Tolerance in the United States: How free markets transform racial, religious, and sexual attitudes

Niclas Berggren[a,b], Therese Nilsson[c,a,*]

[a] *Research Institute of Industrial Economics (IFN), Box 55665, SE-102 15 Stockholm, Sweden*

[b] *Department of Institutional Economics, University of Economics in Prague, Winston Churchill Square 4, 130 00 Prague 3, Czech Republic*

[c] *Department of Economics, Lund University, P.O. Box 7082, SE-220 07 Lund, Sweden*

ABSTRACT

Tolerance is a distinguishing feature of Western culture: There is a widespread attitude that people should be allowed to say what they want even if one dislikes the message. Still, the degree of tolerance varies between and within countries, and if one values this kind of attitude, it becomes important to identify its determinants. In this study, we investigate whether the character of economic policy plays a role, by looking at the effect of changes in economic freedom (i.e., lower government expenditures, lower taxes and more modest regulation) on tolerance in one of the most market-oriented countries, the United States. In comparing U.S. states, we find that an increase in the willingness to let atheists and homosexuals speak, keep books in libraries and teach college students is, overall, positively related to preceding increases in economic freedom, especially lower taxes. We suggest, as one explanation, that a greater scope for voluntary transactions and private usage of incomes and wealth creates more meetings that increase understanding for people different than oneself – or at least for the value of letting people different than oneself have their say. In contrast, the positive association for tolerance towards racists only applies to speech and books, not to teaching, which may indicate that when it comes to educating the young, (in)tolerance attitudes towards racists are more fixed.

JEL classification:
P10, P48, Z13

Keywords:
Markets, Economic freedom, Tolerance, Taxation, Government, USA

* Corresponding author. Tel.: +46 46 222 46 43, fax: +46 46 222 41 18.
E-mail addresses: niclas.berggren@ifn.se (N. Berggren), therese.nilsson@nek.lu.se (T. Nilsson).

1. Introduction

Tolerance primarily emerged as a coherent idea in the Western world in the context of religious conflict (Forst, 2012). The idea was that the state should tolerate different Christian beliefs, both to reduce conflict in society and to abstain from using intrusive force in as personal an area as religious belief, which cannot really be determined by force. One of the most prominent advocates of this approach was Locke (1689). He stressed the importance of separating churches from government affairs, so as to avoid civil unrest.[1] Without making a specific connection to religion, Mill (1859) advanced two more general arguments for tolerance: (i) that people will be more content if the government does not favor any particular conception of the good life but let people decide, on the basis of individual experimentation, on their own (as long as they do not harm others); and (ii) that it is fruitful for the pursuit of truth to let people have their say: either it helps identify the truth by identifying errors or it helps those in possession of the truth to better realize why what they believe is indeed true.

Modern research underscores the importance of tolerance for the subjective well-being of people – when they are not hindered in their life plans by legal and social obstacles they experience greater happiness (Inglehart et al., 2013). This may be of special importance for minorities of various kinds: Corneo and Jeanne (2009) point out that smaller groups that differ from the majority in a society might otherwise be discriminated against.

Moreover, tolerance has been shown to entail economic consequences. Florida (2014, p. 200) argues that this generous attitude towards others creates a more dynamic economy:

> The more tolerant a place is, the more welcoming it is to all kinds of people, and the more likely it is to attract the kinds of people who are oriented towards self-expression and openness to experience – which psychological studies show are key characteristics of entrepreneurial behavior.

In a study of U.S. regions, Florida et al. (2008) find that tolerance, as measured by their Gay-Bohemian index (i.e., the concentration of homosexual households and people working in the arts, design and similar occupations) is positively related both to human capital and the share

[1] However, Locke set limits to tolerance: He did not favor it for Catholics or atheists. And it has indeed been the case, also in the West, that intolerance towards various groups has been dominant at times. For example, Davis (2010) shows this to be the case in the American colonies.

of people who belong to "the creative class", and also to both regional wages and income.[2] Cross-country analysis likewise suggests that tolerance is associated with economic growth: Berggren and Elinder (2012a) find that a higher share of people who do not mind having homosexual neighbors relates negatively to growth and that a higher share of people who do not mind having people of a different race as neighbors relates positively to growth in certain circumstances. The authors speculate that the negative finding could possibly be explained by straight homophobes going away or becoming less productive, by homosexuals feeling a reduced need to prove themselves or by a cultural shift, related to this kind of tolerance, towards a more "post-modern" approach to life. It could also be that the result is not causal and that it stems from intolerant countries growing fast and intolerant countries growing slow because of other factors.[3]

Since tolerance clearly has important consequences, it becomes essential to identify its determinants. This study aims at identifying such determinants, with a particular focus on the role of government vs. markets. The question we ask is whether a freer economy, i.e., an economy that has experienced a limitation of government expenditures, lower taxation and more modest regulation, contributes to more or less tolerance.

Why expect a relationship between economic freedom and tolerance? Free markets (within the rule of law) might stimulate tolerance through bringing different types of people together and by having them recognize that they can benefit from voluntary cooperation even with people of other convictions and views about matters such as race, sexual orientation or religion. The same effect can emerge from a vivid civil society, for which people have more resources if taxation is low. Free markets may, however, give room to greed and selfish behavior, and sometimes even exploitation, which can increase suspicion and a dislike of others. As government steps in, through taxation, expenditures and regulation, market freedom is reduced, with an associated reduced effect (whether positive or negative) on tolerance, but the government actions themselves may also affect tolerance. The effect from the fiscal side depends on what government actually does with the resources it collects through taxation and how taxation is perceived. If, for example, government spends a lot on education, this could provide both teaching input and socialization such that tolerance increases. Governments using subsidies and transfers favoring particular interest groups at the

[2] For examples of related studies that reach similar conclusions, see, e.g., McGranahan and Wojan (2007), Boschma and Fritsch (2009) and Florida and Mellander (2010).

[3] This is in fact what is argued by Bornhoff and Lee (2012), but in a response, Berggren and Elinder (2012b) show that their results hold when regional dummies are varied systematically.

expense of others, however, likely breed distrust and intolerance between people. Regulation, furthermore, could increase tolerance if it restricts opportunistic and exploitative behavior; but by restricting certain types of voluntary, cooperative ventures and by stimulating and responding to rent seeking, the effect could be the reverse. If the regulations concern the labor market and result in insiders and outsiders, they could also create cleavages in society, with reduced tolerance.

We investigate what the relationship looks like empirically in the context of 41 continental U.S. states over the time period 1982–2008. We do so by relating medium-term changes in economic freedom to subsequent medium-term changes in tolerance.[4] The variables we use are the index Economic Freedom of North America (EF) in Stansel and McMahon (2013), which measures the size of government, the tax burden and the degree of regulation in each state on ten-point scales, and tolerance measures from the General Social Survey (2014) covering attitudes towards three minorities: racists, atheists and homosexuals.[5] More precisely, we use four measures: The share in each state who say that the minority in questions should be allowed to speak, to have books in libraries and teach college students, as well as the average of these.[6] To give some examples from 2008, Arkansas and Louisiana appear to be the least tolerant states overall, while Minnesota, Delaware and Arizona appear to be the most tolerant. Looking at changes in overall tolerance over 20–25 years, Massachusetts and Oregon have seen the largest decrease, overall, while Kentucky and North Dakota have gone in the opposite direction and seen increased tolerance to a greater extent than other states. Clearly, there are differences in tolerance between states and within states over time.

We recognize that these measures do not necessarily only capture tolerant attitudes in the classical sense of the term, where someone is willing to let something he or she *dislikes* be allowed (socially and legally), but also truly accepting attitudes, where someone is in favor of

[4] Our empirical strategy to examine medium-term changes in tolerance is more data-demanding than a traditional cross-sectional analysis. In the General Social Survey (GSS), there is information containing at least two data points that are six years apart for 41 states (listed in Table A1 in the Appendix).

