C A G E

Historical Self-Governance and Norms of Cooperation

CAGE working paper no. 718

August 2024

Devesh Rustagi

WARWICK
THE UNIVERSITY OF WARWICK

UKRI Economic and Social Research Council

Historical Self-Governance and Norms of Cooperation

Devesh Rustagi *

Abstract

Does self-governance, a hallmark of democratic societies, foster norms of generalized cooperation? Does this effect persist, and if so, why? I investigate these questions using a natural experiment in Switzerland. In the middle-ages, the absence of an heir resulted in the extinction of a prominent noble dynasty. As a result, some Swiss municipalities became self-governing, whereas the others remained under feudalism for another 600 years. Evidence from a behavioral experiment, World Values Survey, and Swiss Household Panel consistently shows that individuals from historically self-governing municipalities exhibit stronger norms of cooperation today. Referenda data on voter-turnout allow me to trace these effects on individually costly and socially beneficial actions for over 150 years. Furthermore, norms of cooperation map into prosocial behaviors like charitable giving and environmental protection. Uniquely, Switzerland tracks every family's place of origin in registration data, which I use to demonstrate persistence from cultural transmission in a context of historically low migration.

JEL: D02, H41, N43, Z10

Keywords: Self-governance, norms of cooperation, cultural transmission, public goods game, referendum, Switzerland

*Corresponding author: devesh.rustagi@warwick.ac.uk. Department of Economics, University of Warwick. I am thankful to the three anonymous referees for insightful comments and suggestions. I am especially grateful to Alberto Bisin, Pedro Dal Bo, Ernst Fehr, Andrew Foster, Bob Gibbons, Rafael La Porta, Nathan Nunn, Elias Papaioannou, Rajesh Ramachandran, Matthias Schief, Hans Joachim Voth, and Noam Yuchtman for their support and detailed feedback on the paper. I am also thankful to Charles Angelucci, Davide Cantoni, Oded Galor, Nicola Gennaioli, Nichola-Fuchs Schuendeln, Silvia Sonderegger, Guido Tabellini, David Weil, and Ekateriana Zhuravskaya for valuable feedback on the paper. I am thankful to seminar participants at Boston University, Brown University, UC Davis, HEC Lausanne, LMU Munich, NBER Organizational Economics, NYU CESS, Rotman Toronto, UCLA Anderson, UM Ann Arbor, University of Warwick, and University of Zurich for helpful comments. My special thanks to Marco Zanoli for providing historical maps, Prof. Andreas Ladner for providing data, and especially Marcella Veronesi for helping me during the early stages of this project. I am also thankful to Jonathan Conant and Amy Remensnyder, professors of medieval history at the department of history, Brown University for valuable discussions. I acknowledge financial support from ETH Zurich, Prof. Willi Zimmermann, and Alfons and Gertrud Kassel-Stiftung via Goethe University, Frankfurt. This study has been partially realized using data from World Values Survey (WVS), Swiss Household Panel (SHP) based at the Swiss Centre of Expertise in the Social Sciences FORS, and surveys with municipality administrators carried out by Prof. Andreas Ladner. Jan Balcerowski provided excellent research assistance for this project.

I. Introduction

Norms of cooperation are prescriptions of appropriate behavior in cooperation dilemmas. Since it is unfair if only some individuals contribute for the common cause, these norms could acquire the form of conditional cooperation, which urges individuals not to free ride but to cooperate if others do the same (see De Tocqueville, 1835; Elster, 1989; Bicchieri, 1990; Putnam et al., 1993; Fehr and Schmidt, 1999). There is evidence that many individuals display the norm of conditional cooperation, and this matters for a variety of prosocial behaviors (see Ostrom, 2000; Gächter, 2006; Fehr and Schurtenberger, 2018), such as donations to charities (Frey and Meier, 2004), management of commons (Rustagi et al., 2010), and tax compliance (Besley, 2020). Furthermore, norms of cooperation, when internalized, can shape preferences for cooperation (Bowles, 1998). Despite this, we know little about how norms of cooperation emerge, whether they persist, and if so, why? In this paper, I study whether more inclusive political institutions that encourage participatory self-governance foster internalized norms of cooperation.

Participatory self-governance is a hallmark of democracy, as it allows for deliberative and consensual style of decision-making. This stands in contrast to autocracy, where an individual holds absolute power and engages in arbitrary decision-making. These different modes of governance are hypothesized to affect norms of cooperation. Bentham (1816) and Mill (1816) argue that self-governance offers individuals the opportunity to understand the negative externalities their actions may have on others. This may prompt individuals to develop empathy, moderate their standpoint, and build consensus by integrating divergent points of view (Putnam et al., 1993; Habermas, 1996; Rodrik, 2000; Platteau, 2015). As individuals learn to negotiate and compromise in exchange for others doing the same, they come to acquire norms of cooperation. In contrast, autocratic rule involves decision-making by a small group of people who censor discussion and use brutality to deter opposition. This repression prevents individuals from speaking their mind and builds barriers between different groups, resulting in distrust and opportunistic free riding.

In a seminal paper, Guiso et al. (2016) found a positive effect of the Italian Free City experience on prosocial behaviors operating through self-efficacy beliefs. However, there is no evidence on the importance of self-governance for internalized norms of cooperation (Papaioannou, 2020). This evidence has remained elusive, in part, because it is difficult to measure norms. A positive association between self-governance and prosocial behaviors cannot be interpreted as reflecting norms. Prosocial behavior is an equilibrium outcome, which could be capturing the importance of other confounding motives like pure altruism, beliefs about others' contribution, reputation formation, repeated interaction, and social pressure (Bénabou and Tirole, 2006; Nunn, 2009; DellaVigna et al., 2012). Thus far, economists have paid little attention in separating norms from confounding motives, especially beliefs (see Alesina and Giuliano, 2015). This is a major gap, as scholars allude to

self-governance shaping our values, i.e., "the type of people we are" (Mill, 1816; Putnam et al., 1993; Rodrik, 2000; Besley, 2020). Moreover, previous studies are unable to track norms and prosocial behaviors over time, and offer little evidence on persistence in the face of migration. Crucially, self-governance may arise as a result of pre-existing differences. There is rarely compelling evidence from exogenous variation in self-governance.

I resolve these challenges using a combination of experimental, survey, historical, and administrative data over time from Switzerland, which offers plausibly exogenous variation in self-governance. Swiss municipalities acquired self-governance in two phases separated by a large gap. The first phase was in the Middle Ages, when several noble dynasties administered Switzerland feudally on behalf of the Holy Roman Emperor. In 1218, one of these dynasties – the House of Zaehringen – became extinct when its last duke died accidentally a few years after the accidental death of his only child and heir (Heyck, 1895; Lyon, 2013). Thereafter, the Zaehringen fiefs reverted to the emperor and received from him the privileged political status of "imperial immediacy". While still subjected to the emperor's rule, these fiefs became free from the authority of nobles, allowing citizens to engage in self-governance. In contrast, areas under the rule of other noble dynasties continued largely under feudalism for hundreds of years. The second phase began in the 19th century, when Napoleon invaded Switzerland and extended self-governance to areas still under feudalism via the Act of Mediation (1803). I compare municipalities that acquired self-governance in the first phase to those that acquired self-governance in the second phase.

Several features of this natural experiment are worth noting. First, the emergence of self-governance in areas under the Zaehringen rule rather than in areas under the rule of other dynasties was because of the accidental extinction of the Zaehringen family.[1] Importantly, areas with and without the Zaehringen rule were similar in geographical environment and past proxies of prosperity and education at the time of the extinction. Second, areas under the rule of other dynasties did not choose self-governance, but it was Napoleon who introduced these reforms. Also, Napoleon did not selectively target areas with the highest potential for norms of cooperation, but extended self-governance to all those that were still under feudalism.[2] After Napoleon was deposed in 1814, the Congress of Vienna and a Pact between the Swiss states (called cantons) ensured self-governance in every area. Third, some areas acquired self-governance in the first phase independently of the Zaehringen extinction, but compliance remains strong. Finally, though all areas eventually experienced self-governance, the large gap between the two phases created potential pathways for persistence.

Historical self-governance in Switzerland bore similarities to other self-governing areas

[1] Banerjee et al. (2005) and Iyer (2010) use the death of a ruler from the absence of an heir to study the effect of direct vs. indirect colonial rule on agricultural development in India.

[2] Acemoglu et al. (2011) use reforms by Napoleon to study economic growth in Germany.

of medieval Europe, which make the findings from this study of general interest. The Swiss experience is noted for its coverage of not just urban but also rural areas, stronger citizen participation, absence of outside interference, and early use of referendums. Also, the Swiss experience was long-lasting, far-reaching, and based on compromise and cooperation (McCrackan, 1901; Deutsch and Weilenmann, 1965; Kobach, 1993). In self-governing municipalities, councils had equal representation of individuals from different interest groups. Deliberation was achieved through compulsory attendance in meetings and face-to-face communication (Schlaak, 2010). Since no one group could dictate policy to the others, building consensus required groups to make concessions in exchange for other groups doing the same. Long-term exposure to this negotiation and compromise could have fostered norms of cooperation. In fact, laboratory studies show that face-to-face communication fosters cooperation by invoking norms and group identity (Orbell et al., 1988; Bochet et al., 2006).

I measure norms of cooperation as a preference for *generalized* conditional cooperation in interactions with strangers. I use an online public goods game in which two Swiss citizens unknown to each other are paired randomly in a one-shot, anonymous interaction, ruling out benefits from repeated interaction and reputation formation. Each individual receives an endowment of 100 Swiss Franks (CHF) and has to decide on their contribution to the public good in units of 10 CHF. The game is implemented in the strategy method, whereby individuals decide on their contribution conditional on eleven contribution decisions by the other player, which shuts down beliefs from playing a role (Fischbacher et al., 2001). I classify individuals as *free riders* if they always contribute close to zero, *altruists* if they always contribute full endowment, and *conditional cooperators* if their contribution increases in the contribution of the other player, as revealed by the Spearman rank correlation. Since a negligible fraction of individuals behave as altruists, lower values of Spearman *rho* imply free riding, whereas higher values imply stronger propensity for conditional cooperation.

I present three sets of results. First, I use OLS estimates to show that individuals from historically self-governing municipalities display twice the conditional cooperation of individuals from municipalities without historical self-governance. Instrumental variables estimates using the Zaehringen fief as an instrument for historical self-governance confirm these findings. Data from World Values Survey (WVS) and Swiss Household Panel (SHP) on attitudes towards cooperation like cheating on taxes, claiming false social benefits, lying in own interest, and paying a bribe yield similar results. Second, I show that historical self-governance has a positive effect on prosocial behaviors like donations to charities, membership in associations, and environmental protection. I then leverage 150 years of data on individually costly but socially beneficial behaviors like voting in referendums to show that historically self-governing municipalities witnessed higher voter turnout, as well as stronger support for women's suffrage and citizenship to minorities. Third, I find a

positive association of norms and attitudes with a variety of prosocial behaviors, highlight their importance in achieving cooperation.

All Swiss municipalities eventually acquired self-governance, so why do differences in norms of cooperation persist? The strong presence of state agencies and infrastructure in Switzerland rules out state capacity, protection of property rights, and constraints on executive. It is plausible that norms shaped by exposure to self-governance were passed on to the subsequent generations through cultural transmission (Boyd and Richerson, 1988; Bisin and Verdier, 2001). I shed light on this channel using the epidemiological approach (Fernandez, 2007; Giuliano, 2007). I show that Swiss migrants whose *birth* municipality *did* experience historical self-governance show stronger conditional cooperation than Swiss migrants whose *birth* municipality *did not*, despite living in the same canton.

Cultural transmission requires low historical migration to ensure that current inhabitants are related to initial inhabitants exposed to the treatment. I use a novel dataset that tracks the movement of Swiss family names from their town of origin to their town of destination to construct a measure of historical migration. I find that historical migration was low and controlling for it does not change the main results.

Persson and Tabellini (2009) argue that transition from autocracy to self-governance occurs gradually through the accumulation of democratic capital from historical experience. Municipalities with longer history of self-governance had more time to build and consolidate democratic capital. This could have contributed further to persistence via a feedback loop in which self-governance and norms of cooperation reinforce each other (Besley and Persson, 2019). Cultural transmission and low migration are likely to have fostered this feedback loop further. Indeed, historically self-governing municipalities have stronger self-governing institutions even today: they hold twice as many referendums and initiatives to arrive at local decisions. Data from the WVS and SHP show that individuals from these municipalities hold stronger attitudes and support for democracy.

Related Literature. This paper contributes to several strands of literature. First, it builds on studies that show positive long-run effects of political institutions on economic development (Gennaioli and Rainer, 2006, 2007; Michalopoulos and Papaioannou, 2014; Guiso et al., 2016; Dell et al., 2018). However, these studies do not investigate how political institutions shape norms of cooperation and prosocial behaviors.

Second, the paper complements studies linking self-governance with beliefs and prosocial behavior in the field (Guiso et al., 2016) and cooperation outcomes in the lab (Dal Bó et al., 2010; Sutter et al., 2010). This paper goes beyond by highlighting the importance of self-governance in shaping norms of cooperation independently of beliefs, and then linking these norms further to a variety of prosocial behaviors. This fills an important gap in the literature which emphasises inclusive political institutions to have a bearing on our norms and values (Putnam et al., 1993; Habermas, 1996; Rodrik, 2000; Platteau,

2015; Besley, 2020).

Third, the paper relates to the literature on determinants of cultural traits, in particular, the interaction of institutions and culture (Alesina and Giuliano, 2015). Tabellini (2010) shows constraints on executive and trust are complements, but Lowes et al. (2017) show state formation and norms of rule following are substitutes. This paper shows that self-governance and norms of cooperation are complements using a combination of experimental, survey, historical, and administrative data to reach similar conclusions, which bolsters the main findings.

Fourth, previous studies document the importance of historical treatments for cultural traits in contemporaneous periods. This paper uses administrative data on referendums to track voter turnout, support for women's suffrage and minority citizenship in both contemporaneous and historical periods. In doing so, the paper contributes to the literature on long-run effects of historical events (Nunn, 2009), as well as determinants of voter turnout (Leeson, 2008) specifically in Switzerland (Bursztyn et al., 2017), women's suffrage (Moehling and Thomasson, 2020), and minority rights (Trebbi et al., 2008).

Fifth, the paper contributes to the literature on cultural persistence. Despite the importance of migration in explaining persistence, it is rarely studied in a historical context (Voth, 2021). This paper uses a novel dataset to provide insights on historical migration and how this affects the association of historical events with norms today.

The paper is organized as follows. Section II describes the historical background. Section III presents measures of historical self-governance and norms of cooperation. Section IV presents the empirical strategy, Section V the results on norms of cooperation and Section VI on prosocial behaviors and voter turnout. Section VII discusses plausible channels and Section VIII offers concluding remarks.

II. Historical Background

Historical self-governance emerged over two phases in Switzerland. I describe these phases below and then discuss the manner in which historical self-governance was implemented.

II.A. Emergence of Historical Self-Governance

Phase I. – In the Middle Ages, Switzerland was under the control of four major noble dynasties: Zaehringen, Kyburg, Hapsburg, and Savoy (see Figure 1). The dynasties acquired large parts of their territory from the Holy Roman Emperor and administered these on his behalf as imperial fiefs, whereas a small share of territories acquired through family inheritance was administered as private fiefs. The decision-making in the fiefs was dominated by aristocrats who appointed "the richest, most distinguished and powerful" individuals to the governing council (Holenstein, 2014). The citizens, such as craftsmen

and peasants, to whom the areas owed their wealth were excluded from participation. This strong hierarchy of privileges benefited the aristocrats at the cost of the citizens.

Figure 1: Location of the Noble Dynasties in Medieval Switzerland

Notes. The map shows areas under the rule of different noble dynasties in Switzerland before the Zaehringen extinction. Source: Marco Zanoli 2011.

In 1218, the House of Zaehringen became extinct when its last duke (Berchtold V) died accidentally at the age of 58 years, a few years after the accidental death of his only child and heir. This extinction led to the reversion of the Zaehringen imperial fiefs to the Holy Roman Emperor, Frederick II, who used the German feudal law to confer upon these fiefs a privileged political status of "Imperial immediacy".[3] Though still subjected to the fiscal, military, and hospitality demands of the emperor, the imperials fiefs were now free from the authority of nobles and their citizens could participate in decision-making. In contrast, the Zaehringen private fiefs were divided between the surviving family members, and like fiefs under the rule of other dynasties, remained under nobility.

Several historians have underlined the importance of the Zaehringen extinction for the emergence of self-governance in large parts of Switzerland. Hug and Stead (1893, p98) write that Switzerland was spared a monarchical fate "by a natural yet providential event, the extinction of the ducal family. For in 1218 Berchtold V dies, leaving no issue." McCrackan (1901, p58) notes "the extinction of the house of Zaehringen came most opportunely, for it is entirely within the range of possibility, that, otherwise, the state they had erected, might have become a principality, or even a monarchy, as enduring as any of those which surround Switzerland today." Eugster (2020) remarks "the fragmentation and the loose state of the Zaehringen inheritance served as an essential prerequisite for the tendency towards more municipal autonomy of the 13th and 14th century." Importantly, the historical sources do not mention of any concurrent change that would have put areas

[3]See Appendix I.A for plausible reasons behind Frederick II's decision.

on the same path of self-governance as the Zaehringen extinction.

In 1250, Frederick II's death resulted in the great interregnum. This allowed self-governed areas to acquire considerable rights and powers previously exercised by the emperor to the point of full independence. The interregnum ended in 1273 with the election of a Hapsburg as the German king, who desired to bring back self-governing areas under his control. To counteract this threat, the self-governing areas forged an alliance called the Old Swiss Confederacy, which fought three wars with the Habsburg to, inter alia, retain self-governance.

Some areas, especially in the remote alpine regions of Switzerland that were not under the rule of any noble dynasty, acquired self-governance in the middle ages independently of the Zaehringen extinction. However, this partial compliance was not large enough to offset the role of Zaehringen extinction in the emergence of self-governance.

Phase II: Reforms by Napoleon–. Napoleon invaded Switzerland in 1798 and issued the Act of Mediation in 1803. This act liberated the feudal areas, made them sovereign members of Switzerland, and allowed them to have representative governments. After Napoleon was deposed in 1814, there were concerns that the newly liberated areas might revert to feudalism. The Congress of Vienna encouraged all cantons to sign the Pact of 1815, which ensured their sovereignty (Zschokke, 1860; Hug and Stead, 1893). McCrackan (1901, p322) noted, "one is gratified to read that no subject lands and no privileged political classes would be tolerated hereafter." In 1848 and 1890s, Switzerland formally adopted referendums and people's initiatives as instruments of direct democracy. Today, Switzerland uses direct democracy at federal, cantonal, and municipal level.

II.B. Styles of Historical Self-Governance

Deutsch and Weilenmann (1965) note the Swiss style of self-governance was "more co-operative and less competitive, more moderate and inclined to relatively stable alliances and compromises". Despite common features, there were differences in styles depending largely on whether an area was rural or urban. In the rural areas, such as Glarus and Uri, eligible male citizens participated directly in decision-making through voting by show of hands in open-air public assemblies called *landsgemeinde* (see Figure A.1). These assemblies constituted the highest authority through which a governing council comprising an equal number of members from each commune was elected, new laws were enacted, and superior officials including mayors and judges were appointed (Deploige and Heuvel, 1898). In the urban areas like Zurich and Basel, governing councils were divided into a smaller council (*Kleiner Rat*) comprising 50-60 members, and a greater council (*Grosser Rat*) comprising 60-200 members. These councils included an equal share of citizens from diverse interest groups, who were elected or nominated by citizens or guilds or other community-level bodies. The councils deliberated on decisions related to the formulation

of laws, election of mayor, and also constituted the highest court (see Figure A.2). In the feudal areas like Vaud and Thurgau, the citizens were without political rights and were excluded from participation in decision-making (see Figure A.3). The bailiffs who oversaw the governance of these areas were appointed by and served the interest of the ruling power (Holenstein, 2013).

Many self-governed areas shared common elements including citizen participation in local-level decisions, constraints on the power of the elite, and reasonable dialogue between different groups to achieve mutual consensus (Berner, 2006; Stadler, 2008; Holenstein, 2014). The council met regularly, restricted the number of topics discussed on a given day, and strictly enforced the "principle of presence" which required compulsory attendance in meetings (Deploige and Heuvel, 1898; Schlaak, 2010). The primary form of deliberation was direct face-to-face communication, as there was limited use of writing (Hoffmann-Rehnitz, 2010, p15). The power of the elites was curtailed through the inclusion of different interest groups in equal numbers in the council. Furthermore, the electoral principles prevented individuals from bequeathing municipal offices and from having siblings in the council. As the British ambassador to Bern, Stanyan (1714, p74) noted: "neither father or son nor two brothers can be of the council at the same time". In one of the rural areas, a referendum forbade a powerful monastery from using the common grazing land for free and ordered it to pay the same tax per cow as the local farmer or face exclusion from using the common (McCrackan, 1901). These experiences were important for a wider social and political integration of different group members and made them feel as belonging to "one association and one political body" (Hoffmann-Rehnitz, 2010, p15).

Several historical events suggest that historical self-governance was valued by people. As an example, the self-governing areas engaged in three costly wars with Habsburgs, a major power of that time, to retain their status, even when they could have avoided these costs by accepting Habsburg suzerainty. The fact that they chose otherwise reveals the importance of self-governance (see Appendix A for details). Several records further speak of historical self-governance as reflecting a "historical" form of democracy (Deploige and Heuvel, 1898). The mayor of Schaffhausen noted in 1653 the rural cantons as places where "democratic forms are very much appreciated". A source from Grisons in 1618 says, "the form of our government is democratic" (Suter, 2016). Stanyan (1714, p108-109), also described rural cantons as "wholly democratic" where "sovereignty resides absolutely in the body and mass of the people". McCrackan (1901, p281) notes "...the Swiss States, both country districts and towns, were organized upon democratic principles". Nonetheless, it would be a mistake to view medieval Switzerland as a place with modern democratic principles, as in equal rights for all. The self-governance movement declined towards the end of the 17th century. The decline was weaker in rural areas and cities with guilds (Stanyan, 1714; Holenstein, 2014).

III. Data and Descriptive Statistics

I measure historical self-governance at the municipal level, whereas norms of cooperation are measured at the individual level. The main sample comes from a behavioral experiment, which comprises 262 individuals from 174 municipalities and 23 cantons of Switzerland.[4] These individuals and municipalities were selected using procedures described in Appendix A.II. Table A.1-Table A.2 show that municipalities and individuals in the sample are comparable to those that are not across a variety of characteristics, even when the comparison is within cantons. Table A.3 further shows that the municipalities in the sample are comparable to municipalities in Switzerland.

In addition to the behavioral experiment, I use survey data on attitudes towards cooperation from World Values Survey (WVS) (Inglehart et al., 2022) and Swiss Household Panel (SHP) (FORS, 2022). I also use data on prosocial behaviors like donations to charities, membership in associations, and environmental protection from SHP (FORS, 2022). I augment this further with administrative data on voter turnout in referendums and initiatives (Swiss Federal Office for Statistics, 2022). I describe below the measures of historical self-governance and conditional cooperation. The data on attitude towards cooperation are described in Section V, and on pro-social behaviors and voter turnout in Section VI.

III.A. Historical Self-Governance

I collect information on historical forms of citizen participation in decision-making in a municipality, as well as the historical bailiwick and the canton in which the municipality (was) is situated. For this, I rely mainly on Historical Lexicon of Switzerland (HLS, 2018), books by Swiss historians – Gasser (1932) and Zschokke (1860), accounts of American journalist – McCrackan (1901), and British Ambassador to Bern – Stanyan (1714).

My main measure is *experience* of historical self-governance. It is an indicator variable, which equals 1 for municipalities that allowed for self-governance before the reforms by Napoleon, otherwise 0. In my sample, 80 municipalities (46 %) with 143 individuals (55 %) experienced historical self-governance. Figure 2 shows the location of these municipalities, whereby the size of each circle is weighted by the sample from that municipality.

While conducting robustness checks, I use *duration* of historical self-governance. It is measured as the difference between the year Napoleon introduced reforms (1803) and the year around which a municipality acquired historical self-governance. If all municipalities acquired self-governance due to the Zaehringen extinction then duration will be the same

[4] I exclude the canton of Ticino from this study. This is because, unlike the rest of Switzerland, Ticino is the only canton which is located to the south of the Alps, where the majority speak Swiss Italian, which has a different climate, and which was not part of the Swiss historical landscape. It was integrated into Switzerland only in the 16th century, some 300 years after the Zaehringen extinction. For these reasons, Ticino is unlikely to be a valid counterfactual.

as experience. But because of partial compliance, municipalities acquired self-governance at different points in time for reasons unrelated to the Zaehringen extinction. For rural self-governing municipalities, I use the date when public assembly got established. For urban self-governing municipalities, I use the date when an independent council was elected. For some municipalities precise dates are not available, so I use the date around which the political status of these places was affected. The sample average is over 200 years, but it is 436 years in historically self-governing municipalities.

Figure 2: Location of Municipalities without and with Historical Self-Governance

Notes. The map shows municipalities with (red circles) and without (black circles) historical self-governance. The size of the circle is weighted by the sample size. The map also shows the location of the Alps and the canton of Ticino (excluded from the study).

III.B. Norms of Cooperation

I measure norms of cooperation primarily as a preference for *generalized* conditional cooperation. Measuring conditional cooperation using observational data is very difficult because of confounding with other motives operating at the same time. These include repeated interaction, reputation formation, and beliefs about others' contribution. To separate these different motives, I use a public goods game that follows the protocol of Fischbacher et al. (2001) and Fischbacher and Gächter (2010) (see Appendix B for instructions and procedures).[5] It has two key features: (a) one-shot interaction between strangers, which rules out repeated interaction and reputation formation from playing a role, (b) use of strategy method in which players respond to all possible contributions by the other player, which shuts down beliefs from playing a role. This protocol has been externally validated by Rustagi et al. (2010) and Kosfeld and Rustagi (2015).

In the game, two players were randomly assigned to an experimental group. The players knew that the other player is from Switzerland, but nothing other than that.

[5]I conducted three different public goods games; this paper is based on the first game.

Each player received an endowment of 100 Swiss Francs ($\sim$ USD) and could contribute any amount from 0 to 100 in the units of 10 Swiss Francs to the public good, that is, {0, 10, 20, ..., 100}. The amount in the public good was increased by 1.5 times and then distributed equally between the two players, regardless of their contribution. The payoff of player i, where $i \in \{1, 2\}$, is given by the following equation:

$$\pi_i = 100 - C_i + 0.75(C_1 + C_2), \tag{1}$$

where 100 is the endowment received at the start of the game, C_i is the contribution of player i to the public good, 0.75 is the marginal per capita return from investing in the public good, and $C_1 + C_2$ is the total contribution to the public good. Since each Swiss Franc contributed to the public good yields only 0.75 cents back, it was individually rational for players to contribute zero to the public good. However, because the *number of players**0.75 > 1, it was socially optimal to contribute the full endowment; this created a cooperation dilemma. The game involved two decisions:

a) *Unconditional*: players decided simultaneously on their contribution to the public good and beliefs about other players' contribution played a role. Contributions in this decision are confounded with beliefs and thus could be capturing multiple equilibria – individuals with similar norms contribute differently because of differences in their beliefs. This makes contribution in the unconditional decision a poor guide to norms of cooperation.

b) *Conditional*: each player decided on her contribution for each of the 11 possible contribution decisions of the other player (strategy method). Since now the players could make their decisions contingent on the contribution of the other player, beliefs do not play a role. This provided a clean measure of norms of cooperation.

At the end of the game, a lottery was drawn to determine the player for whom the unconditional decision is payoff relevant. This was matched with the corresponding contribution in the conditional decision by the other player to determine payoffs.[6]

I use the conditional decision to classify individuals as *conditional cooperators* if they increase their contribution in response to the increasing contribution of the other player (p-value < 0.01), *free riders* if they never contribute or contribute non-zero in only one decision or never contribute over 10 in any of the decisions, *altruists* if they always contribute 100, *flat* if they always contribute the same amount but different from zero or 100, *hump-shaped* if their contribution first increases in the contribution of the other player but then decreases, and *unclassifiable* if they do not fall into any of the above categories. The types differ neither in time taken to complete the experiment (p-value=0.47) nor game comprehension (p-value=0.99). Table A.4 and Figure A.5 show the behavior of

[6] 40 participants were randomly selected for payments. Since individuals could earn up to 175 Swiss Francs, the expected payoff per participant is 27 Swiss Francs. Bettinger and Slonim (2007) show that such a procedure does not bias behavior. The chosen participants earned on average 135 Swiss Francs.

these types and their share in the sample. I further show that unclassifiable types are not confused but show a tendency for free riding (see Figure A.6, Appendix A.III).

I use the Spearman rank correlation between own contribution and the other players' contribution in the conditional decision to measure conditional cooperation (Fischbacher et al., 2001; Fischbacher and Gächter, 2010). The higher the Spearman *rho*, the higher is the propensity to cooperate conditionally. The average propensity for conditional cooperation is 0.646 points (s.d. 0.545).[7]

III.C. Descriptive Evidence

Figure 3 shows the association between historical self-governance and conditional cooperation. It is evident from the map that individuals from municipalities with historical self-governance are much more likely to be conditionally cooperative than individuals from municipalities without historical self-governance. The bar graph confirms this finding. The raw difference in conditional cooperation across individuals from municipalities with (0.83) and without (0.43) historical self-governance is large in magnitude and is also statistically significant (p-value < 0.001).[8]

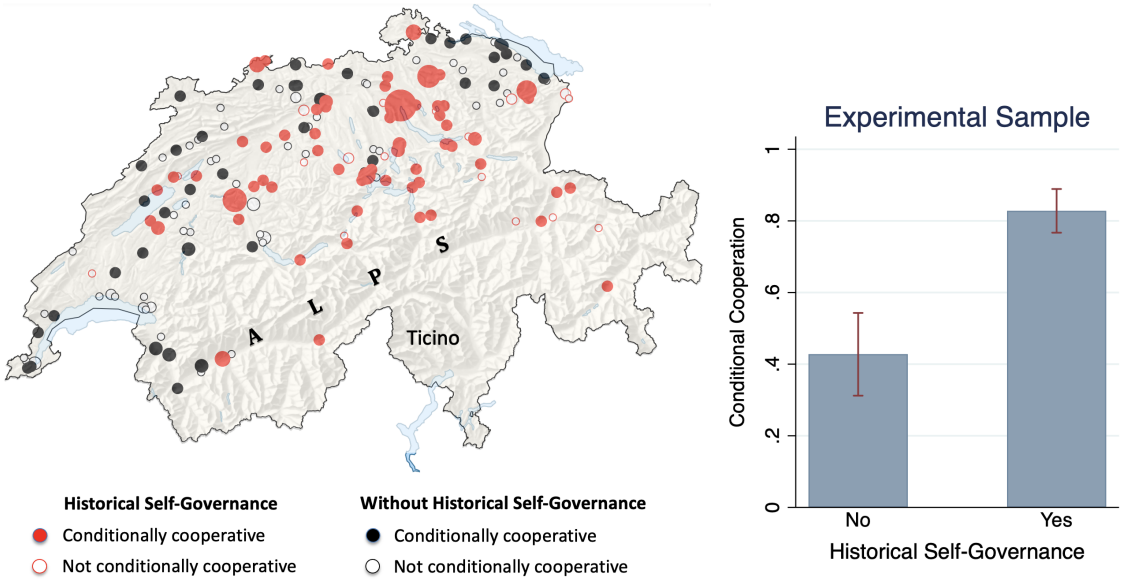


Figure 3: Historical Self-Governance and Conditional Cooperation

Notes. Each circle on the map is a municipality. Circles with red outline are municipalities with historical self-governance, whereas those with black outline are municipalities without historical self-governance. Solid circle (red or black) means individuals are conditionally cooperative. Hollow circles (red or black) mean that the individuals are not conditionally cooperative. The size of the circle represents the frequency of each individual type in the municipality. The bar graph shows average conditional cooperation by historical self-governance. The capped bars indicate 95 percent confidence bands.

[7] In the second experiment with the same participants, individuals were randomly matched with another player either from their own linguistic group (in-group) or from another linguistic group (out-group). I find that conditional cooperation does not differ by identity.

[8] The difference remains large when I split the data by covariates (Figure A.7).

IV. Empirical Specification and Strategy

I examine econometrically the effect of historical self-governance on norms of cooperation. Exposure to historical self-governance might come from an individuals' municipality of residence as well as the municipality of birth. Since for a large majority of the respondents these two overlap and the results do not change, I use exposure from the municipality of residence. Specifically, I estimate the following equation:

$$Norms_{imk} = \beta_0 + \beta_1 HSG_{mk} + \mathbf{X}_{imk}\beta_2 + \mathbf{M}_{mk}\beta_3 + \epsilon_{imk} \tag{2}$$

where $Norms_{imk}$ is the norm of cooperation of individual i from municipality m and canton k. It is measured primarily as the Spearman ρ between own and other players' contribution in the conditional decision of the public goods game. Subsequently, I also present results using survey data on attitudes towards cooperation, a variety of prosocial behaviors, as well as administrative data on voter turnout. HSG is historical self-governance from the resident municipality. It is measured primarily as an indicator for experience. While conducting robustness checks, I also present results using duration, which is the number of years a municipality experienced historical self-governance. The coefficient of interest is β_1, which captures the effect of historical self-governance on norms of cooperation.

$\mathbf{X}$ is a vector of individual specific characteristics that include age, education, gender, log household income, religion (indicator variable for Catholic and Protestant, baseline category is no religion and others), and politics (indicator variable for left wing and center, baseline category is right wing and others). $\mathbf{M}$ is a vector of municipality specific characteristics that include proxies of geography (altitude, navigable waterways in the Middle Ages), historical development and education before the Zaehringen extinction (medieval church including Bishop and abbey), and current economic environment (Gini of income). I consider additional variables when conducting robustness checks including climate and soil suitability for agriculture (Galor and Özak, 2016), an indicator for Roman town, population density and population growth in the historical past (Ashraf and Galor, 2011), and an indicator for access to monasteries. The data sources and summary statistics on these variables are listed in Table A.5 and Table A.6 of Appendix.

I cluster standard errors at the treatment unit, which is a municipality. The results hold when I cluster standard errors on the municipality and the canton, or the municipality and the historical canton, or account for spatial correlation of errors using 25, 50, 75 km distance as cutoffs.

The Zaehringen extinction served as a natural experiment through which historical self-governance was assigned. However, because of partial compliance, the intended treatment assignment is not the same as the actual treatment delivery. This means the OLS

estimates of equation 2 could be potentially biased. One may use intention-to-treat estimate to correct for this bias, but studying the effect of Zaehringen imperial fief on norms of cooperation is unlikely to be of interest. To mitigate this concern I use (a) balance-check on observables and fixed effects strategy, and (b) instrumental variables estimates.[9]

IV.A. Balance-Check and Fixed Effects

Balance check.– Table 1 and Table 2 show the means of municipal and individual level covariates for municipalities without (column 1) and with (column 2) historical self-governance. Columns 3-4 report the difference in means without and with controls. The differences turn out to be mostly small in magnitude and are also statistically insignificant. Figure A.9 shows that the municipalities are also similar with respect to prosperity in the past proxied by population density and population growth. Figure A.10 shows similar patterns using current proxies of prosperity.

Fixed effects.– I consider canton fixed effects to account for cantonal wide factors. However, only the canton of Bern offers reasonable variation (17 municipalities without and 10 with historical self-governance). Becker et al. (2016) show that empires can have long-lasting effects even after they perish. So, I additionally consider fixed effects for the historical cantons with which the municipalities were associated before the invasion by Napoleon. The two fixed effects differ for 8 cantons, of which only the *historical* canton of Bern offers reasonable variation. It covered 25 percent of Switzerland and included the modern canton of Bern (excluding the Bernese Jura), canton of Vaud, and the western half of the canton of Aargau for at least two hundred and fifty years (1526 to 1798). Over 25 percent of the municipalities in the sample are from the historical canton of Bern (31 without and 14 with historical self-governance). Switzerland is a multilingual country, but language varies almost exclusively between cantons and individuals rarely migrate across the linguistic regions. So, canton fixed effects already account for linguistic differences. Only three cantons (Bern, Fribourg, and Valais) offer variation in language, as these are home to Swiss German and Swiss French.[10]

Since the inclusion of the three fixed effects has efficiency implications, I gauge their importance by looking at the raw difference in conditional cooperation by historical self-governance within the canon of Bern, historical canton of Bern, and Swiss German in Figure A.11. The patterns suggest that factors specific to cantons, historical cantons, and language are unlikely to play a role.

[9] A regression discontinuity approach is difficult to implement because the number of municipalities with and without historical self-governance at the border is not large enough to wield power. Nonetheless, comparing municipalities within 15km on either side of the Zaehringen boundary yields a positive and significant coefficient (coef. 0.30, s.e. 0.12).

[10] Most Italian speakers reside in Ticino, which was excluded from the study. I do not separately account for Rheato-Romance because of very few observations. I classify them as Swiss German because of their fluency in the dialect, as also revealed in the post-experimental survey.

Table 1: Balance Check: Municipal Level Covariates

	Historical Self-Governance		Difference (2) – (1)		Zaehringen imperial fief		Difference (6) – (5)	
	No	Yes	Controls		No	Yes	Controls	
			No	Yes			No	Yes
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	A: Main covariates							
Altitude	4.546	4.902	0.356	0.295	4.696	4.767	0.071	0.052
	(1.0029)	(1.775)	(0.225)	(0.185)	(1.496)	(1.108)	(0.229)	(0.187)
Navigability	0.479	0.450	-0.029	0.024	0.454	0.515	0.061	0.084
	(0.502)	(0.501)	(0.076)	(0.074)	(0.500)	(0.508)	(0.097)	(0.103)
Church	0.085	0.125	0.040	0.054	0.078	0.212	0.134	0.074
	(0.281)	(0.333)	(0.047)	(0.047)	(0.269)	(0.415)	(0.075)	(0.075)
Gini income	0.335	0.342	0.007	-0.007	0.345	0.309	-0.036	-0.001
	(0.059)	(0.062)	(0.009)	(0.005)	(0.062)	(0.039)	(0.009)	(0.006)
	Panel B. Additional covariates							
Climate	1.479	1.188	-0.291	-0.140	1.312	1.485	0.173	-0.012
	(0.684)	(0.748)	(0.109)	(0.095)	(0.728)	(0.712)	(0.137)	(0.122)
Soil	1.596	1.400	-0.196	-0.017	1.433	1.818	0.386	0.641
	(1.609)	(1.650)	(0.248)	(0.243)	(1.569)	(1.845)	(0.345)	(0.341)
Roman	0.085	0.100	0.015	0.043	0.071	0.182	0.111	0.051
	(0.281)	(0.302)	(0.044)	(0.042)	(0.258)	(0.392)	(0.071)	(0.069)
Distance	22.832	19.351	-3.481	-4.055	20.487	22.876	2.029	-1.138
	(15.800)	(18.002)	(2.589)	(2.409)	(16.263)	(19.527)	(3.636)	(3.434)
Monastery	0.245	0.263	0.018	-0.039	0.248	0.273	0.025	0.077
	(0.432)	(0.443)	(0.067)	(0.068)	(0.434)	(0.452)	(0.086)	(0.081)
Population	1.971	2.736	0.726	0.551	2.155	2.857	0.289	1.192
	(2.747)	(1.957)	(1.071)	(2.539)	(2.226)	(2.489)	(1.248)	(1.379)
Obs.	94	80	174	174	141	33	174	174

Notes: PANEL A. Altitude is of the main municipality settlement in meters/100; Navigability is an indicator for being on a river/lake that was navigable in the Middle Ages; Church is an indicator for Bishop and abbey before 1218; Gini income is from 2006. PANEL B. Climate is municipality suitability for agriculture: highly suitable, suitable, and borderline suitable/ unsuitable. Soil is municipality suitability for agriculture: very good production, good production, average production, impaired production, and unsuitable. Roman is an indicator for Roman town. Distance is km on foot from the medieval cantonal capital. Monastery is an indicator for location within 5 km from a monastery of any order post 1218. Population is from the late Middle Ages/ 1000. Columns 1-2 report summary statistics by historical self-governance. Columns 3-4 report the difference in means without and with controls. Columns 5-6 report summary statistics by Zaehringen imperial fief. Columns 7-8 report the difference in means without and with controls. Control variables include other remaining variables together with municipal level proxies of education, income, religion, and politics. The numbers in parentheses are standard deviations in columns 1-2 and columns 5-6, and standard errors in columns 3-4 and columns 7-8. While regressing population on historical self-governance, I control for the date for which the data is available. In other regressions, I exclude population because it is available for few municipalities only.

Table 2: Balance Check: Individual Level Covariates

	Historical Self-Governance		Difference (2) – (1)		Zaehringen imperial fief		Difference (6) – (5)	
	No	Yes	Controls		No	Yes	Controls	
			No	Yes			No	Yes
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Panel A: Conditional cooperation							
Spearman ρ	0.428	0.828	0.400	0.449	0.592	0.793	0.202	0.208
	(0.636)	(0.369)	(0.063)	(0.070)	(0.581)	(0.399)	(0.057)	(0.094)
	Panel B: Main covariates							
Age	45.378	42.678	-2.700	-2.779	44.717	41.718	-2.999	-3.322
	(14.136)	(12.869)	(1.753)	(2.213)	(13.792)	(12.513)	(1.754)	(2.545)
Education	0.395	0.497	0.102	0.083	0.419	0.535	0.116	0.021
	(0.491)	(0.502)	(0.065)	(0.068)	(0.495)	(0.502)	(0.073)	(0.085)
Male	0.546	0.531	-0.015	-0.020	0.518	0.592	0.073	0.113
	(0.500)	(0.501)	(0.069)	(0.072)	(0.501)	(0.495)	(0.073)	(0.084)
HH-income	11.650	11.562	-0.087	-0.011	11.605	11.592	-0.013	-0.116
	(0.514)	(0.544)	(0.063)	(0.059)	(0.521)	(0.563)	(0.075)	(0.067)
Catholic	0.311	0.329	0.018	0.059	0.366	0.197	-0.169	-0.076
	(0.465)	(0.471)	(0.061)	(0.048)	(0.483)	(0.401)	(0.056)	(0.056)
Protestant	0.336	0.385	0.048	0.074	0.335	0.437	0.102	0.066
	(0.474)	(0.488)	(0.059)	(0.049)	(0.473)	(0.499)	(0.060)	(0.061)
Left wing	0.353	0.315	-0.038	-0.034	0.335	0.324	-0.011	-0.012
	(0.480)	(0.466)	(0.066)	(0.053)	(0.473)	(0.471)	(0.091)	(0.071)
Center	0.403	0.455	0.051	0.003	0.424	0.451	0.027	0.045
	(0.493)	(0.500)	(0.051)	(0.051)	(0.496)	(0.501)	(0.059)	(0.061)
	Panel C: Additional covariates							
Naturalized	0.210	0.196	-0.014	-0.021	0.194	0.225	0.032	0.033
	(0.409)	(0.398)	(0.061)	(0.053)	(0.396)	(0.421)	(0.067)	(0.069)
Migrant	0.387	0.364	-0.023	-0.019	0.408	0.282	-0.127	-0.036
	(0.489)	(0.483)	(0.071)	(0.072)	(0.493)	(0.453)	(0.071)	(0.090)
Comprehension	0.571	0.608	0.037	0.047	0.592	0.592	0.000	0.051
	(0.497)	(0.486)	(0.081)	(0.069)	(0.493)	(0.489)	(0.125)	(0.095)
Observations	119	143	262	262	191	71	262	262

Notes: PANEL A. Spearman ρ is between self and other players' contribution in the conditional decision of the public goods game. PANEL B. Age is in years. Education is an indicator for an individual with polytechnic / university degree. Male is an indicator for male. HH income is the log of annual household income/1000. Catholic and protestant are indicators for religion. Left wing and center are indicators for political orientation. PANEL C. Naturalized and migrant are indicators for naturalized Swiss citizenship and Swiss migrant. Comprehension is an indicator for individuals who got the control questions right in the first attempt. Columns 1-2 report summary statistics by historical self-governance. Columns 3-4 report the difference in means without and with controls. Columns 5-6 report summary statistics by Zaehringen imperial fief. Columns 7-8 report the difference in means without and with controls. Control variables include other remaining variables in panel B as well as municipal level controls like altitude, navigability, church, Gini of income, climate, soil, and Roman. The numbers in parentheses are standard deviations in columns 1-2 and columns 5-6, and standard errors in columns 3-4 and columns 7-8.

IV.B. Instrumental Variables Estimates

I use the timing of the Zaehringen extinction interacted with an indicator for Zaehringen imperial fief as an instrument for historical self-governance. The list of these fiefs was

obtained by superimposing the map of Zaehringen territories on the map of current municipalities. It was further verified using the list prepared by Heyck (1895). The first and second-stage of the instrumental variables estimation are given by equations 3-4 below:

$$HSG_{mk} = \alpha_0 + \alpha_1 Z_{mk} + \mathbf{X}_{imk}\alpha_2 + \mathbf{M}_{mk}\alpha_3 + \mu_{imk} \tag{3}$$

$$Norms_{imk} = \delta_0 + \delta_1 \widehat{HSG_{mk}} + \mathbf{X}_{imk}\delta_2 + \mathbf{M}_{mk}\delta_3 + \eta_{imk} \tag{4}$$

where Z_{mk} is an indicator for Zaehringen imperial fief and $\widehat{HSG_{mk}}$ is historical self-governance estimated from equation 3. For the Zaehringen extinction to be an exogenous event, its timing must be unforeseen. I believe the accidental death of the last duke in the absence of an heir meets this requirement. I offer further evidence by showing that there was no transfer in the ownership of the fiefs around the timing of extinction. While the Zaehringen acquired all of their private fiefs before 1190, the last set of imperial fiefs were acquired in 1198. Since these predate the death of the last duke by at least 20 years, it is unlikely that the extinction was anticipated. These data are for fiefs under the Zaehringen name, but it could be that anticipating extinction, the family transferred some of their fiefs via marriage to other noble houses. This seems unlikely because the last marriage in the Zaehringen family occurred in 1190, 28 years before the extinction. Moreover, because the imperial fiefs were obtained from the emperor, it was not possible to transfer these to another family without his permission.

The timing of the Zaehringen extinction appears exogenous, but there could be a concern over pre-existing differences across areas with and without the Zaehringen rule. I argue and provide evidence that this is unlikely for two reasons. First, the fiefs of all noble houses are expected to be geographically similar because of their location to the north of the Alps, on the Swiss plateau. Second, historical records show that the Zaehringen dynasty did not acquire these fiefs either by waging a war or petitioning the emperor. Rather, the fiefs were obtained from two different emperors under highly unusual circumstances (see Appendix V.e). This is also evident from the results of a balance check in Table 1. Columns 5-6 report the means of historical proxies of geographic suitability for agriculture, defense, prosperity, and education by Zaehringen imperial fief. Columns 7-8 shows that the differences between the means are small in magnitude and are also statistically insignificant. Table 2 reports that similar patterns are obtained when this exercise is carried out at the level of individual covariates.

The exclusion restriction is violated if the Zaehringen rule directly affected norms of cooperation. However, this seems unlikely, for as Eugster (2020) argues, the Zaehringen rule was not special but like that of any other noble dynasty. It was not characterized by religiosity, construction of ecclesiastical monasteries, provisions of law, or a pronounced state and dynasty. I attempt to assuage this concern further by using *within* Zaehringen

variation in historical self-governance. This allows me to hold the Zaehringen rule fixed and compare Zaehringen imperial fiefs whose political status was affected by the extinction with Zaehringen private fiefs whose political status remained unchanged.[11] Table A.7 shows that Zaehringen imperial fiefs are comparable to Zaehringen private fiefs along a number of geographical and historical variables.

V. Historical Self-Governance and Norms of Cooperation

I start by presenting results on the effect of historical self-governance on conditional cooperation, followed by results from a variety of robustness checks including survey data on attitudes towards cooperation.

V.A. Main results

Table 3 presents the main results. It reports only the coefficient on experience of historical self-governance. Table A.8 reports the coefficients on control variables.

OLS Estimates.– Panel A presents OLS estimates of the effect of historical self-governance on conditional cooperation. Column 1 is without any controls and shows that the coefficient on experience is 0.40 (s.e. 0.063), which is statistically significant at the 1-percent level. It explains 13 percent of the variation in conditional cooperation. When I introduce municipal level control variables in column 2, the coefficient on experience rises slightly in magnitude and remains statistically significant. In column 3, I additionally introduce individual level controls. This does not lead to any major changes in the magnitude or the significance of the coefficient on experience. Among the control variables, Gini of income has a strong negative and statistically significant effect on conditional cooperation, which is in line with (Knack and Keefer, 1997) who also found a negative effect of inequality on civic capital. The introduction of control variables leads a jump in the R-squared by 6 percentage points, suggesting that the control variables are relevant. Given that the average conditional cooperation among individuals from municipalities without historical self-governance is 0.43, these results suggest that individuals from historically self-governing municipalities are twice as conditionally cooperative.[12] In monetary terms, for each additional 10 Swiss Francs contributed by the other player, individuals from municipalities with historical self-governance increase their contribution by over 7 Swiss Francs, whereas individuals from municipalities without do so by only 3.6 Swiss Francs.

[11] The private fiefs of the Zaehringen were divided among the husbands of the two sisters of the last duke and remained under feudalism.

[12] The result remains unchanged when I use experience from the birth municipality. In this case, the coefficient turns out to be 0.397 (s.e. 0.070) and is statistically significant at the 1-percent level.

Table 3: Historical Self-Governance and Conditional Cooperation: OLS and IV Estimates

	No controls	Municipal controls	Individual controls
	(1)	(2)	(3)
	Panel A: OLS estimates		
	Dependent variable: Conditional Cooperation		
Experience	0.400	0.426	0.439
	(0.063)	(0.064)	(0.069)
R^2	0.13	0.16	0.19
	Panel B: IV Second-Stage		
	Dependent variable: Conditional Cooperation		
Experience	0.516	0.490	0.521
	(0.143)	(0.155)	(0.170)
R^2	0.12	0.16	0.18
	Panel C: IV First-Stage		
	Dependent variable: Experience		
Zaehringen imperial fief	0.391	0.385	0.378
	(0.090)	(0.103)	(0.105)
F-statistics	18.70	14.07	12.64
Municipal controls	No	Yes	Yes
Individual controls	No	No	Yes
Observations	262	262	262

Notes: OLS and IV estimates with standard errors clustered on the municipality. Municipality level controls include altitude, navigability, Church, and Gini of income. Individual level controls include age, education, male, log household income, Catholic, Protestant, left wing, center.

Instrumental Variables Estimates.– I now present results using Zaehringen imperial fief as an instrument for historical self-governance. Columns 7-8 in Panel A of Table 2 report reduced-form estimates (ITT) without and with controls. The coefficient on Zaehringen imperial fief turns out to be large, positive, and statistically significant (coef. 0.208, s.e. 0.094). Results from the first-stage of the IV estimation in Panel C of Table 3 show that there is also a strong positive and statistically significant effect of being a Zaehringen imperial fief on the experience of historical self-governance. The F-statistics are large and confirm that the instrument is relevant. Panel B reports results from the second-stage of the IV estimation. Without or with control variables, experience has a large positive coefficient, which is statistically significant at the 1-percent level. In the specification with the full set of controls (column 3), the coefficient on experience has a magnitude of 0.519, which is only slightly larger than its OLS counterpart in panel A.

Behavioral Mechanisms.– The above results arise because historical self-governance shifts the type composition towards conditional cooperation. Results in columns 6-7 of Table A.4 confirm this by showing that municipalities with historical self-governance have a higher share of conditional cooperators by 34 percentage points, but lower shares of free riders by 7 percentage points, altruists and flat types by 4 percentage points each, and unclassifiable

types by 17 percentage points.[13] Since the coding of different types has some discretion, I further show that the main results hold when I drop each type at a time in Figure A.12 and in Table A.10.

V.B. Robustness checks

I carry out a number of robustness checks which confirm the positive effect of historical self-governance on norms of cooperation. The main results are unlikely to be driven by omitted variables because the selection on unobservables would have to be 30 times greater than the selection on observables to explain these findings (Oster, 2019). Moreover, results from a randomization inference test based on 5000 draws shows that the coefficient on experience remains statistically significant (p-value < 0.001). The results are not due to influential cantons: Table A.11 shows that both OLS (column 1) and IV (column 2) estimates hold when I drop one canton at a time.

Alternative standard errors.– Table A.12 shows that the results are robust to clustering standard errors on municipality and canton, municipality and historical canton, and to accounting for spatial correlation of standard errors.

Additional controls.– To offset the concern that some other individual or municipal specific characteristics are driving the result, I introduce additional controls at the individual level (measure of game comprehension, naturalized citizen, and Swiss migrant) and municipal level (soil, climate, and Roman town). Columns 1-2 of Table A.13 show that both OLS and IV estimates are robust to the inclusion of additional controls, which themselves enter with small and statistically insignificant coefficients.

Fixed effects.– Figure A.11 suggests that unobserved heterogeneity due to canton, language, and historical cantons is unlikely to play a role. The results in Table A.14 confirm that the OLS estimates are robust to the inclusion of fixed effects. Since the instrument varies mostly between and not within cantons, it is difficult to conduct this check for the IV estimation using the full sample. To remedy this, I use municipalities from the historical canton of Bern, which holds the historical canton fixed. Table A.15 reports the results after controlling for canton and language variables. OLS and IV estimates turn out to be slightly smaller than in the full sample, but are still sizable in magnitude and remain statistically significant. In contrast, the fixed effects are individually as well as jointly statistically insignificant.

Within–Zaehringen comparison.– The exclusion restriction is violated if the Zaehringen

[13]These results are similar in magnitude to those reported in other studies using experimental data (see Lowes et al., 2017; Bursztyn et al., 2020; Rustagi, 2023). They are also in line with cross-country variation in the share of conditional cooperators, which is 69% in Denmark (Thöni et al., 2012) but only 34% in Ethiopia (Rustagi et al., 2010).

rule directly affected conditional cooperation. To mitigate this concern, I use within Zaehringen variation in historical self-governance, which allows me to hold Zaehringen rule fixed. I compare Zaehringen imperial fiefs that experienced self-governance to Zaehringen private fiefs that did not. Table A.16 shows that both OLS and IV estimates are statistically significant and similar in magnitude to those obtained using the full sample.

Duration of historical self-governance.– Table A.17 shows that both OLS and IV estimates hold when I use duration of historical self-governance. One standard deviation increase in duration (244 years) leads to an increase in conditional cooperation by 0.23 points, which is sizable in magnitude.

Other checks.– Table A.18 shows the results are robust to dropping municipalities for which precise data on duration are lacking or assigning these to non self-governing status. Table A.19 shows that the results hold when I include municipalities from Ticino.

Alternative measures.– I complement experimental measures with data on attitudes towards cooperation using World Values Survey (WVS) from 2007 and Swiss Household Panel (SHP) from 2011.[14] In the surveys, individuals were asked to rate the extent to which it is justifiable to engage in certain behaviors on a scale of 0-10, where 0 means "never justified" and 10 means "always justified". The behaviors include cheating on tax declaration, lying in own interest (SHP only), claiming state benefits not entitled to, and offering a bribe (WVS only). For the ease of interpretation, I invert the scale so that higher scores reflect stronger attitudes towards cooperation. Following Tabellini (2010), I use the first principal component underlying these responses as a summary measure. The results hold if I consider each attitude at a time or take their average. Since these attitudes involve trade-offs between private gains and social costs, (Knack and Keefer, 1997; Guiso et al., 2011), they reflect attitudes towards cooperation. However, in these surveys individuals have little incentive not to report socially desirable answers. Guiso et al. (2011) note that "One issue with these specific measures is that people may have poor incentives to reveal their true values...Furthermore, it is plausible that those who lie to the interviewer are precisely the ones with lower civic values." Consequently, the survey measures are expected to be biased upwards, resulting in a smaller gap between municipalities with and without historical self-governance.

Of the 174 municipalities in the main sample, 28 appear in the WVS (46 percent of which are with historical self-governance) and 144 appear in SHP (50 percent of which are with historical self-governance). Figure A.8 show the location of these municipalities and the raw differences in attitudes by historical self-governance, which turn out to be higher in historically self-governing municipalities (p-value < 0.001).

Table 4 reports OLS estimates in Panel A. Without or with controls, the coefficient on

[14]For WVS, this is the only year for which data are available with municipal identifiers. For SHP, this is the only wave in which attitudes were elicited.

experience is positive and statistically significant at the 1-percent level. The magnitude of the coefficient suggests that individuals from historically self-governing municipalities have stronger attitudes towards cooperation by 30-50 percentage points. The IV estimates in Panel B-C confirm these findings (see Table A.9 for reduced-form estimates). Panel C reports estimates from the first-stage, which show that the instrument is always relevant. Panel B reports second-stage estimates, which are similar in magnitude to their OLS counterparts and are also statistically significant.

Table 4: Historical Self-Governance and Attitudes Towards Cooperation
OLS and IV Estimates

	World Values Survey			Swiss Household Panel		
	No control	Municipal control	Individual control	No control	Municipal control	Individual controls
	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A: OLS estimates					
	Dependent variable: Attitudes towards Cooperation					
Experience	0.510	0.457	0.433	0.297	0.343	0.340
	(0.120)	(0.130)	(0.131)	(0.096)	(0.081)	(0.073)
R^2	0.05	0.06	0.10	0.01	0.02	0.08
	Panel B: IV Second-Stage					
	Dependent variable: Attitudes towards Cooperation					
Experience	0.535	0.443	0.428	0.221	0.404	0.375
	(0.144)	(0.174)	(0.158)	(0.182)	(0.135)	(0.117)
R^2	0.05	0.06	0.10	0.01	0.02	0.08
	Panel C: IV First-Stage					
	Dependent variable: Experience					
Zaehringen	0.614	0.835	0.840	0.492	0.503	0.511
imperial fief	(0.132)	(0.194)	(0.180)	(0.087)	(0.137)	(0.133)
F-Statistics	21.52	18.50	21.82	32.33	13.50	16.67
Mun. controls	No	Yes	Yes	No	Yes	Yes
Ind. controls	No	No	Yes	No	No	Yes
Observations	336	336	336	1866	1866	1866
Municipalities	28	28	28	144	144	144
Baseline mean		-0.24			-0.18	

Notes: OLS and IV estimates with standard errors clustered on the municipality. Municipal (Mun.) controls include altitude, navigability, Church, and Gini of income. Individual (Ind.) controls include age, education, male, log household income, Catholic, Protestant, left wing, center. Baseline mean refers to average principal component of attitudes towards cooperation in municipalities without historical self-governance.

These results hold when I use alternative standard errors (Table A.12), introduce additional controls (Table A.13) and fixed effects (Table A.15), conduct within Zaehringen analysis (Table A.16), use duration of historical self-governance (Table A.17), drop observations without precise date (Table A.18), and include Ticino (Table A.19).

Self-efficacy beliefs.– Guiso et al. (2016) find that the Free City experience in Italy operates through the formation of self-efficacy beliefs. Accordingly, I control for such beliefs, measured via responses to the question on fate vs control in the WVS. Table A.20 shows

that the coefficient on experience retains its magnitude and significance, whereas the coefficient on self-efficacy is very small in magnitude and is also statistically insignificant.

VI. Historical Self-Governance, Pro-Social Behaviors, and Voter Turnout

The above results reveal a large gap in norms and attitudes by historical self-governance. I proceed by showing a reduced-form positive effect of historical self-governance on pro-social behaviors including voter turnout in referendums and initiatives. Subsequently, I show that the gap in norms and attitudes maps on to pro-social behaviors.

VI.A. Prosocial behaviors

I use data from SHP to capture the following prosocial behaviors: a) donations to charities and the amount donated in Swiss Francs ($\sim$ USD); b) a principal component of membership in associations (environment, charity, sports or leisure, culture, political party); and c) a principal component of environmental protection activities (recycling, payment of trash fee, consumption of ecologically friendly products, purchase of local fruits and vegetables to offset carbon costs).

Historical self-governance and prosocial behaviors.– Table 5 reports results from the regression of prosocial behaviors on historical self-governance, after controlling for covariates. Panel A shows that the OLS estimates are positive and statistically significant. