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Historical Trust Levels Predict Current Welfare State Design

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Abstract

Using cross-sectional data for 76 countries, we apply instrumental variable techniques based on pronoun drop, temperature and monarchies to demonstrate that historical trust levels predict several indicators of current welfare state design, including universalism and high levels of regulatory freedom. We argue that high levels of trust and trustworthiness are necessary, but not sufficient, conditions for societies to develop successful universal welfare states that would otherwise be highly vulnerable to free riding and fraudulent behavior. Our results do not exclude positive feedback from welfare state universalism to individual trust, although we claim that the important causal link runs from historically trust levels to current welfare state design.

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1. Introduction

Recently, a number of studies have claimed that the welfare state produces trust (Rothstein, 2003; Uslaner and Rothstein, 2005; Kumlin and Rothstein, 2005). In this paper, we argue that the theoretical mechanisms underpinning the link from welfare state design to trust are ambiguous, and that it is more likely that trust levels in society explain welfare state design rather than the other way round. To support our claim, we use instrumental variables (IV) to demonstrate that variations in historical levels of trust predict cross-country differences in current welfare state design.

The alleged link from welfare state universality to individual trust, as explained, for example, by Kumlin and Rothstein (2005) rests on several claims:

1. The claim that people infer others' trustworthiness from how they perceive public service bureaucrats,
2. the claim that needs-tested public services give rise to suspicions concerning poor procedural justice due to discretionary bureaucratic power, and
3. the claim that universal welfare programs "give rise to a sense of equal treatment and that the "rules of the game" in society are based on principles of fairness."[1]

All these claims can be discussed. If the first claim is true, the generally improving level of bureaucratic quality in most countries should give rise to increasing trust. In fact, however, trust levels have remained stable, apparently insensitive to changes in institutional quality, as demonstrated, for example, by Bjørnskov (2007). Regarding the difference between universal and needs-tested welfare programs as described in claims two and three, it should be noted that some needs-tested programs are in fact easy to formalize into transparent procedures (e.g., "if individual income falls below amount X,

[1] All three points are from Kumlin and Rothstein (2005, p. 349).

the individual is entitled to income supplement according to formula Y"), whereas some "universal" programs require several complex discretionary judgments (e.g., public health care).

Most importantly, the main thrust of the argument can be turned on its head. Universal access to public goods, transfers and services, with little needs testing involved, can be viewed as a strong temptation to engage in free riding. If other people are repeatedly tempted to obtain benefits for which they have no objective need or are ineligible, should one trust them? We argue instead that trust is high in universal welfare states, not because welfare state universality creates trust, but because trusting populations are more likely to create and sustain universal welfare states. To support our claim, we present empirical evidence that historical trust levels explain current welfare state design, measured in several ways. We do this by examining 76 democratic and semi-democratic countries, using instrumental variables based on linguistics and climate to ensure that we are using the historically contingent variation in trust levels to explain welfare state universality.

We find that high-trust countries are clearly able to finance larger total government expenditures and raise larger revenues, are characterized by substantially more regulatory freedom and can sustain higher transfers. We conclude the paper by discussing the implications of our findings and how they might solve extant puzzles in the literature.

The paper proceeds as follows: In the next section, we outline our theoretical considerations. Section 3 describes our data and the estimation strategy used in section 4, which presents the results. Section 5 discusses the results and presents our conclusions.

2. Theoretical considerations

2.1 How to identify causality?

Much recent research suggests that social trust strongly affects economic and political behavior (see, e.g., Knack and Keefer, 1997; Knack, 2002; Uslaner, 2002; Beugelsdijk et al., 2004). As mentioned, many studies note the apparent association between the very high trust levels in the Nordic countries

and their extended welfare state policies (Delhey and Newton, 2005; Kumlin and Rothstein, 2005; Bjørnskov, in press). There are three possible ways to interpret the causality of the correlation between welfare state universality and trust, namely, as running

1) from welfare state design to trust,
2) from trust to welfare state design, or
3) from some omitted variable(s) to both trust and welfare state design.

Discussing these three possibilities, Rothstein (2008) claims that the link from trust to welfare state design is difficult to evaluate due to lack of data on historical trust levels, i.e., trust before the universal welfare state existed. However, there are in fact several ways to handle this lack of data.

First, as far as studies of US immigrants can inform us about historical trust levels, the Nordic countries seem to have been characterized by high trust long before the implementation of extensive welfare state policies in the 1960s (Tabellini, 2008; Uslaner, 2008). A long tradition in psychology indicates that a basic sense of trust of strangers is instilled in people in early childhood and remains relatively stable for the rest of their lives, absent major negative events (e.g., Katz and Rotter, 1969; Dohmen et al., 2008). As children tend to copy the social trust of their parents, aggregate trust levels are thus likely to remain fairly stable across time. Reflecting this process, rather than being influenced by the needs-tested US welfare state, people in the United States of Swedish, Norwegian, Danish or Finnish heritage are today approximately 10% more likely to believe that "most people can be trusted" than the average American (Uslaner, 2008).

Uslaner (2008), who also documents that descendants of immigrants from low-trust countries are likely to be substantially less trusting than the average American, furthermore demonstrates that it does not seem to matter for trust levels how recently immigrants came to the United States. Albeit merely suggestive, the above findings clearly indicate that Scandinavians were highly trusting before the introduction of universal welfare policies.