[5] As for tolerance towards homosexuals, Inglehart and Abramson (1999) regard it as a general indicator of tolerance in a society; cf. Florida (2014, p. 198). As for atheists, Wiseman and Young (2014) find a link, across U.S. states, between the share of non-believers and productive entrepreneurship, suggesting a potential link between tolerance towards atheists and economic growth.

[6] In a similar way the GSS includes information on attitudes towards communists, socialists, revolutionaries and militarists.

letting the minorities in question have their say in society because he or she actually likes them and their message. We consider this broader or "neoclassical" definition of tolerance (see Von Bergen and Bandow, 2009) apt for our purposes. When studying tolerance in a social-science framework the most important thing for the minorities in question is arguably whether they are let into society or not, not if this openness exists in the presence of genuine disapproval or approval. Our measures express the degree to which people in each state are willing to let these three minorities have an equal say, for whatever reason.

The results indicate that more economic freedom generally relates positively to more tolerance towards all three groups: racists, atheists and homosexuals. The more market-oriented a state's economy policy becomes, especially in terms of reducing taxes, but sometimes also by reducing the regulatory burden, the more willing people are to let these minorities into public discourse. It thus seems as if more market-oriented policies, by widening the scope for voluntary interaction and exchange (both in the market and in civil society), by reducing the tensions that may arise from a progressive tax system (if perceived as unfair by some) and by reducing public-sector resources that may have been used to favor some at the expense of others (with ensuing discontent among those who were not favored), are able to generate more positive attitudes towards allowing those who are different from oneself to speak and write.

The only existing study that we are aware of linking economic freedom to tolerance is a cross-country study, Berggren and Nilsson (2013). Their examination of the relationship indicates that it is positive, with tolerance being measured as attitudes to neighbors that are homosexual or of a different race and as a willingness to teach kids tolerance. The biggest effect is for tolerance towards homosexuals. The advantage with our study is that it is conducted with within-country data, which means that we automatically hold constant central institutions and cultural features that differ between countries and which can confound the findings. Interestingly, the two areas that were found to matter the most for tolerance across countries were a high-quality legal system and monetary stability – and by looking at the U.S. states, with a relatively unified legal system and a single monetary policy, we are better able to isolate the role free markets play for the prevalence of tolerant attitudes (over and above these national institutions and policies). As indicated above, we do find a positive effect of lower taxation, which suggests that even when legal quality and monetary stability are high, there is scope for policy measures that affect tolerance.

Other studies of "macro"-determinants of tolerance are few. They include Corneo and Jeanne (2009), who especially find that GDP per capita and becoming a new EU member

affects tolerance towards homosexuals positively. Andersen and Fetner (2008) find a negative effect of income inequality but a positive impact from income on the same type of attitude. Spitz (2004), lastly, posits a connection between the free-trade agreement NAFTA and greater acceptance for same-marriage in the United States, as a consequence of greater interaction and integration with more tolerant Canadians.

There are other less close, but still related, studies. The Economic Freedom of the World index, or some of its areas, have been found to be related to other "social" or cultural variables than tolerance in cross-country studies: Berggren and Jordahl (2006) find that economic freedom associates positively with social trust, and Rode (2011) documents a positive effect on subjective well-being.[7] The Economic Freedom of North America index has been used to study the relationship between free markets and variables such as corruption and income inequality in the context of U.S. states. Aspergis et al. (2012) conclude that economic freedom decreases corruption in the long run, but also note that the relationship seems to be bidirectional. Ashby and Sobel (2008) identify a negative effect of economic freedom on income inequality, which Apergis et al. (2014) also do for the long-term equilibrium case (while also finding signs of a bicausal relationship). Bennett and Vedder (2013) rather find an inverted u-shape between the two variables, with a negative relationship only above a certain level of economic freedom. Hoover et al. (2014) apply a novel perspective and focus on racial income differences. The results suggest that economic freedom increases the income ratio between ethnic groups.

We now turn to theoretical considerations (section 2), before continuing with a presentation of our empirical strategy and data (section 3) and the empirical results (section 4), finally offering some concluding remarks (section 5).

2. Theoretical considerations

Tolerance is a social attitude of openness, even to opinions, characteristics and behavior that one dislikes. We consider how market-oriented policies relate to tolerance of minorities having a say in the public sphere. Theoretically, we see two main links connecting economic freedom and tolerance: one relating to government activities and one relating to market activities.

[7] For a comprehensive summary of studies using this index, see Hall and Lawson (2014).

2.1. Government activities

As for government activities, they are relevant both in themselves and in terms of affecting the scope for and character of non-government activities. As such, governments decide on central issues of concern for how people behave and think through taxation, expenditures and regulation. Let us discuss these in turn.

Regarding *taxation*, we suggest that both its character and level play a role. The character of taxation can have a direct effect on tolerance. As outlined by Buchanan and Congleton (1998), much policymaking, not least taxation, is characterized by non-generality, by people being treated differently. For example, some pay a higher tax-rate on their incomes than others; income and capital owners are taxed differently; and certain sectors face lower sales-tax or VAT rates than others, etc. There might, of course, be good efficiency or equity arguments for such unequal treatment, but they can nevertheless be perceived as favoring some at the expense of others, especially if they stem from special-interest capture, and this can create tension among people and a reduced willingness to tolerate views one dislikes. The level of taxation can be expected to affect tolerance by deciding how available resources are divided between the private and public sectors – and if government activities tend to decrease tolerance and private activities to increase it, this implies that less taxation brings about more tolerance (or vice versa). That is, the taxation level works as a "scale factor".

Regarding *expenditures*, they can also affect tolerance through their character and level. As for their character, some types of expenditures can be expected to increase tolerance, maybe especially education, which can foster an open attitude towards others through teaching and social interaction, and certain social expenditures that reduce inequality. In some cases, the government also uses its resources for propaganda in the direction of tolerance, which might pay off. However, if expenditures are perceived to distributed in a way that benefits some at the expense of others, this can cause feelings of conflict to arise. Again, if special interests manage to secure benefits to which they are not thought to be entitled, this can lead to a dislike of minority groups in society and reduce the willingness to understand others. As for the level, we have a scaling effect here as well: If more of the budget is allocated to measures that increase tolerance, tolerance increases even more, and vice versa.

Regarding *regulation*, it can matter in two ways as well: through its character and through its level. If the character of regulation is such as to remove barriers to entry and to increase competition, or if it is perceived as "taming" market forces that could otherwise be

exploitative or opportunistic, it can contribute to markets working in a way that benefit people in general – which, for reasons mentioned below, can be expected to increase tolerance. However, if regulation is based, not on common-interest considerations but on special-interest concerns, it can favor certain companies at the expense of others and be thought to introduce unfair rules of the game, with discontent and tension as a result from those who were not favored.

In the cases of a negative influence of government activity, it need not, we posit, be the particular groups towards which tolerance is extended that are directly involved in shaping or receiving the specific benefits of policy: Rather, a perception of unfairness can create a *general* sensation of suspicion and distrust between people and groups.[8]

2.2. Market activities

As for market activities, there is a long, not least Marxian tradition of telling a pessimistic story about them. Some elements of this story, such as markets giving rise to exploitation, economic inequality and selfishness (Hirschman, 1982; Casebeer, 2008), can be related to social attitudes like tolerance. If workers experience *maltreatment* and unfavorable conditions (maybe even unemployment), this can create hostility towards "capitalists" and possibly towards society at large. *Inequality* has been linked to low social trust (Jordahl, 2009) – economic differences tend to create a feeling of distance and, sometimes, unfairness – and since it seems as if markets' ability to generate tolerance is increasing in social trust (Berggren and Nilsson, 2014), this might have a dampening effect on the presence of tolerance. *Selfishness* implies, by definition, that one cares for oneself and not for others, which might entail not caring for the right of others to say what they want. At the very least, this could mean weaker support for tolerance. Experimental evidence suggests that monetary incentives (typical of markets) at times crowd out altruistic sentiments and that the "minimalist" character of markets shapes norms and behavior: One can (learn) to interact with others in a shallow manner without deeper bonds, and mechanisms to ensure "nice" behavior, such as retaliation and reputation, may not work well (Bowles, 1998). On the one hand, a less altruistic orientation could mean a lesser concern for the rights of others to have their say in

[8] See Kumlin and Rothstein (2005) for a similar idea in the context of welfare policy and social trust: How government officials (are perceived to) treat people generalizes into social attitudes. If the policy is universal, it has beneficial consequences; if it is non-general and means-tested, it tends to work in the other direction.

society; and "not-so-nice" behavior can induce people to generalize that others different from oneself, and about whom one knows little, are prone to try to hurt you, which can also reduce tolerance for differences.

