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Market institutions bring tolerance, especially where there is social trust

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Tolerant societies seem to function better than non-tolerant societies both economically and socially. This makes it worthwhile to identify ways to stimulate tolerance. While previous research indicates that market-oriented formal institutions and policies offer such stimulus, it does not investigate what role cultural factors, like social trust, plays. We find that trust is a catalyst: The more there is, the more positive the effect of economic freedom on tolerance. Formal institutions hence interact with the culture of a society and work better as generators of tolerance in alignment with trust.

Keywords: markets; economic freedom; tolerance; trust; institutions

JEL Classification: P10; P48; Z13

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I. Introduction

Economics has begun to return to its institutional and cultural roots in recent decades – not only to their separate influences on economic and social outcomes, but also to how they interact with each other (Alesina and Giuliano, 2013). Our starting point is research showing that market-oriented institutions and policies influence cultural attitudes and people’s ways of thinking of others (Bowles, 1998; Weiss, 2003; Mayda and Rodrik, 2005; Berggren and Nilsson, 2013). A plausible reason is that the rule of law, within which markets necessarily operate, reduces suspicions that people who are different are exploitative and that the market process, with its rich interaction disciplined by reputation effects, makes people realise that people they do not know can be decent and honest. However, previous research does not take the cultural context into account. Is it the case that a given set of formal institutions affects social attitudes in the same manner irrespective of the quality of informal institutions and cultural factors? We believe the analysis can be enriched, and insights gained, by incorporating one of the most important cultural variables, social trust (Algan and Cahuc, 2013). We do so in exploring how economic freedom affects tolerance, exemplified by attitudes to homosexuals. We show that the positive effect of free-market institutions and policies on this important outcome variable varies with the level of trust: The more trust, the more able is economic freedom to bring about tolerance.

II. The Proposed Relationships

Fig. 1 illustrates why we think that social trust adds explanatory value to the previously documented, positive relationship between economic freedom and tolerance. First, Berggren and Jordahl (2006) find that economic freedom stimulates trust (arrow 1).

[Fig. 1 about here]

Moreover, in a setting where people trust people in general, tolerance can be expected to emerge, since trust implies open and generous attitudes towards those different from

oneself. A trusting person does not feel threatened by others and give others the benefit of the doubt (arrow 2).

The novel argument here is that social trust also affects the size of the effect of economic freedom on tolerance (arrow 3). Relating to market institutions, the rule of law brings about more tolerance if there is trust, because this reinforces the expectation that the legal system will treat everyone equally, fairly and in accordance with the rule of law. Relating to the market process, the tendency for tolerance to be internalised can be expected to be reinforced by trust, since it makes people less suspicious of others and more relaxed in their attitudes. Furthermore, a free economy is characterised by dynamism and development – and therefore by uncertainty. With trust, people are less prone to fear that they will lose out and that others, for whom they have no sympathy, benefit.

Lastly, there is of course the direct effect of economic freedom on tolerance (arrow 4). The same factors that were deemed relevant for the relationship of arrow 3 – the formal institutions of the market and the market process itself – can play a direct role as well, with the exception of the reinforced effect of trust.

III. Data

As our measure of tolerance, we use *Tolerance homosexuals* from the World Values Survey (2012) and the European Values Study (2012), which is share of the population in a country that does *not* pick ‘homosexuals’ in answer to the question ‘On this list of various groups of people. Could you please mention any that you would not like to have as neighbors?’. As pointed out by Inglehart and Abramson (1999), inclusiveness towards homosexuals is a useful indicator of tolerant attitudes overall.

Our measure of social trust, *Trust*, corresponds to the share of the population in each country who answer that ‘most people can be trusted’ to the question ‘In general, do you think most people can be trusted or can’t you be too careful?’.

We also use six measures of institutions and policies, and the degree to which they are market-oriented, from Gwartney *et al.* (2011): the *Economic freedom index (EFI)* and its five areas: *Size of government (EFI₁)*, *Legal structure and security of property rights (EFI₂)*, *Access to sound money (EFI₃)*, *Freedom to trade internationally (EFI₄)* and

Regulation of credit, labor and business (EFI₅). The overall index and each area increase with economic freedom and the index is the average of the five areas.

Lastly, we make use of a number of control variables that are potentially relevant for explaining variation in tolerance across countries: *Real GDP per capita, Education, Young as a share of working-age population, Urban population share, Family values, Religious fractionalization, Ethnic fractionalization, Religion Catholic, Religion Muslim, Civil liberties, Political rights* and a set of geographical dummies. We use a lagged specification so that explanatory variables always predate our tolerance measure.

IV. Exploring the Role of Social Trust

In order to get a better grasp of the mechanisms through which economic freedom influences tolerance, we investigate the role of *Trust* in three ways: by including it as an explanatory variable; by interacting economic freedom and *Trust*; and by calculating the continuous marginal-effect relationship between economic freedom and *Trust* levels.¹

Table 1 presents results from the two first tests. For *EFI* and for each area of the index, we follow the same procedure. The first column for each measure shows the baseline estimate of the effect of *EFI* or *EFI_i* ($i = 1, \dots, 5$) on tolerance when running an ordinary OLS regression using data for 68 countries. The second column includes *Trust* as a control, while the third column presents the estimated interaction coefficient between *Trust* and *EFI* or *EFI_i*. For reasons of space we do not report results for control variables, but these are available on request.

[Table 1 about here]

When only including the economic freedom variables, it is clear that the overall index, *EFI₂* (the quality of the legal system) and *EFI₃* (the quality of monetary policy) stand in a positive relationship to *Tolerance homosexuals*. When adding *Trust*, we find that it is a mediator: while it is always positively and significantly related to *Tolerance*

¹ The correlation coefficient between *Trust* and *Tolerance homosexuals* is rather low, 0.46, indicating that these two variables measure conceptually distinct things.

homosexuals, EFI and EFI_3 retain their statistical significance, although the magnitudes of the estimated coefficients decrease. The size of these point estimates suggests that economic freedom as such is an important factor behind tolerance. Furthermore, the positive signs of the interaction effects indicate that EFI and $Trust$, as well as EFI_3 and $Trust$, jointly affect tolerance. These findings thus confirm the reasoning in Fig. 1, to the effect that both economic freedom and social trust seem able to stimulate tolerance and that economic freedom and social trust interact in so doing.

However, the information in Table 1 on how $Trust$ affects the relationship between economic freedom and *Tolerance homosexuals* is limited. We follow Brambor *et al.* (2006), who suggest that interaction effects are best analysed by showing the marginal effect of the primary explanatory variable conditioned on the interacted variable, holding all other control variables constant. Fig. 2 shows how the estimated EFI and EFI_i coefficients (on the Y axis) vary continuously with $Trust$ (on the X axis), with the hyphenated lines displaying a 95% confidence interval.

[Fig. 2 about here]

The graphs suggest that the positive tolerance effect of more market-oriented institutions and policies varies heterogeneously with $Trust$. Specifically, the point estimate of EFI is positive and increasing across $Trust$ levels and is only insignificant at very low levels. Similarly, the tolerance effect of EFI_3 is positive and increasing with the share of people who trust others. Moreover, we now find that $Trust$ also affects how EFI_2 and EFI_5 relate to tolerance in societies with $Trust$ levels above 35%: there, social trust boosts the stimulus that the quality of the legal system and easy regulation brings to tolerance. However, there is no significant effect for EFI_1 or EFI_4 .

V. Concluding Remarks

Tolerance is arguably a valuable asset in any society, and it is therefore comforting to know that it can be fostered through market-oriented institutions and policies. However, since tolerance is a cultural factor, the effect of formal institutions may vary with the culture in which they are embedded. More specifically, we hypothesised that social trust

determines how strongly institutions characterised by economic freedom generate tolerance. Indeed, our empirical analysis demonstrates that social trust is a catalyst: The ability of formal institutions and market-oriented policy to generate tolerance is stronger the more people trust each other (and non-existent at low trust levels). Hence, we expect institutional reform aiming to achieve more tolerance succeed best in high-trusting societies.

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Table 1. The role of social trust for the effect of economic freedom on tolerance

	EFI	EFI	EFI	EFI ₁	EFI ₁	EFI ₁	EFI ₂	EFI ₂	EFI ₂	EFI ₃	EFI ₃	EFI ₃	EFI ₄	EFI ₄	EFI ₄	EFI ₅	EFI ₅	EFI ₅
Economic freedom	7.286**	5.991**	0.570	-0.149	1.492	3.270	5.556**	3.519	0.575	3.195***	2.552**	0.382	3.452	3.103	-0.882	4.771	3.765	0.118
	[2.934]	[2.803]	[3.129]	[1.868]	[1.913]	[3.198]	[2.367]	[2.433]	[3.114]	[1.037]	[1.022]	[1.302]	[3.352]	[3.079]	[4.777]	[3.667]	[3.433]	[3.792]
Trust		0.463***	-1.751*		0.599***	0.904**		0.410**	-0.447		0.424**	-0.659		0.564***	-1.028		0.509***	-0.680
		[0.152]	[0.968]		[0.184]	[0.422]		[0.156]	[0.736]		[0.169]	[0.607]		[0.169]	[1.573]		[0.150]	[0.806]
Interaction			0.312**			-0.061			0.114			0.124*			0.206			0.182
			[0.133]			[0.070]			[0.092]			[0.062]			[0.204]			[0.121]
Full set of controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Regional dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R ²	0.729	0.764	0.780	0.674	0.731	0.730	0.724	0.744	0.749	0.740	0.767	0.778	0.683	0.737	0.740	0.700	0.744	0.748
Observations	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68

Note: The first column for each area of economic freedom shows baseline estimates. The second controls for *Trust*, while the third also includes an interaction term between *Trust* and the area of economic freedom of interest.

Robust standard errors in brackets. * significant at 10%. ** significant at 5%. *** significant at 1%.

All estimated equations include the specified measure of economic freedom, a constant term, a full set of control variables and regional dummy variables.

Fig. 1. Economic freedom, social trust and tolerance

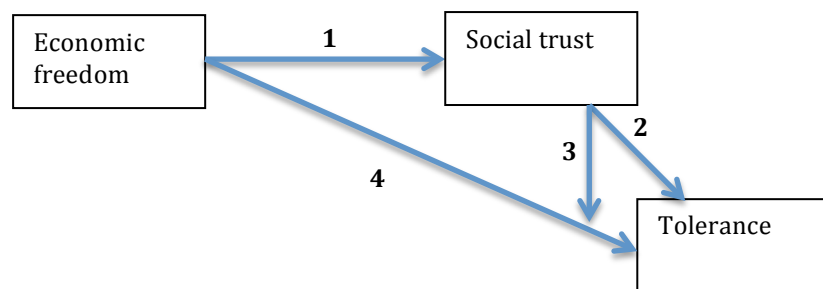


Fig. 2. The effect of economic freedom on tolerance towards homosexuals conditional on social-trust levels

