civil liberty	-0.12	0.06	0.15	0.15
South America	0.14	-0.10	0.22	0.28*
Post-Communist	-0.06	-0.34***	-0.17*	-0.17*
Latitude	0.05	0.10*	-0.05	-0.02
Landlocked	-0.00	-0.05	0.03	0.02
R ²	0.05	0.11	0.13	0.12

The number of observations is 212,431 and the number of countries is 80. Standardized coefficients. Significance: * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$. We use robust standard errors that are country clustered. The estimation results for the time dummies are available from the author

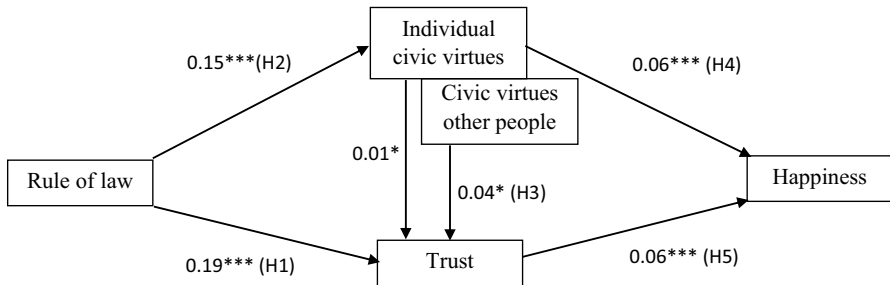


Fig. 2 Multiple regression analysis: core results

trusts his guests".⁷ Furthermore, trust is found to be significantly positively related to income class, employment status, and latitude, whereas it is negatively related to unemployment, religiosity, political rights, and post-communist countries.

Column 3 shows that life satisfaction is significantly positively related to trust as well as to civic virtues, which support hypotheses 4 and 5.⁸ The rule of law does not have a significant positive effect. However, we do find that life satisfaction is significantly related to income per capita. Previous research by Graafland and Compen (2015) has shown that GDP per capita may mediate the positive effect of rule of law on life satisfaction. This mechanism is supported if we regress the logarithm of GDP per capita on rule of law, controlling for all control variables. The estimated coefficient of rule of law is equal to 0.62 ($p < 0.001$). In column 4 we therefore dropped GDP per capita as a control variable. Now, life satisfaction is significantly positively related to rule of law. For the micro control variables, we find that life satisfaction is significantly positively related to income scale, marital status, and religiosity, and negatively related to age and unemployment. Furthermore, people in post-communist countries are less happy.

Robustness Analysis

Table 4 presents results of robustness analysis. First, using bootstrapping with 1000 replications hardly changes the results. Only the significance of the effect of country-averaged civic virtues on trust declines (from p value is 0.042 to 0.093). Furthermore, testing if the results depend on the countries included in the sample, we found that if African countries are excluded from the sample, do the estimation results change for trust, as civic virtues at the country level becomes insignificant. Other results testing hypotheses 1–4 are highly robust.

Indirect Effects

To estimate the importance of civic virtues as a channel through which rule of law indirectly affects trust and life satisfaction, we calculated the direct, indirect, and total effects of rule of law on trust and life satisfaction. The results are reported in Table 5.

The indirect effect of rule of law on trust through civic virtues is equal to the multiplication of β_1 and β_2 (see Eqs. 1 and 2 in Section 3.1). The direct effect is equal to the estimated coefficient of rule of law in column 2 of Table 3. Although the indirect effect is significant at $p < 0.05$, the magnitude is relatively small (0.01). It only explains 5% of the total effect of rule of law on trust (0.20).

⁷ Alternatively, the influence of the own civic virtues may provide a correction on country civic virtues as an indicator for the civic virtues of the social environment of the individual.

⁸ When testing for non-linearity, we found that civic virtues quadratic also has a small, but significant positive effect of 0.02 ($p = 0.001$). If only a binary variable of civic virtues is used, its estimated coefficient is 0.08 ($p < 0.001$).