However, there are other theories of a more optimistic kind that stress the ability of markets to bring about virtuous behavior and, not least, social attitudes like tolerance. Thomas Paine (1792, p. 215) was an early proponent of such a view:

> [Commerce] is a pacific system, operating to cordialise mankind, by rendering Nations, as well as individuals, useful to each other. … The invention of commerce … is the greatest approach towards universal civilization that has yet been made by any means not immediately flowing from moral principles.

That is, people enter into voluntary and peaceful arrangements with others in order to exchange resources, as they realize that this is mutually beneficial, and this not only reflects but also sustains a culture of cooperation. As Casebeer (2008) notes, such environments afford opportunities for virtues to develop through practice in the form of repeated interactions with others. And positive experiences of dealing with others could increase tolerance: Those who are different are not seen as threating but able to co-exist with and also contribute to higher well-being for you.

There is, indeed, some support for market integration being able to shape social attitudes in a pro-social way. Heinrich et al. (2001) find that the higher the degree of market integration, the greater the likelihood of cooperation and making fair offers to strangers. Heinrich et al. (2010) similarly show experimentally how engagement in markets sustains fairness in exchange. Huck et al. (2012) report experimental results that an ability to build a reputation, coupled with competitiveness (the ability to choose with whom to interact), is conducive to trust (which in turn, as noted, is conducive to tolerance). Hoffman and Morgan (2015) find that workers in industries with "cutthroat" competition in fact are more pro-social – in the sense of exhibiting more altruism, trust, trustworthiness and honesty – than student subjects. They theorize that in industries with anonymity, high stakes and competitiveness, it is difficult to solve the trust problem with formal mechanisms, so individuals must rely on a variety of informal mechanisms. Pro-social individuals can more easily sustain trust, and hence prosper, in these situations. Bartling et al. (2015) find evidence from Switzerland that many consumers and firms wish to avoid a negative social impact in the market. This

behavior is generally robust to varying market characteristics, such as increased seller competition and limited consumer information.

It bears noting that what is meant by "market activities" varies quite a bit. On the one hand, one may have in mind the stylized idea of markets from microeconomic textbooks with perfect competition, where transactions are of a fast, one-shot nature, where anonymity reigns between economic actors and where entry and exit is costless. On the other hand, one may think of thick, deep personalized settings, characterized by repeated dealings with different kinds of people, some of whom one knows well, some of whom one may know a little about and some of whom are new acquaintances, and where people, due to transaction costs, tend to develop and deepen relations with others.[9] Given the opposing predictions discussed above, it is important to clarify that the effects of markets on tolerance need not be the same for both of these cases. Bowles (1998) argues that the former type of setting can give rise to and sustain behavior that is not socially pleasing. We grant that this is a possibility, but on the one hand, the risk for this should be smaller in the second type of setting, and on the other hand, even in an idealized competitive economy of anonymous, ephemeral and costless transactions, two aspects of market interaction may nevertheless stimulate (or at least work towards not reducing) tolerance (broadly in line with the experimental results reported above).

First, selfishness was identified above as a possible consequence of market interaction, the idea being that ephemeral interaction based on shallow relations and a concern for bettering one's own condition, first and foremost, reinforces a tendency to not care about others. However, it is not clear that this reduces tolerance. Tolerance need not be based on a genuine concern for others: in fact, the classical meaning of the term indicates that it is not. It is an attitude of non-interference, which may lie very close to simply not caring for others (one way or the other). If I do not care, I do not want to stop others from having their say. Hence, if markets give rise to selfishness (which in itself is not clear), this can arguably go hand in hand with tolerance. Second, markets of the perfect-competition etc. kind are characterized by freedom and strict individualism or atomism. The agent sees that such an abstract, free system works in an ordered manner (given the rule of law) and that it brings benefits to those who operate in it. Through generalization, agents may very well think that "the market of ideas" can work in a similar way and give rise to positive consequences: People of different persuasions and kinds come together and have their say, and this could

[9] As argued by Klein (1997, 2000), in this type of setting reputation and assurance mechanisms are both demanded and supplied in order to ensure "nice" behavior.

give rise to more correct knowledge and better understanding of why we think what we think (cf. Mill, 1859). If freedom works in one situation, it may very well be taken to hold in another.[10] (And if economic agents, perhaps when they were in business school, read Coase, 1974, such a perceived link between markets for goods and services, on the one hand, and markets for ideas, on the other, is even more probable.)

Two further reasons for a positive link between the degree to which an economy is market-oriented and tolerance can be proffered. First, the profit motive can induce people in competitive sectors to tolerate those who are different. Even though "deep", personal tolerance may be lacking, a manager or company owner realizes that if he rejects people on the basis of characteristics or views that are not related to productivity, competing firms gain a competitive advantage, which may in the end lead to the demise of the company. Likewise, consumers would suffer utility losses if they were to reject better offers of goods and services solely because the companies making the offers were represented by people of a certain race, creed, sexual orientation or the like. Second, if people are less dependent on government, they will feel it particularly important to equip their children for life in a market economy, which builds on meeting approval from others. For reasons outlined by, e.g., Corneo and Jeanne (2009), instilling tolerance may be seen as an insurance mechanism when it is uncertain who turns out to belong to what minority. A tolerant culture entails openness to those who grow up, even if they deviate from the mainstream.

Lastly, whatever the social consequences of market activities, in our case their effect on tolerance, their prevalence can roughly be thought to stand in an inverse relation to the prevalence of government activities.[11] The more resources the government has at its disposal, and the more the government dictates about how resources are to be used, the fewer the resources available for free use by private actors. In other words, the higher the degree of

[10] Bowles (1998, p. 80): "However acquired, preferences are internalized: there is considerable evidence that preferences learned under one set of circumstances become generalized reasons for behavior. Thus economic institutions may induce specific behaviors – self-regarding, opportunistic, or cooperative, say – which then become part of the behavioral repertoire of the individual."

[11] This is, of course, a simplification, since (i) governments generally provide institutions that are prerequisites for markets to work and (ii) since governments are sometimes able to improve the way markets work, e.g., through regulation. However, if we talk about government activities over and above the size at which it provides this essential "infrastructure" for markets, and if we talk about the short and medium term, the reasoning should hold reasonably well.

economic freedom (or the smaller the government), the greater the scope for voluntary interaction between people and the effects this interaction gives rise to.

2.3. Summary

To summarize, on theoretical grounds it is clear that one can expect economic freedom to affect tolerance: What government does and how it does it, as well as the scope for voluntary, commercial exchange through which people meet and form attitudes towards others who are different, should contribute to forming attitudes towards others. But the ways in which economic freedom works in this area are manifold and go in different directions, which justifies an empirical analysis to shed light on what the net effect is.

3. Empirical strategy and data

3.1. Empirical strategy

In order to test whether and in what way economic freedom relates to tolerance, we specify an empirical model of the following kind:

$$\Delta Tolerance_{ij} = \alpha + \beta_1(\Delta EF_{kj}) + \beta_2(\boldsymbol{X}_j) + \varepsilon_j \qquad (1)$$

where $\Delta Tolerance_{ij}$ denotes the change in tolerance *i* (where *i* = racists, atheists, homosexuals, average) in state *j* between period t and t+6, ΔEF_{kj} denotes the change in economic freedom *k* (where *k* = size of government, takings and discriminatory taxation, regulation, average) in state *j* during a preceding period, between t and t-6, and where $\boldsymbol{X}_j$ denotes the levels of the control variables at t in state *j*.

The analysis is carried out on the state level in the United States for 41 states using data over the period 1982–2008, where t = 1988, 1994, 2002.[12] Fig. 1 illustrates the timing of the variables. To exemplify, let t = 2002. The change in tolerance is calculated using GSS

[12] Due to GSS data availability we use t = 1994 rather than t = 1995. The change in economic freedom is still predating the change in tolerance in the same manner as described above. An alternative for the last time period would be to stop at the year 2000, to get even time periods, but we then lose a number of observations, and we therefore prefer to end the last period in 2002.

data in 2002 and in 2008, while the change in economic freedom is calculated using information in 1996 and in 2002. All additional control variables have values from 2002.

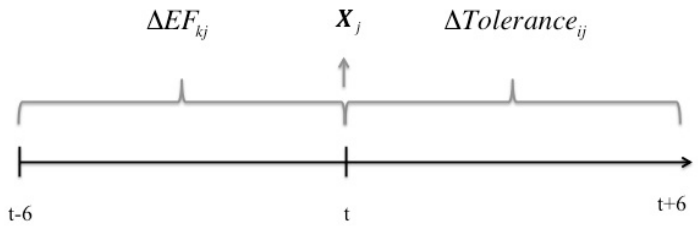

Fig. 1. The timing of the variables

The reason we use changes rather than levels, and changes over fairly long time periods, is that we consider an influence of economic freedom on cultural variables, such as tolerance, as the result of medium-term processes. For policy changes to have an effect, they need to be in place over some period of time such that people adapt their thinking and behavior and have time to be affected by new experiences. By having the change in economic freedom predate the change in tolerance, we also reduce the risk that our results capture an influence from tolerance on economic freedom.

3.2. Data

Our outcomes variables measure changes in tolerance. There are four of them altogether, based on nine survey questions in the GSS:

- *Tolerance racists*: The average of the change (in percentage points) in these three shares in each included U.S. state:
    - The share that replies "Allowed" to the question "Consider a person who believes that Blacks are genetically inferior. If such a person wanted to make a speech in you community claiming that Blacks are inferior, should he be allowed to speak, or not?".
    - The share that replies "Not remove" to the question "If some people in your community suggested a book he wrote which said that Blacks are inferior should be taken out of your public library, would you favor removing this book, or not?".

    - The share that replies “Allowed” to the question “Should a racist be allowed to” and “Should a racist be allowed to teach in a college or university, or not?”.
- *Tolerance homosexuals*: The average of the change (in percentage points) in these three shares in each included U.S. state:
    - The share that replies “Allowed” to the question “What about a man who admits that he is a homosexual. Suppose this admitted homosexual wanted to make a speech in your community. Should he be allowed to speak, or not?”.
    - The share that replies “Not remove” to the question “If some people in your community suggested that a book he wrote in favor of homosexuality should be taken out of your public library, would you favor removing this book, or not?”.
    - The share that replies “Allowed” to the question “Should a homosexual be allowed to teach in a college or university, or not?”.
- *Tolerance atheists:* The average of the change (in percentage points) in these three shares in each included U.S. state:
    - The share that replies “Allowed” to the question “There are always some people whose ideas are considered bad or dangerous by other people. For instance, somebody who is against all churches and religion. If such a person wanted to make a speech in your (city/town/community) against churches and religion, should he be allowed to speak, or not?”.
    - The share that replies “Not remove” to the question “If some people in your community suggested that a book he wrote against churches and religion should be taken out of your public library, would you favor removing this book, or not?”.
    - The share that replies “Allowed” to the question “There are always some people whose ideas are considered bad or dangerous by other people. For instance, somebody who is against all churches and religion. Should such a person be allowed to teach in a college or university, or not?”.
- *Tolerance:* The average of *Tolerance racists, Tolerance homosexuals* and *Tolerance atheists.*

These tolerance measures are chosen since they are clean, in the sense that the answers reveal a person’s attitude towards the minority in question without introducing other considerations;

since they conform to classical situations of tolerance, where the right of minorities to express their views is concerned; and since there is reasonable variation in the data.

Our main explanatory variables are the changes in four measures of economic freedom, measured for each of the included U.S. states by Stansel and McMahon (2013): *Size of government* (EF1), *Takings and discriminatory taxation* (EF2), *Regulation* (EF3) and *Economic Freedom* (EF), the last measure being the average of EF1, EF2 and EF3. The precise construction of these measures is described in Table A2 in the Appendix. They capture different aspects of the degree to which government and market activities respectively characterize an economy. The less the government intervenes in the economy, the more economic freedom. Note that central institutions and policies that are part of economic freedom on the country level, such as the rule of law, monetary policy and trade policy, are generally determined and apply federally in the United States, which means that the aspects of economic freedom that are captured by our measures are characterizations of policies that can and do vary by state. To the extent that, say, the rule of law varies by state, this is not included in our measures.

A first-difference analysis bundles time-invariant state characteristics into an error component and estimates the relationship between changes in economic freedom and changes in tolerance in a way that is robust to unobserved heterogeneity with respect to factors that are constant over time at the state level. However, since some matters vary over time, we make use of a set of control variables, chosen both because they have been shown to matter in previous studies on the determinants of tolerance and because we consider them potentially important on theoretical grounds. We include the values at time t of (depending on model specification): tolerance, real GDP per capita, education levels (more specifically, the share with less than high school education as the reference group, the share of high school graduates, the share of those with some college and the share of those with a college degree), the age structure (more specifically, the share of the population younger than 25 as the reference group, the share aged 25–44, the share aged 45–64 and the share older than 64), the shares of blacks and Hispanics, the Gini coefficient (to measure income inequality), religiosity (more specifically, the share attending religious services once every week or more), whether the governor is a Democrat (dummy variable), the Republican vote share in the presidential election, and the share of unemployed. We also include dummy variables for geographical regions within the United States (Alaska as the reference group, the Midwest, the North, the South and the West). Table A3 in the Appendix presents all variables, their sources and descriptive statistics.

Some of the controls, inequality and real GDP per capita in particular, may serve as potential mediators, i.e., as factors that are influenced by changes in economic freedom. Including a mediator in the specification reduces the estimated effect of changes in economic freedom on changes in tolerance, which implies that we get a conservative estimate – the "real" effect is larger than first meets the eye.

4. Results

4.1. Main results

We first present the results of our main model specification in Table 1. We begin with a parsimonious baseline specification and then keep the sample fixed when gradually increasing the number of controls to make sure that the results are not driven by what states are included. Table 1 presents the baseline results focusing on changes in average economic freedom, with changes in average tolerance as the dependent variable.