Statistically, IV techniques can be used to separate historic trust levels (definitely not caused by welfare state design) from recent variation in trust (possibly endogenous to various factors, including welfare state design). To apply this approach validly in our case, we must use factors with very deep historical roots as instruments to sort out the causality. Our choice of instrumental variables is mainly informed by two previous studies, those of Uslaner (2008) and Tabellini (2008).

The first variable is the "pronoun-drop characteristic" (Chomsky 1981; Kashima and Kashima 1998) of a country's dominant language, i.e., that the language allows the personal pronoun to be dropped. While neither English nor the Nordic languages allow this, several major languages, such as Spanish and most African languages, do. Tabellini (2008), who introduced this variable to the trust literature, argues that languages that allow the personal pronoun to be dropped tend to reflect cultures in which respect for individual rights is relatively weak. This means that the grammatical rule that forbids pronoun dropping is positively linked to trust – but not correlated with welfare state universality. In fact, a focus on individual rather than group rights and identities would seem inconsistent with universality, which stresses broad group access to welfare services instead of individual treatment. We also note that welfare regimes vary considerably within the group of countries with languages not allowing pronoun dropping.

As a second instrument, we use the average temperature in the coldest month of the year. The idea behind this instrument is traceable to Aristotle: In countries with relatively cold winters, people were historically more dependent on strangers for survival. Needy strangers in such countries would receive help while, due to scarcity, strangers and friends alike would not receive help if not objectively in need. As such, the colder the winters are, the more likely it is that trust in strangers constitutes an evolutionarily dominant strategy. The alternative would seem to be groups characterized by Banfield's (1958) "amoral familism" that would tend to be too small to be biologically sustainable in difficult climates. Again, if anything, this instrument would be negatively associated with the propensity to implement a universal welfare regime but positively correlated with trust in strangers.

We supplement these instruments with a dummy for the existence of monarchical institutions, i.e., countries being "ruled" by a king, emperor or other sovereign. We should note that in our sample, monarchs presumably have no direct power, as all countries are democratic or semi-democratic. Bjørnskov (2007) nevertheless demonstrates that populations in monarchies are substantially more trusting than otherwise. Again, there is little reason to believe that monarchies are better at sustaining welfare states than regimes with other kinds of titular heads of state.

However, as recently emphasized by Rodrik (2007), an instrument does not a theory make. We do not claim that pronoun dropping, average temperature or monarchical institutions are important or useful explanations of welfare state design. Indeed, proper identification of the effects of social trust depends on their *not* providing useful explanations. We use these variables to infer historical trust levels to demonstrate that these can be used to predict current welfare state design, to which we now turn.

2.2 What exactly is welfare state universality?

The strand of social science research called "the welfare modelling business" by Abrahamson (1999) can be traced back at least to Titmuss (1974), who distinguishes between three ideal types of welfare state: the "marginal" (typical of Anglo-Saxon countries), the "industrial achievement" (typical of Central European countries) and the "institutional" (typical of the UK and Scandinavia). For a long time, the standard reference was Esping-Andersen (1990), who identified three models, similar to those identified by Titmuss: the "liberal" (in the European sense of the word), the "corporatist" and the "social democratic." However, replicating and correcting errors in the Esping-Andersen classification, Scruggs and Allan (2006, 2008) found very limited empirical support for the "three worlds" typology.

Adding to the confusion, Bergh (2004) surveyed the literature, finding a plethora of labels: "universal," "social democratic," "institutional," "comprehensive," "encompassing" and "Scandinavian" were all used to describe roughly the same construction – states where the government

not only provides legal protection, defense, basic schooling and health care to its citizens, but also functions as the main institution providing risk insurance and life-cycle redistribution for all citizens.

For this reason, standard measures of the welfare state, such as public final expenditures on consumption or the OECD's social expenditures database, would be improper measures of universality; for example, the Nordic welfare states are actually not very different when we look only at public expenditures on health care or schooling, for example. As our proxy for welfare state universality, we instead use total public revenues as a share of GDP (and total public expenditures as a robustness test).

Total expenditures include final consumption expenditures as well as transfers, benefits and other "pure" welfare state costs. This measure has been criticized for exaggerating the size of the Nordic welfare states. For example, child grants are typically given as benefits rather than tax deductions, thus inflating total taxes and total revenues. In the context relevant here, this is nevertheless exactly what we wish to capture: the tendency of universal welfare states to rely relatively more on the state, whereas other countries use the market or the family as agents of welfare provision.[2] Such types of welfare provision are factors that necessitate a larger state and thus a substantially larger need to finance it. We do, however, check our results by controlling for consumption expenditures and defense spending, in which case differences between countries are mainly driven by differences in the size of transfers. This reflects the varying degrees to which countries rely on the state (rather than the market or the family) to handle life-cycle redistribution and risk insurance, which is typically the case in universal welfare states that are said to create trust.

2.3 Welfare state universality and trust: An alternative hypothesis

As an alternative to the idea that welfare state universality creates trust, we suggest that trust is necessary for the creation of universal welfare states. In a survey of the trust literature, Nannestad (2008) notes that

[2] An alternative motivation for our measure would be that the literature on universality agrees on few things except that universal welfare states have higher taxes and higher public expenditures, so these are what we measure.