Table 4 Robustness analysis

	1	2	3	4
	Civic virtues	Trust	Life satisfaction	
Bootstrapped estimates^a				
Rule of law	0.15**	0.19***	0.02	0.11**
Civic virtues _{individual}		0.01*	0.06***	0.05**
Civic virtues _{country}		0.04 ⁺		
Trust			0.07***	0.06***
Sample excluding Central and South American countries				
Rule of law	0.15**	0.18***	0.06	0.12***
Civic virtues _{individual}		0.02**	0.06***	0.05***
Civic virtues _{country}		0.04*		
Trust			0.07***	0.07***
Sample excluding post-communist countries				
Rule of law	0.18**	0.20***	-0.03	0.07
Civic virtues _{individual}		0.01	0.05***	0.04*
Civic virtues _{country}		0.05*		
Trust			0.06***	0.06***
Sample excluding African countries				
Rule of law	0.19**	0.25***	0.04	0.11*
Civic virtues _{individual}		0.02*	0.06***	0.05**
Civic virtues _{country}		0.02		
Trust			0.06***	0.06***
Sample excluding Asian countries				
Rule of law	0.15**	0.18***	0.02	0.13**
Civic virtues _{individual}		0.02*	0.06***	0.06***
Civic virtues _{country}		0.04*		
Trust			0.06***	0.06***

Standardized coefficients. * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$. The results are controlled for all control variables. See Appendix Table 6 for an overview of the countries in the full sample that belong to the regions excluded.

^a Bootstrapped p-values based on 1000 replications. ⁺ $p < 0.10$

Table 5 Analysis of direct and indirect effects of rule of law on life satisfaction

Dependent variable	Direct effect	Indirect effect through:		Total effect ^b
		Civic virtues	Trust	
Trust	0.19***	0.01* ^a		0.20***
Life satisfaction	0.11** ^c	0.01**	0.01***	0.14***

Significance of indirect effects are calculated by Sobel test. * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

^a Sum of the indirect effects through country and individual civic virtues

^b Sum of direct and indirect effects

^c Based on column 4 of Table 3

For life satisfaction, the indirect effect of rule of law through civic virtues is also rather small (0.01), although significant at $p < 0.01$. Also, the indirect effect through trust is relatively small in magnitude (0.01). The large direct effect (0.11) can be largely explained by an indirect effect through income per capita (compare the difference in the coefficients of rule of law in columns 3 and 4 of Table 3).⁹

Discussion

Summary of Main Findings

This paper has studied the relationships between rule of law, civic virtues, trust, and life satisfaction. Using the World and European Values Surveys (covering a period from 1990 to 2020), we accessed a sample of 212,431 observations of individuals living in 80 countries.

This study has four main findings. First, the results show that civic virtues are positively related to rule of law, which is a key economic institution of free markets. This finding suggests some support for the *doux commerce* thesis that free market institutions enforce civic virtues. We do not find support for the reverse thesis, the so-called self-destruction (or parasitic liberalism) thesis that free market institutions crowd out civic virtues. A possible explanation is the focus on rule of law, as destructive effects of free markets on virtues are more likely to arise from other aspects of free markets, such as intensity of competition. Intense competition may push companies to continuously increasing sales by advertising, fostering a tendency to overconsumption and materialism (Moore, 2005). Competition may also undermine honesty, as the mobility and short-term focus that competition induces crowd out long-term commitments and lead to erosion of social bonds (Putnam, 2000; Sennet, 2000). Furthermore, Shleifer (2004) argued that competition may promote corruption, as corruption gives the briber a competitive advantage. Because of our focus on rule of law only, our analysis does not allow a more general conclusion on the relevance of the *doux commerce* versus self-destruction thesis.¹⁰

Second, we find that trust is related to a mixture of formal institutions (rule of law) and informal institutions (civic virtues). This suggests that not only the liberal but also the communitarian perspective is relevant. To channel self-interest in socially beneficial directions, liberalism stresses the importance of formal institutions, such as rule of law. In liberal theory, one does not have to be a good virtuous person in the moralistic sense of the term to be a good citizen (Madison, 1998). In the communitarian perspective, virtues that enhance communal relationships are important. Social virtues sustain cooperative behavior in individuals. Our results

⁹ As noted above, we found that the coefficient of rule of law in a regression equation of GDP per capita equals 0.62. Combining this with the estimated coefficient of income per capita in column 3 of Table 3 (0.13) suggests an indirect effect through income per capita of $0.62 * 0.13 = 0.08$.

¹⁰ Test results for other dimensions of economic freedom that are related to free competition showed positive nor negative effects on civic virtues and trust (see footnote 6), indicating that both these are not supported.

indicate that both perspectives are important, and that liberalism and communitarianism are not mutually exclusive (Boettke, 1998).