Table 1
Economic freedom and tolerance

	(1) ΔTolerance	(2) ΔTolerance	(3) ΔTolerance	(4) ΔTolerance	(5) ΔTolerance	(6) ΔTolerance
ΔEF	0.050	0.075*	0.094**	0.092**	0.095**	0.090*
	[0.037]	[0.039]	[0.037]	[0.044]	[0.046]	[0.049]
Tolerance	-1.197***	-1.716***	-1.950***	-1.957***	-1.958***	-1.984***
	[0.239]	[0.248]	[0.271]	[0.265]	[0.266]	[0.254]
Real GDP per capita	0.219*	-0.119	0.264	0.243	0.243	0.134
	[0.114]	[0.126]	[0.161]	[0.184]	[0.186]	[0.224]
High school		1.917***	2.033***	2.156**	2.207**	1.911*
		[0.689]	[0.635]	[0.899]	[0.993]	[1.046]
Some college		1.721***	2.264***	2.282***	2.311***	2.117**
		[0.492]	[0.492]	[0.688]	[0.703]	[1.003]
College degree		3.360***	2.984***	3.020***	3.039***	2.984***
		[0.840]	[0.845]	[0.930]	[0.953]	[0.923]
Age 25-44			2.083	2.170	2.254	4.084*
			[1.956]	[1.987]	[2.120]	[2.325]
Age 45-64			-4.599**	-4.356*	-4.437*	-2.085
			[2.138]	[2.516]	[2.558]	[2.997]
65+			2.255**	2.199**	2.229**	2.689*
			[1.059]	[1.061]	[1.047]	[1.478]
Blacks				0.015	0.003	0.028
				[0.371]	[0.386]	[0.433]
Hispanics				0.108	0.084	0.360
				[0.304]	[0.328]	[0.354]
Gini					0.138	0.195
					[0.896]	[0.900]
Midwest						0.041
						[0.129]
North						-0.083
						[0.178]
South						-0.054
						[0.167]
West						-0.086
						[0.137]
Constant	-1.380	0.534	-3.274*	-3.190*	-3.282*	-3.108
	[1.130]	[1.237]	[1.734]	[1.685]	[1.759]	[2.056]
Observations	101	101	101	101	101	101
Adjusted R^2	0.276	0.411	0.504	0.494	0.488	0.488

Notes: Robust standard errors in brackets.
*** p<0.01, ** p<0.05, * p<0.1

As can be seen, increasing economic freedom in a preceding period positively correlates, in a statistically significant way, with increases in overall tolerance. The association remains significant and increases in magnitude when successively adding groups of control variables.

Looking at the control variables, a higher level of tolerance in a state comes with a smaller change in tolerance over each six-year period. Education is an important predictor of the development of tolerance, but there seems to be a non-linear relationship between

demographic structure and changes in tolerance: While a larger share of the population older than 65 years in relation to the population aged 25–44 is associated with larger increases in tolerance across states, a relatively larger middle-age population appears to reduce tolerance. Notably, neither ethnicity, GDP per capita nor income inequality seems to matter in a statistically significant way; the same goes for the regions.

Table 2 presents the baseline results when examining each tolerance measure separately. Interestingly, the findings suggest varying effects from changes in government involvement in economic life on changes in tolerance. While increases in tolerance towards homosexuals and atheists are positively related to preceding increases in economic freedom, there is no such statistically significant relationship for tolerance towards racists. The latter kind thus seems unaffected by the size and character of government activities and by the scope of market activities.

What could explain this? When we decompose tolerance towards racists, we find that increases in two of the three types of tolerance – relating to giving a speech and keeping a book in the library – actually *are* positively related to previous increases in economic freedom. It is the absence of an increase in tolerance towards racists teaching college students, as a result of more economic freedom, that drives the "zero" estimate in Table 2. We speculate that racism is considered an especially intolerable phenomenon in the context of education and that most people's positions are therefore not affected by either changes in economic freedom or the related changes in the scope of market activities.

The explanatory power is quite different depending on the type of tolerance studied, and more control variables are statistically significant in models for two of them. While the chosen specifications seem to do a fair job in modeling tolerance towards homosexuals and atheists, adjusted R^2 value is significantly lower when modeling tolerance of racists (0.18 compared to about 0.55 for the other two measures), indicating that effects on changes in social attitudes may be quite different from each other and not necessarily have identical determinants. Still, the overall results suggest a great potential for more economic freedom to increase tolerance towards certain minorities.

In order to make more precise what elements of economic freedom that contribute to increased tolerance in U.S. states and get a deeper understanding of baseline findings, we also estimate the same model as before, except we replace the average measure of economic freedom with the three areas EF1, EF2 and EF3. Table 3 presents the estimated coefficients of the economic freedom areas, without reporting, for reasons of space, the findings for the control variables. The results suggest that the area of particular importance is lower taxes

(EF2), which positively and significantly relates to increased tolerance towards homosexuals and atheists in the subsequent time period. A decrease in EF1 (i.e., an increase in government size) relates positively to tolerance towards racists and atheists in a number of specifications, but the relationship loses significance when taking regional fixed effects into account.

To see whether the influence of a particular area of economic freedom on tolerance holds when controlling for the other areas of freedom we also include EF1, EF2 and EF3 in the same specification (column 4). Once again it becomes evident that reducing takings and discriminatory taxation correlates with an increase in tolerance towards homosexuals and atheists. However, we also note that larger government (lower EF1) is associated with greater tolerance towards racists.

As mentioned briefly already, the three measures *Tolerance racists*, *Tolerance homosexuals* and *Tolerance atheists* can be disaggregated into three "freedoms": to speak, to write and to teach. In order to further examine our baseline findings we also run separate regressions using each of these components as the dependent variable. The more detailed picture that emerges is largely consistent with the baseline story: An increase in the willingness to let racists, atheists and homosexuals speak and keep books in libraries is positively related to preceding increases in economic freedom, especially lower taxes. The same relationship holds for the willingness to let homosexuals and atheists teach college students, but not for having racists teaching a younger generation. A reduction in government size also correlates positively and significantly with an increase in tolerance towards atheists being college teachers.[13]

[13] These results are available from the authors upon request.

Table 2
Economic freedom and tolerance towards racists, homosexuals and atheists

	(1) ΔTolerance raciststs	(2) ΔTolerance raciststs	(3) ΔTolerance raciststs	(4) ΔTolerance raciststs	(5) ΔTolerance homosexuals	(6) ΔTolerance homosexuals	(7) ΔTolerance homosexuals	(8) ΔTolerance homosexuals	(9) ΔTolerance atheists	(10) ΔTolerance atheists	(11) ΔTolerance atheists	(12) ΔTolerance atheists
ΔEF	0.006	0.007	0.000	0.001	0.025	0.040**	0.048**	0.048*	0.029	0.064***	0.067***	0.067***
	[0.006]	[0.008]	[0.011]	[0.012]	[0.018]	[0.018]	[0.024]	[0.025]	[0.021]	[0.019]	[0.022]	[0.024]
Tolerance	-0.061	-0.111**	-0.096**	-0.092**	-0.639***	-0.929***	-0.961***	-0.992***	-0.658***	-1.042***	-1.042***	-1.039***
	[0.051]	[0.045]	[0.043]	[0.044]	[0.150]	[0.150]	[0.140]	[0.138]	[0.096]	[0.083]	[0.084]	[0.079]
Real GDP per capita	0.037	0.137***	0.172***	0.177***	0.146**	0.164**	0.117	0.082	0.189***	0.145*	0.148	0.134
	[0.024]	[0.046]	[0.046]	[0.059]	[0.063]	[0.075]	[0.087]	[0.106]	[0.065]	[0.082]	[0.091]	[0.123]
High school		0.267	-0.100	-0.076		0.950**	1.563***	1.460**		1.237***	1.261***	1.222**
		[0.163]	[0.240]	[0.246]		[0.366]	[0.562]	[0.580]		[0.307]	[0.442]	[0.476]
Some college		0.123	-0.010	-0.019		1.041***	1.404***	1.495**		1.554***	1.620***	1.624***
		[0.158]	[0.209]	[0.256]		[0.289]	[0.423]	[0.573]		[0.271]	[0.361]	[0.532]
College degree		0.043	-0.081	-0.046		1.421***	1.711***	1.646***		2.016***	2.051***	2.024***
		[0.161]	[0.192]	[0.191]		[0.432]	[0.499]	[0.485]		[0.311]	[0.331]	[0.342]
Age 25-44		-0.097	-0.538	-0.704		1.223	1.648	2.232*		0.312	0.320	0.853
		[0.503]	[0.531]	[0.621]		[1.043]	[1.069]	[1.171]		[0.946]	[1.005]	[1.226]
Age 45-64		-1.720***	-1.792**	-1.969**		-1.889	-1.754	-1.024		-2.717***	-2.840**	-2.302
		[0.631]	[0.714]	[0.849]		[1.177]	[1.373]	[1.574]		[1.029]	[1.221]	[1.649]
65+		0.076	0.052	0.246		1.327**	1.439**	1.207*		1.171*	1.234*	1.060
		[0.326]	[0.309]	[0.315]		[0.567]	[0.556]	[0.659]		[0.652]	[0.666]	[0.856]
Blacks			0.018	0.022			0.161	0.224			0.036	-0.004
			[0.097]	[0.115]			[0.198]	[0.239]			[0.182]	[0.211]
Hispanics			-0.072	-0.088			0.218	0.298			-0.030	0.046
			[0.090]	[0.107]			[0.162]	[0.182]			[0.160]	[0.191]
Gini			-0.499*	-0.507*			0.302	0.299			0.017	0.021
			[0.261]	[0.269]			[0.479]	[0.491]			[0.458]	[0.465]
Midwest				-0.085***				0.118**				0.135**
				[0.028]				[0.058]				[0.068]
North				-0.074*				0.093				0.092
				[0.040]				[0.081]				[0.088]
South				-0.071*				0.066				0.111
				[0.039]				[0.077]				[0.089]
West				-0.067*				0.064				0.083
				[0.036]				[0.064]				[0.077]

Constant	-0.339	-1.092**	-0.895*	-0.828	-0.987*	-2.017**	-2.222**	-2.213**	-1.474**	-1.727**	-1.787**	-1.988*
	[0.239]	[0.449]	[0.451]	[0.533]	[0.583]	[0.862]	[0.943]	[1.080]	[0.645]	[0.836]	[0.865]	[1.056]
Observations	101	101	101	101	101	101	101	101	101	101	101	101
Adjusted R^2	0.001	0.134	0.176	0.169	0.380	0.549	0.552	0.551	0.334	0.582	0.569	0.567

Notes: Robust standard errors in brackets.
*** p<0.01, ** p<0.05, * p<0.1

Table 3
Areas of economic freedom and dimensions of tolerance

	(1) ΔTolerance	(2) ΔTolerance	(3) ΔTolerance	(4) ΔTolerance
ΔEF1	0.031			-0.005
	[0.056]			[0.076]
ΔEF2		0.054**		0.058**
		[0.023]		[0.024]
ΔEF3			0.044	-0.023
			[0.077]	[0.098]
	ΔTolerance racists	ΔTolerance racists	ΔTolerance racists	ΔTolerance racists
ΔEF1	0.021			0.038*
	[0.013]			[0.022]
ΔEF2		-0.005		-0.010
		[0.006]		[0.006]
ΔEF3			0.009	-0.015
			[0.019]	[0.033]
	ΔTolerance homosexuals	ΔTolerance homosexuals	ΔTolerance homosexuals	ΔTolerance homosexuals
ΔEF1	0.007			-0.007
	[0.027]			[0.039]
ΔEF2		0.031**		0.036***
		[0.012]		[0.012]
ΔEF3			0.009	-0.031
			[0.042]	[0.055]
	ΔTolerance atheists	ΔTolerance atheists	ΔTolerance atheists	ΔTolerance atheists
ΔEF1	0.034			0.005
	[0.029]			[0.039]
ΔEF2		0.040***		0.040***
		[0.012]		[0.013]
ΔEF3			0.047	-0.008
			[0.040]	[0.051]

Notes: All regressions include all baseline controls and geographical dummy variables. Robust standard errors in brackets.
*** p<0.01, ** p<0.05, * p<0.1

4.2. Extended analysis

In order to further investigate the robustness of the main findings, we conduct several sensitivity analyses. For reasons of space, we only report the results verbally, but they are all available in numerical form upon request from the authors.

First, one concern is that the identified association may not be really causal but rather the result of underlying cultural change. For example, one can imagine that conservatism in the United States comes with both a desire to increase economic freedom and intolerance, causing both to correlate. However, if this were the explanation, we would expect a negative sign, not a positive sign. To check this potential explanation further, we add "ideological"

control variables (religiosity, two political measures – the share of votes in the presidential election for the Republican candidate, and whether the governor in the state is a Democrat – and a dummy for whether there is a right to work without being a member of a union, a proxy for right-wing ideology) in order to see if the results stand even if these cultural/political variables are included. It turns out that religiosity is only significant when analyzing the relationship with tolerance towards racists. A higher share of people regularly attending religious services correlates with less tolerance toward this group. Regarding the political variables, they are generally insignificant. Once again the exception is in the case of tolerance towards racists, where a higher share of votes for the Republican candidate in the presidential election correlates with a negative change in tolerance. Importantly, the inclusion of the religiosity variable and the political measures do not have any quantitative effect on the economic freedom estimates in any the baseline regressions. Lastly, we include a dummy for state legislation that guarantees a right to work without being a union member. As noted by Bjørnskov and Potrafke (2013), this measure proxies political ideology such that governors' ideological position is significantly more right-wing in states with such legislation. The right-to-work dummy is never significant in any of our specifications, and the inclusion of the variable does not change our baseline findings. Hence, we consider it improbable that our general results are driven by some underlying political-ideological factor.

Second, we run a test for multicollinearity. Examining the variance inflation factor (VIF) suggests no incidence of multicollinearity: Reassuringly, all individual figures are below the critical value of 10 (Kutner et al., 2004).

Third, we conduct an outlier check and exclude tolerance and economic-freedom observations (all measures) that deviate more than two standard deviations from the sample mean. This exercise reduces the sample by up to eight observations. The results suggest that baseline findings are not driven by extreme values. Similarly, our baseline findings are robust to the exclusion of New York.

Fourth, we test if our results are driven by sample size. Following a rule of thumb one should not include more explanatory variables than 1/3 of the sample, since this could inflate the estimates. According to such a rule we would not have to worry, but as a robustness test we see what happens when we deviate from the empirical approach presented above, where we use three six-year periods strictly, and rather allow six-year periods to overlap. In other words, we keep the lagged structure with changes in economic freedom predating changes in tolerance in the same way as above, but let t = 1989, 1990, …, 2002, 2003, which gives us a "moving" change in economic freedom and tolerance. This strategy gives a sample of 264

observations, a substantial increase. The results are very similar to our baseline findings, with economic freedom relating positively to tolerance towards homosexuals and atheists, and with EF2 being the main driver.[14]

Fifth, we include unemployment as an explanatory variable. Following the discussion above, unfavorable conditions and high unemployment could potentially generate societal tension and hostility. As predicted the unemployment estimate is negative, but it is never significant in any of the models. Heller and Stephenson (2014) find that economic freedom is associated with lower unemployment, but labor market conditions are apparently not a mediator in the relationship with tolerance.

To conclude, we find that the results hold up quite well to scrutiny: More economic freedom does seem able to foster tolerance.

5. Concluding remarks

There is an ongoing discussion, with old roots, about the nature of markets – not least their wider social consequences. While there are numerous skeptics, with Marxian and similar underpinnings, who decry markets for bringing about inequality, strife and conflict, research in recent years indicates that markets, under certain conditions, are able to contribute to valuable cultural features of society, such as social trust and tolerance. It is indeed important to find out how people can live together in reasonable harmony in spite of having different opinions and characteristics and how the dominant economic system, that of capitalism, works in this regard.

This study is the first, to our knowledge, to look at whether changes in the character of economic policy can bring about more tolerance in America, one of the most market-oriented societies in the world. More precisely, the question is whether lower government expenditures, lower and less discriminatory taxation and more limited regulation of economic life – i.e., more economic freedom – contribute to more tolerant attitudes towards racists, homosexuals and atheists in the context of U.S. states. This is usually not part of the kind of factors that, in

[14] To some extent the approach to gradually include sets of control variables into the specification also reassures us that our results are not driven by a small sample size in relation to the number of controls. As can be seen in Table 1 and Table 2, there are no cases where only the specification including the full set of controls is significant.

the public debate, are connected to tolerance, but we suggest there are reasons to think that there is a relationship.

Why so? Economic freedom is a way to describe the size and character of government activities in the economy – and, conversely, the space allotted to markets. Both government and markets can affect social attitudes like tolerance.

As for the government, it might be able to boost tolerance if more of its expenditures are used for tolerance-inducing activities, e.g., education. However, if more resources are instead used to benefit some at the expense of others, this could create tension between groups and reduce tolerance. Taxation could also reduce tolerance if it is perceived to be discriminatory in its design. Tougher regulation could increase tolerance if it makes the market process work better (by making it difficult for companies to take advantage of consumers); but it could have the opposite effect if it hinders the market process, especially if some are regulated more heavily than others. And the larger the expenditures and taxes, and the more interventionist the regulations, the larger the size of these effects.

As for market activities, what one predicts about effects on tolerance depends on how one perceives the market. If one regards it as a big, impersonal, atavistic, anonymous and ephemeral clearing mechanism, social mechanisms that discipline behavior may not be forthcoming. Opportunism pays, with ensuing social distance. But a more positive view emerges if most of market activities are rooted in personalized and repeated interaction. If so, the experience of exchange with friends and strangers may give rise to the realization that most people are of good will and trustworthy, which can foster a feeling of understanding and respect. To this one can add an egoistic motive: If one wants to flourish in a competitive economy, tolerance towards people who are different is probably a virtue, and companies that employ discriminatory practices not rooted in productivity concerns can be expected, over time, to perish.

Using survey-based measures of tolerance – the shares of people who tolerate racists, homosexuals and atheists to speak in public, keep books in the library and teach college students – and the Economic Freedom of North America index – measuring the size and type of government expenditures, taxation and regulation – we conduct an empirical analysis to see what the "net" sign of the relationship is. An advantage of this within-country setting is that we effectively control for cultural and institutional features that are identical across states and thereby more precisely estimate the effects of market-oriented policies. Our findings indicate a positive relationship – especially we find that the share of the population who are tolerant tend to increase if economic freedom is decreased through lower taxes. The result is shown to

be quite stable to different sensitivity tests regarding model specification, period specification and sample specification.

The significance of these results is that unlike what many probably would have expected, an increased reliance on market processes, through reduced government involvement in the economy, is one method through which American states seem able to bring about greater tolerance towards its (sometimes despised) minorities.

Acknowledgements

We wish to thank Christian Bjørnskov and Jerg Gutmann for very helpful comments and suggestions, Olga Pugatšova for excellent research assistance, and The Swedish Research Council (Berggren and Nilsson), Johan and Jakob Söderberg's Foundation (Berggren) and the Crafoord Foundation (Nilsson) for financial support.

Appendix

Table A1

U.S. states included in the empirical analysis

Alabama	Kentucky	Oklahoma
Alaska	Louisiana	Oregon
Arizona	Maryland	Pennsylvania
Arkansas	Massachusetts	South Carolina
California	Michigan	South Dakota
Colorado	Minnesota	Tennessee
Connecticut	Mississippi	Texas
Delaware	Missouri	Vermont
Florida	Montana	Virginia
Georgia	New Jersey	Washington
Iowa	New York	West Virginia
Illinois	North Carolina	Wisconsin
Indiana	North Dakota	Wyoming
Kansas	Ohio	

Table A2

The Economic Freedom of North America index

Area 1 Size of government (EF1)
1A General consumption expenditures by government as a percentage of GDP
1B Transfers and subsidies as a percentage of GDP
1C Social security payments as a percentage of GDP
Area 2 Takings and discriminatory taxation (EF2)
2A Total tax revenue as a percentage of GDP
2B Top marginal income tax rate and the income threshold at which it applies
2C Indirect tax revenue as a percentage of GDP
2D Sales tax collected as a percentage of GDP
Area 3 Regulation (EF3)
3A Labor market freedom
3Ai Minimum wage legislation
3Aii Government employment as a percentage of total state employment
3Aiii Union density

Notes: Each area, and each of its components, is measured on a ten-point scale. An area is the average of its constituent components. Source: Stansel and McMachon (2013).

Table A3

Descriptive statistics and data sources

Variable	Obs	Mean	Std dev.	Min	Max	Source
ΔTolerance racists	101	0.005	0.052	-0.178	0.169	General Social Survey (2014)
ΔTolerance homosexuals	101	0.051	0.138	-0.216	0.678	General Social Survey (2014)
ΔTolerance atheists	101	0.043	0.142	-0.383	0.408	General Social Survey (2014)
ΔTolerance	101	0.032	0.082	-0.167	0.358	General Social Survey (2014)
ΔEF (Economic freedom)	101	0.352	0.710	-0.700	1.700	Stansel and McMahon (2013)
ΔEF1 (Size of government)	101	0.008	0.490	-1.70	1.00	Stansel and McMahon (2013)
ΔEF2 (Takings and discriminatory taxation)	101	0.344	1.304	-1.80	2.40	Stansel and McMahon (2013)
ΔEF3 (Regulation)	101	0.710	0.565	-0.300	1.90	Stansel and McMahon (2013)
Real GDP per capita	101	10.204	0.295	9.530	10.90	BEA (2013)
Less than high school education	101	0.182	0.067	0.071	0.364	CPS (2013)
High school	101	0.361	0.045	0.258	0.495	CPS (2013)
Some college	101	0.223	0.053	0.112	0.344	CPS (2013)
College degree	101	0.234	0.053	0.118	0.376	CPS (2013)
Younger than 25	101	0.360	0.021	0.317	0.415	U.S. Census (2010)
Age 25–44	101	0.308	0.019	0.271	0.357	U.S. Census (2010)
Age 45–64	101	0.208	0.021	0.170	0.247	U.S. Census (2010)
65+	101	0.125	0.018	0.051	0.185	U.S. Census (2010)
Blacks	101	0.128	0.092	0.004	0.363	U.S. Census (2010)
Hispanics	101	0.066	0.077	0.006	0.332	U.S. Census (2010)
Gini	101	0.417	0.041	0.328	0.513	Voorheis (2014)
Religiosity	101	0.256	0.083	0.063	0.529	GSS (2014)
Republican president	101	48.21	7.969	28.08	61.50	Shor and McCarty (2011)
Democratic governor	101	0.465	0.501	0	1	Shor and McCarty (2011)
Unemployment	101	5.42	1.239	2.90	10.50	BLS (2010)
Alaska	101	0.019	0.099	0	1	U.S. Census (2010)
Midwest	101	0.238	0.428	0	1	U.S. Census (2010)
North	101	0.158	0.367	0	1	U.S. Census (2010)
South	101	0.436	0.498	0	1	U.S. Census (2010)

West	101	0.158	0.367	0	1	U.S. Census (2010)

References

Andersen, R., Fetner, T., 2008. Economic inequality and intolerance: Attitudes toward homosexuality in 35 Democracies. American Journal of Political Science 52, 942–958.

Apergis, N., Dincer, O., Payne, J.E., 2012. Live free or bribe: On the causal dynamics between economic freedom and corruption in U.S. states. European Journal of Political Economy 28, 215–226.

Apergis, N., Dincer, O., Payne, J.E., 2014. Economic freedom and income inequality revisited: Evidence from a panel error correction model. Contemporary Economic Policy 32, 67–75.

Ashby, N.J., Sobel, R.S., 2008. Income inequality and economic freedom in the U.S. states. Public Choice 134, 329–346.

Bartling, B., Weber, R.A., Yao, L., 2015. Do markets erode social responsibility? Quarterly Journal of Economics forthcoming.

BEA, 2013. Regional Economic Accounts. Bureau of Economic Analysis, U.S. Department of Commerce, Washington, D.C.

Bennett, D.L., Vedder, R.K., 2013. A dynamic analysis of economic freedom and income inequality in the 50 U.S. states: Empirical evidence of a parabolic relationship. Journal of Regional Analysis & Policy 43, 42–55.

Berggren, N., Elinder, M., 2012a. Is tolerance good or bad for growth? Public Choice 150, 283–308.

Berggren, N., Elinder, M., 2012b. Tolerance and growth: Modeling the empirical relationship. Public Choice 153, 495–502.

Berggren, N., Jordahl, H., 2006. Free to trust: Economic freedom and social capital. Kyklos 59, 141–169.

Berggren, N., Nilsson, T., 2013. Does economic freedom foster tolerance? Kyklos 66, 177–207.

Berggren, N., Nilsson, T., 2014. Market institutions bring tolerance, especially where there is social trust. Applied Economics Letters 21, 1234–1237.

Bjørnskov, C., Potrafke, N., 2013. The size and scope of government in the US states: Does party ideology matter? International Tax and Public Finance 20, 687–714.

BLS, 2010. Local Area Unemployment Statistics (LAUS). U.S. Bureau of Labor Statistics, Washington, D.C.

Bornhoff, E.J., Lee, G.H.Y., 2012. Tolerance and economic growth revisited: A note. Public Choice 153, 487–494.

Boschma, R.A., Fritsch, M., 2009. Creative class and regional growth: Empirical evidence from seven European countries. Economic Geography 85, 391–423.

Bowles, S., 1998. Endogenous preferences: The cultural consequences of markets and other economic institutions. Journal of Economic Literature 36, 75–111.

Buchanan, J.M., Congleton, R.D., 1998. Politics by Principle, Not Interest: Toward Nondiscriminatory Democracy. Cambridge University Press, Cambridge.

Casebeer, W.D., 2008. The stories market tell: Affordances for ethical behavior in free exchange. In: Zak, P.J. (Ed.), Moral Markets: The Critical Use of Values in the Economy. Princeton University Press, Princeton, NJ, pp. 3–15.

Coase, R.H., 1974. The market for goods and the market for ideas. American Economic Review 64, 384–391.

Corneo, G., Jeanne, O., 2009. A theory of tolerance. Journal of Public Economics 93, 691–702.

CPS, 2013. Data on Educational Attainment. Current Population Survey, U.S. Census Bureau, Washington, D.C.

Davis, K.C., 2010. America's true history of religious tolerance. Smithsonian Magazine October. http://www.smithsonianmag.com/history/americas-true-history-of-religious-tolerance-61312684/?no-ist (accessed 30.10.2014).

Florida, R., 2014. The creative class and economic development. Economic Development Quarterly 28, 196–205.

Florida, R., Mellander, C., 2010. There goes the metro: How and why bohemians, artists and gays affect regional housing values. Journal of Economic Geography 10, 167–188.

Florida, R., Mellander, C., Stolarick, K., 2008. Inside the black box of regional development: Human capital, the creative class and tolerance. Journal of Economic Geography 8, 615–649.

Forst, R., 2012. Toleration. In: Zalta, E.N. (Ed.), The Stanford Encyclopedia of Philosophy. http://plato.stanford.edu/archives/sum2012/entries/toleration (accessed 30.10.2014).

General Social Survey (2014). Database. http://www3.norc.org/Gss+website/ (accessed 20.7.2014).

Hall, J.C, Lawson, R.A., 2014. Economic freedom of the world: An accounting for the literature. Contemporary Economic Policy 32, 1–19.

Heller, L.R., Stephenson, E., 2014. Economic freedom and labor market conditions: Evidence from the States. Contemporary Economic Policy 32, 56–66.

Heinrich, J., Boyd, R., Bowles, S., Camerer, C., Fehr, E., Gintis, H., McElreath, R., 2001. Cooperation, reciprocity and punishment in fifteen small-scale societies. American Economic Review 91, 73–78.

Heinrich, J., Ensminger, J., McElreath, R., Barr, A., Barrett, C., Bolyanatz, A., Cardenas, J.C., Gurven, M., Gwako, E., Henrich, N., Lesorogol, C., Marlowe, F., Tracer, D., Ziker, J., 2010. Markets, religion, community size, and the evolution of fairness and punishment. Science 327, 1480–1484.

Hirschman, A.O., 1982. Rival interpretations of market society: Civilizing, destructive, or feeble? Journal of Economic Literature 20, 1463–1484.

Hoffman, M., Morgan, J., 2014. Who's naughty? Who's nice? Experiments on whether pro-social workers are selected out of cutthroat business environments. Journal of Economic Behavior & Organization forthcoming.

Hoover, G.A., Compton, R.A., Giedeman, D.C., 2014. The impact of economic freedom on the black/white income gap. Mimeo. University of Alabama, Tuscaloosa, AL.

Huck, S., Lünser, G.K., Tyran, J.-R., 2012. Competition fosters trust. Games and Economic Behavior 76, 195–209.

Inglehart, R.F., Abramson, P.R., 1999. Measuring postmaterialism. American Political Science Review 93, 665–677.

Inglehart, R.F., Borinskaya, S., Cotter, A., Harro, J., Inglehart, R.C., Ponarin, E., Welzel, C., 2013. Genes, security, tolerance and happiness. Working Paper No. BRP 31/SOC. National Research University Higher School of Economics (HSE), Moscow.

Jordahl, H., 2009. Economic inequality. In: Tinggaard Svendsen, G., Haase Svendsen, G.L. (Eds.), Handbook of Social Capital: The Troika of Sociology, Political Science and Economics. Edward Elgar, Cheltenham, pp. 323–336.

Karagegovic, A., Samida, D., Schelegel, C.M., McMahon, F., 2003. North American economic freedom: An index of 10 Canadian provinces and 50 U.S. states. European Journal of Political Economy 19, 431–452.

Klein, D.B. (Ed.), 1997. Reputation: Studies in the Voluntary Elicitation of Good Conduct. University of Michigan Press, Ann Arbor, MI.

Klein, D.B., 2000. Assurance and Trust in a Great Society. The Foundation for Economic Education, Irvington-on-Hudson, NY.

Kumlin, S., Rothstein, B., 2005. Making and breaking social capital: The impact of welfare-state institutions. Comparative Political Studies 38, 339–365.

Kutner, M.H., Nachtsheim, C.J., Neter, J., 2004. Applied Linear Regression Models. McGraw-Hill/Irwin, New York, NY.

Locke, J., 1689. A Letter Concerning Toleration. Printed for Awnsham Churchill, London.

McGranahan, D.A., Wojan, T.R., 2007. Recasting the creative class to examine growth processes in rural and urban counties. Regional Studies, 41, 197–216.

Mill, J.S., 1859. On Liberty. J.W. Parker, London.

Paine, T., 1792/1951. The Rights of Man. E.P. Dutton, New York, NY.

Rode, M., 2013. Do good institutions make citizens happy, or do happy citizens build better institutions? Journal of Happiness Studies 14, 1479–1505.

Shor, B., McCarty, N., 2011. The ideological mapping of American legislatures. American Political Science Review 105, 530–551.

Spitz, L., 2004. At the intersection of North American free trade and same-sex marriage, UCLA Journal of International Law and Foreign Affairs 9, 163.

Stansel, D., McMahon, F., 2013. Economic Freedom of North America 2013. The Fraser Institute, Vancouver.

U.S. Census, 2010. 2010 Census State Population, U.S. Census Bureau, Washington, D.C.

Von Bergen, C.W., Bandow, D., 2009. Supporting genuine tolerance in organizations. In: Oglesby, R.A., Adams, M.G. (Eds.), Business Research Yearbook: Global Business Perspectives. International Graphics, Beltsville, MD, pp. 586–593.

Voorheis, J., 2014. State and metropolitan area income inequality in the United States: Trends and determinants, 1968–2012. Working Paper, University of Oregon, Portland, OR.

Wiseman, A., Young, T., 2014. Religion: Productive or unproductive? Journal of Institutional Economics 10, 21–45.