> … because the universal welfare states are also high-trust countries, it is tempting to hypothesize that it is their high level of generalized trust that has enabled them to solve the collective action dilemma created by their welfare systems … Thus, generalized trust is what makes the universal welfare system sustainable and allows equality to coexist with wealth. This line of reasoning would at the same time explain why countries with lower levels of generalized trust have developed different welfare systems that give rise to fewer and smaller collective action dilemmas. (p. 430)

Extending the size of the state beyond that of a minimal or "watchman" state thus entails a number of collective action dilemmas. Nannestad's argument is consistent with arguments in Svendsen and Svendsen (2009), and also with the theoretical models of Lindbeck (1995) and Lindbeck et al. (1999), according to which a social norm of public permissiveness prevents a small number of citizens from exploiting the welfare state, which would result in exploding public expenditures. In the former, the main argument is that most people adhere to common, stable norms of working hard and not taking advantage of services for which they have no need or are ineligible because other people adhere to the same norms. Furthermore, informal institutions such as trust have gradually become "incapsulated and codified into formal institutions in the course of history," such as regulations protecting a capitalist welfare state (Svendsen and Svendsen, 2009, pp. 3; Bergh, 2006). In the Lindbeck papers, the argument rests on the assumption that the norms and work ethics necessary to finance the welfare state are stronger in countries that managed to implement such systems, but prone to erosion over time.

In other words, the causal mechanism may well be that high trust levels increase the feasibility of generous welfare states. We stress three potential mechanisms:

1. Without trust – and trustworthiness – universal welfare states would run into problems caused by free riding and may end up in financial distress due to increasing welfare costs. Since many public goods and services are available to everyone in society, costs are sensitive to groups

taking advantage of those goods and services although they are either not de facto eligible for them or not in need. To the extent that social trust – in this context, that people trust fellow citizens not to take advantage of the system – makes people less likely to exploit the system improperly, trust protects a universal welfare state from exploding costs.

2. The pressure on public bureaucracies administering universal welfare policies is strong and the repercussions for bureaucrats not following the rules are potentially high. As such, the existence of such policies puts additional pressure on the bureaucracy and makes the trustworthiness of bureaucrats central to the feasibility of administering such policies (cf. Bjørnskov, in press). This point also includes the perceived need to regulate, as Aghion et al. (2009) argue that low trust leads voters to demand more detailed regulation, since they do not trust bureaucrats with discretionary power.
3. Finally, universal welfare states require high taxes, which make them potentially vulnerable to eroding tax morals and extensive underground economies. In high-trust societies, these problems are less severe, as trusting populations are less likely to cheat on taxes or seek transfers to which they are not entitled. In addition, bureaucracies are generally less corrupt and more efficient in high-trust societies.

Thus, trust enables more extensive welfare state policies by limiting their costs, as indicated by Figure 1a, where the curve depicts the maximum level of government activity that is fiscally sustainable at a given trust level, all else being equal. As such, the figure reflects our simple theoretical considerations, as it depicts the level of government expenditures that are *possible*, but not necessarily the level actually chosen. The realized level is governed by two processes. We think of these processes as equivalent to decisions subject to a participation constraint, which is primarily political, and an incentive constraint, which outlines the financial feasibility of a given political choice. In other words, the line in Figure 1a illustrates the incentive constraint while the participation constraint affects how

closely countries are situated to the line. This implies two processes related to each constraint: 1) financial sustainability and 2) the political choice of whether or not to use the financial leeway.

The main function of social trust in the above framework is in moving the incentive constraint, the curved line along which a welfare state can be financed. At a given trust level, we also expect countries with smaller government to regulate more, and vice versa. Figure 1b summarizes the links between trust and welfare state design identified in related literature and those explored in the present paper.

Insert Figure 1a and 1b here

In the next section, we test our hypothesis using a cross-section of democratic and semi-democratic countries for which we have reliable trust data.

3. Data

In the following, we employ data from a wide range of sources. First, our trust measure has become standard over the last decade. It is the percent of a population that answers yes to the question "In general, do you think most people can be trusted or can't you be too careful?" While this question may seem vague and imprecise, it performs surprisingly well in test-retest situations and correlates strongly with, for example, return rates in wallet-drop experiments (cf. Knack and Keefer, 1997). Nannestad (2008, p. 419) also notes that "respondents do not in general seem to find the generalized trust question difficult," as only very small shares of respondents do not respond to the question. While Glaeser et al. (2000) question the degree to which answers to the trust question reflect actual behaviors, recent experimental evidence suggests that this trust measure is a clear determinant of actual trusting behavior, although perhaps only in situations in which the stakes are of economic significance (Sapienza et al., 2007; Cox et al., 2009).

The trust levels within our sample are distributed broadly, ranging from 3.4% (Cape Verde) to 64.3% (Sweden), with a mean score of 26.2%. These scores have been demonstrated to remain remarkably stable for most countries, although a few have experienced clear trends in recent decades.[3] Evidence presented by Uslaner (2008) and Tabellini (2008) suggests that there is at least a culturally stable core of social trust in most countries. Nevertheless, to use the variations in trust levels that precede the rise of modern welfare states, we opt for an IV approach, described in more detail below.

To describe current welfare state institutions, we use the cost of welfare state policies as well as the extent of labor market regulations and other policies supporting such institutions. Our preferred measures of welfare state policies are the total 2008 government expenditures and government revenues in percent of GDP (both taken from CIA, 2008). These data capture the size of the public sector, including all transfers and benefits payments and the need to finance them.