Third, the results support Smith's view that life satisfaction is positively related to civic virtues. The magnitude of the positive effect of civic virtues on life satisfaction is comparable to the magnitude of generalized trust. This result rejects the view of De Mandeville that private vices rather than virtues generate societal benefits. Indeed, if markets are subject to market imperfections, such as lack of full transparency, virtues become of great importance for the trust required for concluding contracts (Graafland & Nijhof, 2007). Virtuous businessmen will feel responsible for living up to the contracts they concluded. The motivation comes from within. They refrain from cheating their contract partners, even if they expect this to be financially advantageous.

Lastly, this paper shows that both civic virtues and trust are channels through which rule of law stimulates human happiness. The magnitude of the sum of these indirect effects is, however, relatively small. It only explains about 15% of the total effect of rule of law on human happiness. The reason is that there are many other factors that might mediate the positive relationship between rule of law and life satisfaction. Examples are income per capita, education, individual freedom, entrepreneurship and tolerance, as previous research has shown that each of these variables relate positively to both rule of law and happiness.

Contributions to Literature

This paper contributes to the literature in two ways. First, this study is, to our knowledge, the first research into the relationships between free market institutions and civic virtues and between civic virtue and life satisfaction. Previous research has found a positive relationship between free market institutions and generalized trust (Knack & Keefer, 1997; Zak & Knack, 2001; Henrich et al., 2001, 2004; Berggren & Jordahl, 2006; Graafland & Compen, 2015) and between generalized trust and life satisfaction (Bjørnskov et al., 2007; Oishi et al., 2011; Graafland & Compen, 2015). In this paper we focus on civic virtues from the illegal – dishonesty domain of the Morally Debatable Behaviors Scale to test the empirical relevance of the *doux commerce* (liberal dream) thesis. Although trust is related to civic virtues, it is not properly a civic virtue. Trust depends on the institutional context (rule of law) as well as on the civic virtues of those that are to be trusted. At the individual level, the two concepts do not necessarily relate, as persons trusting others do not necessarily excel in being trustworthy themselves in relation to others. Our bivariate correlation analysis indeed shows that the correlation between trust and civic virtues is rather low.

Whereas Graafland and Compen (2015) focused on trust, there is still a lack of micro evidence linking free market institutions and life satisfaction to civic virtues. Recently, Storr and Choi (2019) showed that civic virtues are higher for market than for non-market societies. In non-market societies, twice as many people as in market societies say that civic vices such as avoiding paying fares on public transport, cheating on taxes, stealing property, and accepting bribes are acceptable. However, these conclusions of Storr and Choi (2019)

were based on a simple comparison of averages for market and non-market societies.¹¹ In our paper, we provide micro evidence of this relationship, controlling for macro and micro control variables. We consider microanalysis to be more reliable than macro analysis because the results are not affected by compounding effects. For example, whereas at the micro level civic virtues differs conceptually and empirically from trust, at the macro level these variables are more related, as generalized trust is informed by the civic virtues of others. Microanalysis is therefore more capable of identifying the precise nature of the relationships between rule of law, civic virtues, trust, and life satisfaction.

Scientific and Policy Implications

Research into the relationship between free market institutions and civic virtues is important, because the trust that civic virtues can build is known to have many positive effects on economic development and society. As liberalism stresses the importance of formal institutions, neoliberal (as well as neoclassical) economics has disconnected virtues from economics for a long time. Both neoliberal and neoclassical economics stress the importance of formal institutions, such as rule of law, to channel the microeconomic behavior driven by individual preferences, possibilities and beliefs, but neglect the significant role of virtues in the economic system. Economists often cite Adam Smith's *Wealth of Nations* (1776) as the first work to identify economics as the study of how the private self-interested actions of individuals generate public wealth as if by an invisible hand (Medema, 2010). It is common to see this thesis repeated in the introductions to economics textbooks (e.g., Mankiw, 2014) with the support of a few selected lines from the *Wealth of Nations*. While this may be a good representation of neoclassical economists' self-understanding of their profession, it is not a good representation of what Adam Smith said or meant, as Smith acknowledged the importance of virtues for stimulating human happiness. If market institutions affect human happiness through civic virtues, economists should take these effects into account in their economic analysis and policy recommendations. The policy implication is that governments should look for institutions that structure economic incentives in a smart way, such that they cultivate virtue (Bowles, 2016).

Limitations and Future Research

It should be noted that the empirical analysis does not allow strong conclusions about causality. For example, there might be reverse causality from trust on rule of law, as trust has been found to facilitate reforms that increase economic

¹¹ In an appendix, Storr and Choi (2019) also performed regression analysis, relating a binary measure of market society to various indicators of well-being, controlling for ethnic fractionalization, political rights, civic liberties, and Western culture. They found that public corruption is negatively related to the dummy of market societies.

freedom (Berggren & Bjørnskov, 2017). This positive reverse effect would cause an upward simultaneity bias in our estimation results. Without the use of proper instrumental variables, we cannot exclude the possibility that the positive relationship between rule of law and trust is caused by a reverse positive effect. Similar reservations may also apply to the effect of rule of law on civic virtues and the effects of civic virtues and trust on life satisfaction. For the identification of causality in the relationship between civic virtues and life satisfaction, future waves of WVS/EVS should include additional variables that can theoretically be argued to causally drive civic virtues without affecting life satisfaction.

Another limitation of our study is our focus on civic virtues. Market institutions may also affect other types of intrinsic motivation, which are related to virtues. Other virtues that may be affected by markets institutions, and where empirical research is lacking to date, are, for example, courage, temperance, humility, industriousness, prudence, love, and hope. Although the WVS and EVS include survey questions asking about preferences on these virtues (as characteristics respondents prefer to see in their own children), these preferences do not measure characteristics of the respondents themselves. Hence, measuring these other virtues would require another extension of WVS and EVS.

Appendix 1

Table 6 Number of observations per country

	Central and South America		Western Europe		Post-communist Europe		Africa		Asia		Other	
Argentina	1,844	Austria	4,002	Albania	1,319	Algeria	1,175	Armenia	1,432	Australia	4,507	
Brazil	1,483	Belgium	3,172	Bosnia	1,588	Egypt	2,676	Azerbaijan	1,586	Canada	1,701	
Chile	4,438	Denmark	4,907	Bulgaria	2,229	Ghana	1,552	Bangladesh	1,405	New Zealand	1,524	
Colombia	4,253	Finland	3,393	Croatia	1,306	Mali	1,306	China	957			
Dominican Republic	334	France	3,758	Czech Republic	1,254	Morocco	1,851	Georgia	2,007	United States	7,443	
		Germany	8,507			Nigeria	4,479	India	7,694			
Ecuador	1,199	Greece	932	Estonia	3,422	Rwanda	1,527	Indonesia	2,658			
El Salvador	1,039	Iceland	2,335	Hungary	949	South Africa	13,595	Iran	2,232			
Guatemala	947	Ireland	1,733	Lithuania	1,935			Japan	5,338			
Mexico	7,265	Italy	4,459	Montenegro	787	Tanzania	1,033	Jordan	1,131			
Peru	5,060	Luxembourg	610	North Macedonia	807	Trinidad	984	Malaysia	2,494			
Uruguay	2,785	Malta	717			Tunisia	1,116	Pakistan	3,070			
		Netherlands	5,219	Poland	2,446	Uganda	545	Philippines	2,390			
		Norway	3,125	Romania	3,675	Zimbabwe	2,331	Singapore	1,933			
		Portugal	1,116	Russia	7,706			South Korea	3,581			
		Spain	6,892	Serbia	278							
		Sweden	4,124	Slovakia	976			Thailand	1,073			
		Switzerland	3,792	Slovenia	1,855			Turkey	8,354			
		United Kingdom	3,269	Ukraine	2,895							
11	19		17		13		16		4			

Appendix 2

Table 7 Bivariate correlation analysis for all variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
1 Rule of law	1																					
2 Civic virtues	0.04	1																				
3 Trust	0.24	0.06	1																			
4 Life satisfaction	0.20	0.03	0.11	1																		
5 Income scale	0.12	-0.00	0.11	0.18	1																	
6 (ln)Age	0.22	0.14	0.06	0.00	-0.05	1																
7 Marital status	-0.01	0.06	0.02	0.07	0.27	1																
8 Gender (male)	-0.02	-0.04	0.02	-0.01	0.03	-0.01	0.02	1														
9 Full employed	0.15	-0.01	0.08	0.08	0.18	-0.09	0.06	0.16	1													
10 Unemployed	-0.08	-0.06	-0.07	-0.11	-0.11	-0.13	-0.10	0.02	-0.24	1												
11 Religiosity	-0.44	0.03	-0.18	-0.02	-0.11	-0.05	0.04	-0.07	-0.16	0.06	1											
12 Protestant	0.27	0.07	0.11	0.07	0.06	0.04	-0.01	-0.01	0.05	-0.01	-0.06	1										
13 Muslim	-0.39	0.05	-0.05	-0.12	-0.04	-0.12	0.03	0.02	-0.07	0.03	0.26	-0.16	1									
14 Non-religious	0.14	-0.00	0.06	0.02	0.03	0.03	-0.04	0.03	0.07	-0.01	-0.29	-0.18	-0.17	1								
15 Small government	-0.36	-0.03	-0.20	-0.07	-0.10	-0.10	0.02	-0.00	-0.09	0.04	0.33	-0.11	0.04	-0.05	1							
16 GDP per capita	0.81	0.01	0.19	0.21	0.14	0.24	-0.04	-0.04	0.15	-0.09	-0.39	0.15	-0.26	0.16	-0.33	1						
17 Political rights	0.72	0.03	0.12	0.18	0.08	0.18	-0.01	-0.01	0.07	-0.06	-0.31	0.15	-0.44	0.10	-0.14	0.59	1					

Table 7 (continued)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
18 Civil liberty	0.78	0.02	0.16	0.22	0.10	0.21	-0.02	-0.02	0.10	-0.06	-0.33	0.18	-0.47	0.14	-0.20	0.69	0.93	1			
19 South America	-0.19	-0.02	-0.12	0.06	-0.07	-0.06	-0.01	-0.00	-0.06	-0.00	0.16	-0.10	-0.13	0.03	0.26	-0.14	0.04	.01	1		
20 Post-Communist	-0.02	-0.00	-0.07	-0.08	-0.03	0.14	0.02	-0.05	0.08	0.02	-0.12	-0.12	-0.06	0.05	-0.00	0.11	-0.07	-0.03	-0.16	1	
21 Latitude	0.57	0.06	0.20	0.05	0.10	0.22	-0.02	-0.03	0.15	-0.07	-0.42	0.14	-0.16	0.11	-0.50	0.63	0.36	0.44	-0.36	0.40	1
22 Landlocked	0.05	0.01	-0.02	0.02	-0.00	0.02	-0.02	-0.01	0.04	0.03	-0.02	0.01	-0.00	-0.01	-0.03	0.02	-0.15	-0.08	-0.10	0.17	0.04

bold: $p < 0.01$. Number of observations is 229,520. The number of countries is 80

Acknowledgements The author thanks Eelke de Jong for his comments on an earlier version of this paper.

Data Availability The data used in this article are all from public sources and are available with the author on request.

Declarations

This work was supported by the Templeton World Charity Foundation, Inc. Templeton World Charity Foundation had no involvement in the study design; collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the article for publication.

Ethical Statement This article does not contain any studies with human participants or animals performed by any of the authors.

Conflict of Interest The author has no conflict of interest with regard to funding, employment, financial interest or non-financial interest.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Abasimi, E., & Xiaosong, G. (2016). Character strengths and life satisfaction of teachers in Ghana. *Humanities and Social Sciences Letters*, 4(1), 22–35.
- Alesina, A., & Giuliano, P. (2015). Culture and institutions. *Journal of Economic Literature*, 53(4), 898–944.
- Algan, Y., & Cahuc, P. (2009). Civic Virtue and Labor Market Institutions. *American Economic Journal: Macroeconomics*, 1(1), 111–145.
- Aristotle. (n.d.) *Ethica Nicomachea*. Historische Uitgeverij.
- Alzola, M. (2008). Character and environment: The status of virtues in organizations. *Journal of Business Ethics*, 78(3), 343–357.
- Berggren, N., & Jordahl, H. (2006). Free to trust: Economic freedom and social capital. *Kyklos*, 59(2), 141–169.
- Berggren, N., & Bjørnskov, C. (2017). The market-promoting and market-preserving role of social trust in reforms of policies and institutions. *Southern Economic Journal*, 84(1), 3–25.
- Beugelsdijk, S. (2006). A note on the theory and measurement of trust in explaining differences in economic growth. *Cambridge Journal of Economics*, 30, 371–387.
- Bhattacharyya, S., & Hodler, R. (2014). Do Natural Resource revenues hinder Financial Development? The role of Political Institutions. *World Development*, 57, 101–113.
- Bjørnskov, C. (2007). Determinants of generalized trust: A cross-country comparison. *Public Choice*, 130(1–2), 1–21.
- Bjørnskov, C., Dreher, A., & Fischer, J. A. V. (2007). The bigger the better? Evidence of the effect of government size on life satisfaction around the world. *Public Choice*, 130, 267–292.
- Bjørnskov, C., Dreher, A., & Fischer, J. (2008). Cross-country determinants of life satisfaction: Exploring different determinants across groups in society. *Social Choice and Welfare*, 30(1), 119–173.
- Bjørnskov, C., Dreher, A., & Fischer, J. A. (2010). Formal institutions and subjective well-being: Revisiting the cross-country evidence. *European Journal of Political Economy*, 26(4), 419–430.

- Boettke, P. J. (1998). Rational choice and human agency in economics and sociology: Exploring the Weber-Austrian connection. In H. Giersch (Ed.), *Merits and limits of markets* (pp. 53–80). Berlin: Springer-Verlag.
- Boudreaux, C. J., Nikolaev, B., & Klein, P. (2019). Socio-cognitive traits and entrepreneurship: The moderating role of economic institutions. *Journal of Business Venturing*, *34*(1), 178–196.
- Bowles, S. (2011). Is liberal society a parasite on tradition? *Philosophy & Public Affairs*, *39*(1), 46–81.
- Bowles, S. (2016). *The moral economy. Why good incentives are no substitute for good citizens*. Yale University Press.
- Bowles, S., & Polania-Reyes, S. (2012). Economic incentives and social preferences: substitutes or complements? *Journal of Economic Literature*, *50*, 368–425.
- Bright, D., Winn, B., & Kanov, J. (2014). Reconsidering virtue: Differences of perspective in virtue ethics and the positive social sciences. *Journal of Business Ethics*, *119*(4), 445–460.
- D'Agostino, A., Grilli, G., & Regoli, A. (2019). The determinants of subjective well-being of young adults in Europe. *Applied Research Quality Life*, *14*, 85–112.
- Dunn, E. W., Aknin, L. B., & Norton, M. I. (2008). Spending money on others promotes happiness. *Science*, *319*(5870), 1687–1688.
- EVS/WVS. (2021). European Values Study and World Values Survey: Joint EVS/WVS 2017–2021 Dataset (Joint EVS/WVS). JD Systems Institute & WVSA. Dataset Version 1.1.0. <https://doi.org/10.14281/18241.14>. <https://www.worldvaluessurvey.org/WVSEVJoint2017.jsp>. Accessed Feb 2022
- Fahey, T., & Smyth, E. (2004). Do subjective indicators measure welfare? Evidence from 33 european societies. *European Societies*, *6*(1), 5–27.
- Fleckenstein, M. P. (2008). Due care theory. In R. W. Kolb (Ed.), *Encyclopedia of Business Ethics and Society*. SAGE Publications.
- Fourcade, M., & Healy, K. (2007). Moral views of market society. *Annual Review of Sociology*, *33*, 285–311.
- Frey, B. S. (2012). A constitution for knaves crowds out civic virtues. *The Economic Journal*, *107*(443), 1043–1053.
- Graafland, J., & Nijhof, A. (2007). Transparency, market operation and trust in the dutch construction industry: An exploratory study. *Construction Management and Economics*, *25*, 195–205.
- Graafland, J. J., & Compen, B. (2015). Economic freedom and life satisfaction: Mediation by income per capita and generalized trust. *Journal of Happiness Studies*, *16*(3), 789–810.
- Graafland, J., & Wells, T. (2020). In Adam Smith's own words: The role of virtues in the relationship between free market economies and societal flourishing, a semantic network data-mining approach. *Journal of Business Ethics*. <https://doi.org/10.1007/s10551-020-04521-5>
- Gropper, D. M., Lawson, R. A., & Thorne, J. T., Jr. (2011). Economic freedom and happiness. *Cato Journal*, *31*, 237–255.
- Gwartney, J., Hall, J., & Lawson, R. (2017). Economic Freedom of the World: 2017 Annual Report. Retrieved April 19, 2018, from <https://www.fraserinstitute.org/studies/economic-freedom-of-the-world-2017-annual-report>
- Haller, M., & Hadler, M. (2006). How social relations and structures can produce happiness and unhappiness: An international comparative analysis. *Social Indicators Research*, *75*, 169–216.
- Hayek, F. A. (1976). *Law, legislation and liberty: A new statement of the principles of justice and political economy* (Vol. 2). Routledge & Kegan Paul.
- Helliwell, J. F. (2003). How's life? Combining individual and national variables to explain subjective well-being. *Economic Modelling*, *20*(2), 331–360.
- Helliwell, J. F., & Putnam, R. D. (2004). The social context of well-being. *Philosophical Transactions-Royal Society of London Series B Biological Sciences*, *359*, 1435–1446.
- Helliwell, J. F. (2006). Well-being, social capital and public policy: What's new? *The Economic Journal*, *116*, C34–C45.
- Helliwell, J. F., & Barrington-Leigh, C. P. (2010). How much is social capital worth? NBER Working Paper Series, No. 16025.
- Helliwell, J. F., Layard, R., & Sachs, J. (Eds.). (2016). *World Happiness Report 2016 Update* (Vol. I). New York: Sustainable Development Solutions Network.
- Hendriks, M., Burger, M., Rijsenbilt, A., Pleeging, E., & Commandeur, H. (2020). Virtuous leadership: A source of employee well-being and trust. *Management Research Review*. <https://doi.org/10.1108/MRR-07-2019-0326>
- Henrich, J., Boyd, R., Bowles, S., Camerer, C., Gintis, H., & McElreath, R. (2001). Cooperation, reciprocity and punishment in fifteen small scale societies. *American Economic Review*, *91*, 73–78.

- Henrich, J., Boyd, R., Bowles, S., Camerer, C. F., Fehr, E., Gintis, H., & McElreath, R., et al. (2004). Overview and synthesis. In Henrich (Ed.), *Foundations of human sociality. Economic experiments and ethnographic evidence from fifteen small-scale societies* (pp. 8–54). Oxford University Press.
- Herzog, L. (2014). Higher and lower virtues in commercial society: Adam Smith and motivation crowding out. *Politics Philosophy and Economics*, 10(4), 370–395.
- Hirschman, A. O. (1982). Rival interpretations of market society: Civilizing, destructive, or feeble? *Journal of Economic Literature*, 20(4), 1463–1484.
- Jen, M. H., Sund, E. R., Johnston, R., & Jones, K. (2010). Trustful societies, trustful individuals, and health: An analysis of self-rated health and social trust using the World Value Survey. *Health & Place*, 16, 1022–1029.
- Katz, R. D., Santman, J., & Lonero, P. (1994). Findings on the revised morally debatable behaviors scale. *The Journal of Psychology*, 128(1), 15–21.
- Knack, S., & Keefer, P. (1997). Does social capital have an economic payoff? A cross-country investigation. *The Quarterly Journal of Economics*, 112(4), 1251–1288.
- Madison, G. B. (1998). Self-interest, communalism, welfarism. In H. Giersch (Ed.), *Merits and limits of markets* (pp. 3–27). Springer-Verlag.
- Mankiw, N. G. (2014). *Principles of economics* (7th ed.). Cengage Learning.
- McCloskey, D. (2006). *The bourgeois virtues*. University of Chicago Press.
- Medema, S. G. (2010). Adam Smith and the Chicago school. In R. B. Emmett (Ed.), *The Elgar companion to the Chicago School of Economics*. Edward Elgar Publishing.
- Moore, G. (2005). Humanizing business: A modern virtue ethics approach. *Business Ethics Quarterly*, 15, 237–255.
- Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58(3), 20–38.
- Nooteboom, B. (2017). *Vertrouwen. Opening naar een veranderende wereld*. Klement.
- Oishi, S., Kesebir, S., & Diener, E. (2011). Income inequality and happiness. *Psychological Science*, 22, 1095–1100.
- Oishi, S., Kushlev, K., & Schimmack, U. (2018). Progressive taxation, income inequality and happiness. *American Psychologist*, 73(2), 157–168.
- Ovaska, T., & Takashima, R. (2006). Economic Policy and the level of self-perceived well-being: An international comparison. *Journal of Socio-Economics*, 35, 308–325.
- Özcan, B., & Bjørnskov, C. (2011). Social trust and human development. *The Journal of Socio-Economics*, 40, 753–762.
- Paganelli, M. P. (2010). The moralizing distance in Adam Smith: The theory of moral sentiments as possible praise of commerce. *History of Political Economy*, 42(3), 425–441.
- Peterson, C., Ruch, W., Beermann, U., Park, N., & Seligman, M. E. P. (2007). Strengths of character, orientations to happiness, and life satisfaction. *The Journal of Positive Psychology*, 2(3), 149–156.
- Peterson, M. F., Arregle, J. L., & Martin, X. (2012). Multilevel models in international business research. *Journal of International Business Studies*, 43(5), 451–457.
- Piao, X., Ma, X., Tsurumi, T., & Managi, S. (2021). Social capital, negative event, life satisfaction and sustainable community: Evidence from 37 countries. *Applied Research Quality Life*. <https://doi.org/10.1007/s11482-021-09955-1>
- Primo, D. M., Jacobsmejer, M. L., & Milyo, J. (2007). Estimating the impact of state policies and institutions with mixed-level data. *State Policy and Policy Quarterly*, 7(4), 446–459.
- Putnam, R. D., Leonardi, R., & Nanetti, R. Y. (1994). *Making democracy work: Civic traditions in modern Italy*. Princeton University Press.
- Putnam, R. (2000). *Bowling alone: The collapse and revival of american community*. Simon and Schuster.
- Rasmussen, D. C. (2006). Does “Bettering our condition” really make us better off? Adam Smith on progress and happiness. *The American Political Science Review*, 100(3), 309–318.
- Rothstein, B. (2000). Trust, social dilemmas, and collective memories. *Journal of Theoretical Politics*, 12, 477–501.
- Rousseau, D. M., Sitkin, S. B., Burt, R. S., & Camerer, C. (1998). Not so different after all: A cross-discipline view of trust. *Academy of Management Review*, 23(3), 393–404.
- Sapsford, R., Tsourapas, G., Abbott, P., & Teti, A. (2019). Corruption, trust, inclusion and cohesion in North Africa and the Middle East. *Applied Research Quality Life*, 14, 1–21.
- Sennet, R. (2000). *The corrosion of character*, transl. M. Blok, Amsterdam: Byblos.
- Shleifer, A. (2004). Does competition destroy ethical behavior? *American Economic Review*, 94(2), 414–418.

- Smith, A. (1759). *The Theory of Moral Sentiments*. Glasgow edition edited by D. D. Raphael & A. L. Macfie. Liberty Fund 1984.
- Smith, A. (1776). *Inquiry into the nature and causes of the wealth of nations*. Glasgow edition edited by R. H. Campbell & A. S. Skinner. Liberty Fund, Indianapolis 1984.
- Smith, A. (1763). *Lectures on justice, policy, revenue and arms*. Clarendon Press.
- Storr, V. H., & Choi, G. S. (2019). *Do markets corrupt our morals?* Palgrave Macmillan.
- Uslaner, E. M. (2002). *The moral foundations of trust*. Cambridge University Press.
- Van Dalen, H. P., & Henkens, K. (2018). The making and breaking of trust in pension providers: An empirical study of pension participants. *The Geneva Papers on Risk and Insurance - Issues and Practice*, 43(3), 473–491.
- Van Esterik-Plasmeijer, P. W. J., & van Raaij, W. F. (2017). Banking system trust, bank trust, and bank loyalty. *International Journal of Bank Marketing*, 35(1), 97–111.
- Veenhoven, R. (2000). Freedom and happiness: A comparative study in forty-four nations in the early 1990s. In E. Diener & E. M. Suh (Eds.), *Culture and subjective well-being* (pp. 257–88). MIT Press.
- Velasquez, M. G. (1998). *Business ethics. Concepts and cases* (4th edition). Prentice Hall.
- Wang, G., & Hackett, R. D. (2016). Conceptualization and measurement of virtuous leadership: Doing well by doing good. *Journal of Business Ethics*, 137(2), 321–345.
- Weaver, G., Treviño, L., & Cochran, P. (1999). Corporate ethics programs as control systems: Influences of executive commitment and environmental factors. *Academy of Management Journal*, 42, 41–57.
- Yeniaras, V., & Akarsu, T. N. (2017). Religiosity and life satisfaction: A multi-dimensional approach. *Journal of Happiness Studies*, 18, 1815–1840.
- Zak, P. J., & Knack, S. (2001). Trust and growth. *The Economic Journal*, 111, 295–321.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.