According to our theory, historical trust levels let countries develop more universalistic welfare policies, but trust and trustworthiness also partially substitute for controls and regulations, following the Aghion et al. (2009) argument. To test this part of our hypothesis, we use a set of established indices of regulatory freedom obtained from the Fraser Institute's Economic Freedom of the World: 2008 Annual Report (Gwartney et al., 2008).

We supplement the specification with a set of other variables. First, we add regional dummies to control for broad regional differences in culture and political tradition; we only report the post-communist dummy. Second, we add a measure of openness (trade volume as a percent of GDP) in view of Rodrik's (1998) compensation hypothesis, which suggests that more open countries have larger welfare states.[4] We approximate Wagner's Law by adding GDP per capita; both this and the openness

[3] The examples of obviously non-stationary trust scores since the early 1980s include the much-discussed declines in the USA and the UK, but also positive trends in Denmark and Uruguay.

[4] The idea that open economies develop larger welfare states in response to the volatility caused by economic openness (known as the compensation hypothesis) can in fact be traced back to Lindbeck (1975). Recently, however, Kim (2007) and

measure are from Heston et al. (2006). Finally, to proxy for the political environment, we use the ten-year averages of government ideology, taken from the Database of Political Institutions and following the approach of Bjørnskov (2008). Table 1 provides the descriptive statistics.

Insert Table 1 here

Our choice of instrumental variables to sort out the causality is informed by previous studies by Uslaner (2008) and Tabellini (2008), as outlined in section 2. We use three predetermined variables that, as substantiated by tests, only affect the extent of welfare state policies through social trust. The first of these variables is the "pronoun-drop characteristic" (Kashima and Kashima, 1998) of a country's dominant language, introduced into the trust literature by Tabellini (2008). As the second instrument, we use the average temperature in the coldest month of the year. We do so based on the simple argument, traceable to Aristotle, that in countries with relatively cold winters, people were historically more dependent on strangers for survival. As such, trust would have been positively correlated with colder climate long before welfare states arose. Third, we add a dummy for monarchies, as Bjørnskov (2007) has demonstrated that countries that have preserved monarchical institutions, even in the present sample of democracies, are substantially more trusting.

4. Empirical results

We first test whether there really is an association between trust and the extent of the welfare state. A preliminary indication can be gauged from the scatterplot in Figure 2, which presents the theoretical schematic in Figure 1a using actual data. The potential size of government expenditures clearly increases with trust, while the southeast quadrant includes both countries constrained by their level of

Down (2007) have argued that the link between economic openness and volatility is absent, both theoretically and empirically.

development (i.e., India, Thailand and Taiwan) and some countries in the Anglo-Saxon tradition (i.e., Australia, Canada, New Zealand and the USA). Conversely, the Nordic welfare states are all situated in the northeast corner. With the perennial exception of France (and Belgium), perhaps the developed country with the strongest statist tradition, the northwest quadrant of the figure is empty, consistent with our expectation that low-trust countries cannot sustain large welfare states.

4.1. Trust and overall government expenditure

Noting that the association, as claimed in the literature, is quite real, we proceed to a set of cross-country estimates in Table 2, using the instruments described above. Odd-numbered columns present the results using government total expenditures (% of GDP) as the dependent variable, while even-numbered columns use government total revenues. Our main results are presented in columns 1 and 2.

Insert Table 2 here

The cross-sectional evidence in the table indicates that the simple pattern in Figure 2 is replicated in the table. The table also shows that our simple specification explains a reasonable part of the variation, and that the instruments are sufficiently strong and valid, judging from the first-stage statistics and Hansen's J statistic. Among the determinants of government expenditures and government revenues in 2008, we find the strongest association with social trust, along with openness, which is consistently significant for expenditures but not revenues. However, neither ideological nor common-law countries (basically the United Kingdom and its offspring) are significant, and the post-communist dummy is not robustly associated with welfare state size.

To verify the robustness of our results, we exclude 11 obvious outliers (defined by their residuals), in which case we find slightly smaller coefficients for trust as well as clear indications of

Wagner's Law, as GDP becomes strongly significant when outliers are removed.[5] In columns 5 and 6, we add to our regressions the share of GDP spent on the military and other government final consumption, which effectively leaves us with the variation in government expenditures and revenues directly attributable to welfare state activities, such as transfers, subsidies and non-minimal government services. In other words, the results indicate that the effect of trust is not likely to work through the scope of necessary government responsibilities, but through the parts of government activity related to welfare state design. We furthermore note that a Kleibergen-Paap rank LM test of weak identification indicates only a 10% maximal IV relative bias.

Our results are not only statistically but also economically significant: the estimates suggest that a one-standard-deviation increase in trust leads to a sizable equilibrium increase in government expenditures and revenues of approximately 40–55% of a standard deviation.

4.2. Trust and government regulation

We thus find that social trust is clearly associated with the size and scope of welfare state spending. A related issue is whether high-trust countries regulate less tightly for various reasons. In fact, high-tax Nordic welfare states have typically made their economies more competitive by strategically deregulating parts of the public sector, as demonstrated by Bergh (2006). This finding is very much in line with the positive links between trust and equilibrium regulatory freedom (Aghion et al., 2009), between trust and deregulation of business (Heinemann and Tanz, 2008) and between trust and policy innovation (Knack, 2002). Thus, tight regulation of parts of the economy could in principle substitute for government financing of activities. We therefore need to ascertain that high-trust countries do not simply regulate instead of finance activities directly. We test this possibility in Table 3.

[5] Several countries are consistent outliers in our analyses: those with governments smaller than expected include Finland, Poland, Taiwan, Thailand and the USA, while those with governments larger than expected include Bolivia, Hungary, Italy, France and a few aid-dependent, democratic developing countries.

Insert Table 3 about here

Using the Fraser Institute index of regulation, we essentially retest the findings of Algan and Cahuc (2006) and Aghion et al. (2009) in a larger sample of countries. The results, presented in Table 3, confirm that trust is associated with regulatory freedom. This result is robust to excluding outliers, but appears to be driven by the business and credit areas, not by labor market regulations (contrary to Algan and Cahuc, 2006). We also find that richer countries have less rigid regulations, that common-law countries have fewer business and labor market regulations, whereas post-communist countries have clearly deregulated their labor and credit markets and openness there is associated with the level of credit market freedom.

Finally, in Table 4 we test whether regulatory freedom is associated with larger or smaller welfare states.

Insert Table 4 about here

The results indicate that regulatory freedom in the business area is significantly associated with government expenditures and revenues, although only at the 10% level, while the other areas are not.[6] We also find that when including business regulations, the coefficient of social trust increases markedly. While we do not want to stress this result too much, it is indicative of an indirect effect exerted through regulation.

Taking the extent of our findings at face value indicates that a one-standard-deviation shock (14 percentage points) to social trust leads to an increase in freedom from business regulations of almost one point on a ten-point scale. In total, a one-standard-deviation shock to trust thus leads to an

[6] Robustness tests (not shown) of the results indicate that the weakly significant results become strongly significant when excluding the group of outlier countries.

increase in total government expenditures of approximately five percentage points (45% of a standard deviation) and an increase in government revenues of 6.5 percentage points (60% of a standard deviation). This effect can be decomposed into direct effects of 7 and 8.5 percentage points on expenditures and revenues, respectively, and indirect effects through business regulations of approximately –2 percentage points. As these effects are sizable and not due to government final consumption expenditures, but most likely operate exclusively through welfare state-related government activities (cf. Table 2), we proceed to discussing their relevance.

5. Discussion and conclusions

A growing literature connects the extent of the welfare state with levels of social trust. For obvious reasons, this literature has taken the Scandinavian welfare states as its starting point due to their record levels of trust as well as the size, scope and universality of their welfare regimes. Important in this literature is Rothstein's claim that welfare state institutions and universality actively *create* social trust. This, Rothstein argues, happens through three channels: 1) peoples' inference of others' trustworthiness through how they perceive public service bureaucrats; 2) belief that needs testing somehow gives rise to suspicions concerning poor procedural justice; and 3) belief that universal welfare programs create a general feeling of equal treatment and fairness.

In this paper, we have argued for the reverse causality, trying to refute Rothstein's arguments. We note that the Scandinavian welfare states were unlikely to function from the outset without very high and *preexisting* levels of social trust. First, we note that evidence from studies of US immigrants suggests that the Scandinavian countries were characterized by high levels of social trust well before the introduction of welfare state universality. Second, we argue that trust sustains the universal welfare state through three main mechanisms: 1) by limiting problems caused by free riding and thus protecting the state from increasing welfare costs; 2) by affecting the trustworthiness of both the bureaucrats central to the feasibility of administering such policies as well as the regulatory framework, effectively allowing

fewer and less-detailed regulations; and 3) by limiting financing problems associated with citizens operating in the underground economy, cheating on taxes and seeking transfers to which they are not entitled.

Our relatively simple evidence in section 4 strongly indicates that social trust facilitates the sustainable existence of a universal welfare state. We find that what we consider the long-run equilibrium level of government expenditures is strongly affected by trust. Through two channels, an apparently direct effect not captured by an array of institutional data and an indirect effect operating through more regulatory freedom, countries with one-standard-deviation-higher social trust have on average higher government expenditures, i.e., 6% of GDP. The direct effect of trust amounts to approximately 8% of GDP, while an indirect effect, operating through less detailed regulations, reduces the full effect by approximately 2% of GDP. We note that this precisely corresponds to the difference between the size of the public sector in an average democratic country and in the Scandinavian universal welfare states. In other words, our findings have the desirable effect of making the Nordic countries essentially "ordinary" cases of institutional choice instead of outliers, that is, socialist welfare regimes combined with capitalist economic systems in an apparently ideologically incoherent mix.

As a corollary, we might add that Scandinavia has historically seemed an outlier in Western civilization. Lookofsky (2008), for example, notes that the centuries-old Scandinavian legal tradition of accepting oral agreements as legally binding can be seen as reflecting a similar normative tradition of impersonal honesty. Likewise, even though Denmark and Sweden both became absolutist regimes in the seventeenth century, historians often note that Scandinavian absolutism was particularly weak compared with such regimes in the rest of Europe. Reflecting Putnam's (1993) original idea, it would be productive to explore the special cultural and historical traits of Scandinavia that seem to have affected economic, social and political behavior and continues to set these countries on a somewhat different behavioral path from that of most other countries.

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Table 1. *Descriptive statistics*

	Mean	Std. dev.	Observations	Nordic mean
Log GDP per capita	9.030	1.025	79	10.193
Postcommunist	.203	.404	79	0
Openness	75.709	37.446	79	69.551
Common law	26.621	14.065	79	0
Political ideology	.098	.561	79	–.102
Regulatory freedom	6.844	.887	78	7.882
Business regulations	6.199	1.234	78	8.226
Labor regulations	5.695	1.297	78	5.976
Credit regulations	8.637	.877	78	9.448
Government spending	31.821	11.347	77	45.432
Government revenues	32.314	10.729	76	40.056
Legal quality	6.429	1.943	78	9.186
Social trust	26.621	14.065	79	58.434

Table 2. *Trust and welfare state institutions*

	Government expenditures 1	Government revenues 2	Government expenditures 3	Government revenues 4	Government expenditures 5	Government revenues 6
Log GDP per	3.289*	1.636	2.933***	6.371***	.993	1.585
capita	(1.826)	(1.616)	(1.104)	(1.004)	(1.836)	(2.063)
Postcommunist	9.078*	8.777	2.846	8.483***	7.734	7.186
	(4.849)	(5.424)	(2.728)	(3.491)	(5.604)	(4.801)
Openness	.054*	.068**	.033*	.032	.071**	.058*
	(.031)	(.031)	(.019)	(.026)	(.035)	(.031)
Common law	–.518	1.372	.696	–1.197	.288	–2.209
	(2.952)	(2.775)	(1.833)	(2.076)	(2.643)	(2.504)
Political ideology	–1.473	–.489	–.539	–2.003	.086	–.587
	(1.943)	(1.617)	(1.214)	(1.477)	(1.539)	(1.877)
Military expenditures					–.080	.534
					(.781)	(.804)
Government final consumption					.372	.681**
					(.356)	(.351)
Social trust	.470***	.361**	.177**	.367***	.316*	.429***
	(.167)	(.182)	(.089)	(.123)	(.181)	(.163)
Observations	77	76	65	65	72	72
Adjusted R squared	.354	.329	.720	.706	.389	.463
F statistic	8.97	7.41	26.09	19.37	7.91	10.00
First stage F	9.53	9.44	8.28	7.61	7.35	7.35
First stage R squared	.317	.316	.323	.358	.289	.289
Hansen J statistic, $p <$	.755	.856	.469	.947	.916	.747

Note: *** (**) [*] denote significance at $p < .01$ ($p < .05$) [$p < .10$]. All regressions include dummies for Asia, Latin America, North Africa and the Middle East, and Sub-Saharan Africa. Instruments are dummies for pronoun-drop languages and monarchies, and the average temperature in the coldest month of the year.

Table 3. *Trust and welfare state institutions*

	Regulatory freedom 1	Regulatory freedom 2	Business regulations 3	Labor regulations 4	Credit regulations 5
Log GDP per	.388***	.350***	.407***	.500**	.257*
capita	(.137)	(.106)	(.153)	(.234)	(.134)
Postcommunist	1.047***	1.468***	.321	1.632***	.944***
	(.299)	(.292)	(.511)	(.519)	(.351)
Openness	.003**	.003*	.002	.003	.006**
	(.002)	(.002)	(.003)	(.003)	(.002)
Common law	.711***	.968***	.422*	1.579***	.133
	(.174)	(.155)	(.224)	(.299)	(.214)
Political ideology	.072	.012	.247	–.005	–.029
	(.134)	(.116)	(.184)	(.215)	(.153)
Social trust	.047***	.062***	.067***	.036	.037***
	(.013)	(.012)	(.017)	(.023)	(.014)
Observations	76	65	76	76	76
Adjusted R squared	.457	.604	.499	.328	.311
F statistic	9.80	11.98	14.49	6.42	3.22
First stage F	8.73	6.67	8.73	8.73	8.73
First stage R squared	.311	.312	.311	.311	.311
Hansen J statistic, $p <$	.817	.817	.048	.475	.990

Note: *** (**) [*] denote significance at $p < .01$ ($p < .05$) [$p < .10$]. All regressions include dummies for Asia, Latin America, North Africa and the Middle East, and Sub-Saharan Africa. Instruments are dummies for pronoun-drop languages and monarchies, and the average temperature in the coldest month of the year.

Table 4. *Trust and the size of the welfare state, additional channels*

	Government expenditures 1	Government revenues 2	Government expenditures 3	Government revenues 4	Government expenditures 5	Government revenues 6
Log GDP per	2.000	3.849*	1.715	3.591*	1.849	3.343
capita	(1.901)	(2.148)	(1.747)	(2.027)	(1.853)	(2.047)
Postcommunist	9.582*	9.521*	10.267*	11.089**	10.849*	10.383*
	(5.742)	(5.136)	(5.878)	(5.267)	(5.985)	(5.441)
Openness	.071**	.056*	.072**	.059*	.083**	.065*
	(.032)	(.033)	(.031)	(.032)	(.035)	(.036)
Common law	2.575	.523	3.462	2.118	2.035	–.047
	(3.206)	(3.303)	(3.364)	(3.379)	(3.097)	(3.231)
Political ideology	.154	–.804	–.369	–1.344	–.462	–1.398
	(1.859)	(2.164)	(1.654)	(1.994)	(1.708)	(2.001)
Business	–2.066*	–2.273*				
regulations	(1.242)	(1.319)				
Labor regulations			–1.104	–1.519		
			(.879)	(.941)		
Credit regulations					–2.521*	–1.938
					(1.482)	(1.559)
Social trust	.509**	.610***	.414**	.537***	.466**	.551***
	(.226)	(.202)	(.211)	(.194)	(.218)	(.200)
Observations	75	76	75	76	75	76
Adjusted R squared	.274	.274	.321	.327	.303	.309
F statistic	6.55	7.73	6.46	7.50	6.05	7.19
First stage F	6.08	6.27	7.61	7.72	7.42	7.44
First stage R squared	.231	.235	.290	.292	.266	.266
Hansen J statistic, $p <$	.822	.542	.809	.779	.823	.751

Note: *** (**) [*] denote significance at $p < .01$ ($p< .05$) [$p < .10$]. All regressions include dummies for Asia, Latin America, North Africa and the Middle East, and Sub-Saharan Africa. Instruments are dummies for pronoun-drop languages and monarchies, and the average temperature in the coldest month of the year.

Table A1. *Social trust and instrumental variables*

Country	1	2	3	Country	1	2	3
Argentina	19.4	No	10.0	Luxembourg	30.5	No	0.2
Australia	47.1	Yes	5.3	Macedonia	10.9	No	0.2
Austria	37.6	Yes	–0.8	Madagascar	32.8	No	14.5
Bangladesh	22.2	Yes	18.3	Malawi	5.5	No	15.2
Belgium	31.4	No	2.0	Mali	27.5	No	24.9
Benin	27.4	No	25.2	Malta	24.6	No	13.0
Bolivia	19.3	No	6.9	Mexico	24.2	No	12.9
Botswana	11.7	No	12.9	Moldova	18.2	Yes	–5.0
Bulgaria	29.0	No	–1.1	Mongolia	12.6	No	–16.0
Canada	49.0	Yes	–7.1	Mozambique	25.2	No	13.0
Cape Verde	3.4	No	19.0	Namibia	20.5	No	13.2
Chile	17.2	No	8.4	Netherlands	53.6	Yes	2.5
Colombia	16.3	No	12.7	New Zealand	51.2	Yes	8.5
Costa Rica	13.5	No	19.1	Nicaragua	18.7	No	26.3
Croatia	21.0	No	0.0	Norway	63.9	Yes	–4.0
Cyprus	18.7	No	11.4	Panama	22.3	No	27.0
Czech Republic	26.2	Yes	–1.3	Paraguay	9.5	No	18.0
Denmark	60.7	Yes	–0.4	Peru	9.9	No	14.8
Dominican Republic	26.4	No	24.2	Philippines	7.6	No	25.9
Ecuador	16.1	No	13.1	Poland	20.0	No	–3.7
El Salvador	16.4	No	22.2	Portugal	20.0	No	10.5
Estonia	28.2	Yes	–4.0	Romania	16.6	No	–2.9
Finland	58.0	Yes	–6.5	Senegal	26.8	No	17.0
France	22.3	Yes	3.5	Slovakia	21.2	Yes	–1.3
Georgia	18.7	No	0.9	Slovenia	19.6	No	–1.1
Germany	37.7	Yes	–0.9	South Africa	19.6	No	10.9
Ghana	15.5	Yes	24.1	South Korea	33.2	No	–3.5
Greece	21.6	No	9.1	Spain	32.8	No	5.3
Guatemala	21.5	No	16.5	Sweden	64.3	Yes	–3.5
Honduras	18.8	No	19.3	Switzerland	44.3	Yes	–1.1
Hungary	26.3	Yes	0.2	Taiwan	38.2	No	15.2
Iceland	45.3	No	–0.3	Thailand	54.2	No	25.5
India	33.9	No	14.1	Trinidad and Tobago	3.8	Yes	24.0
Ireland	39.1	Yes	4.8	Ukraine	27.8	No	–5.9
Israel	23.5	No	12.3	United Kingdom	36.4	Yes	3.9
Italy	29.7	No	6.8	Uruguay	27.3	No	10.5
Japan	39.7	Yes	6.9	USA	41.5	Yes	–1.0
Latvia	18.5	Yes	–4.9	Venezuela	14.1	No	24.5
Lesotho	15.7	No	9.0				

Note: Column 1 is social trust, 2 is pronoun drop, and 3 is minimum temperature.

Figure 2. *Trust and the size of the welfare state*

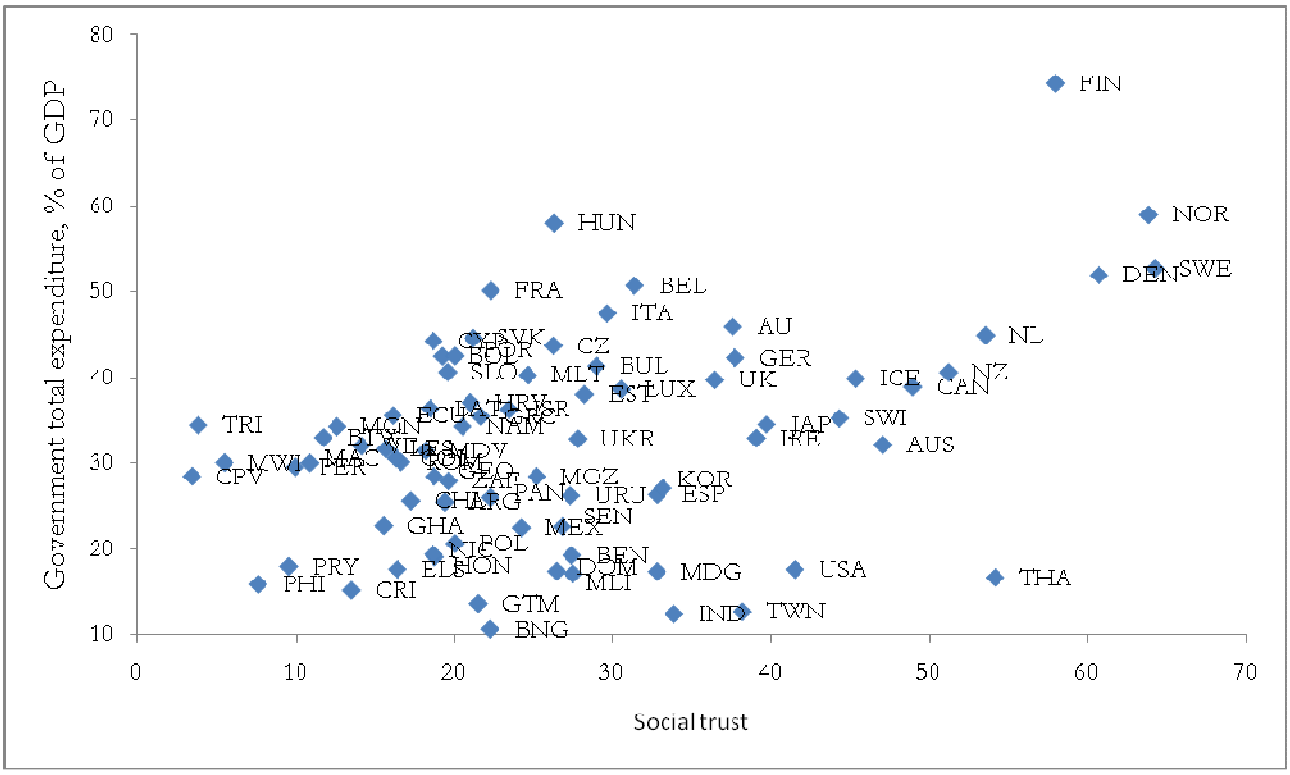
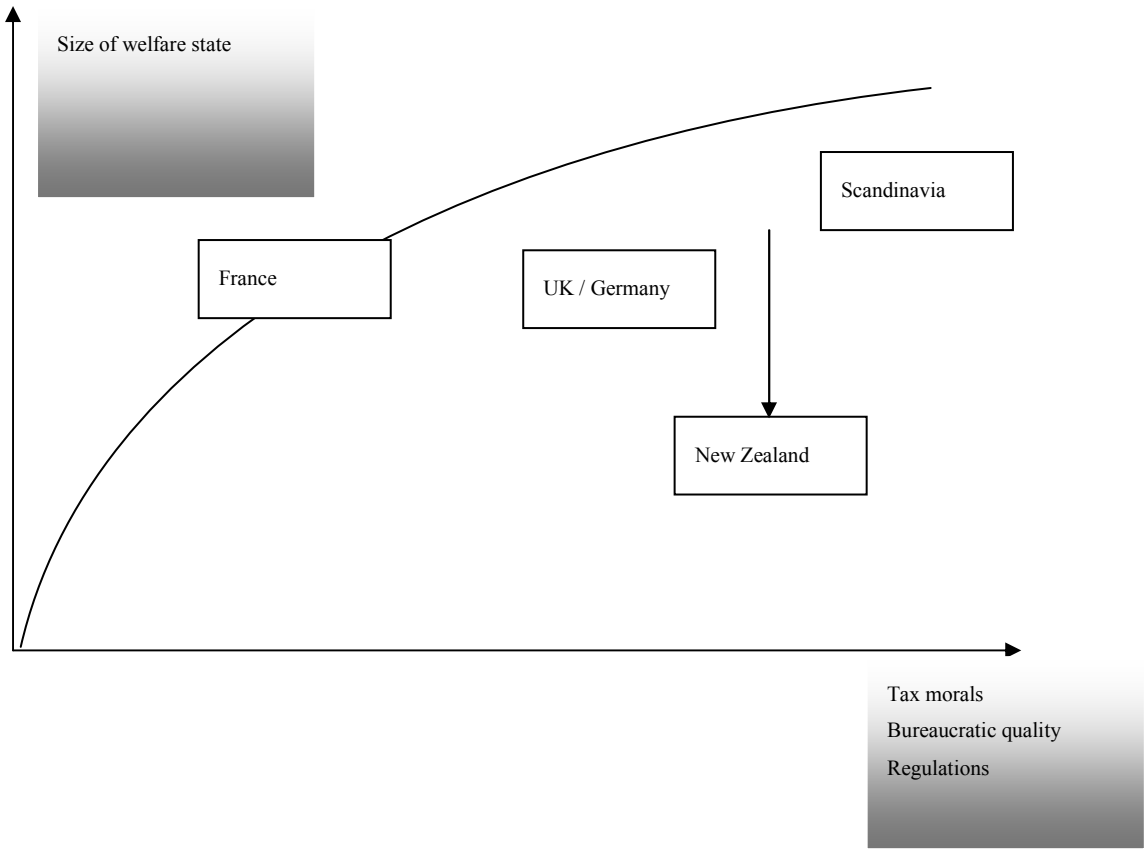


Figure 1

a. Social trust and the degree and universality of welfare



b. Links between trust and welfare state design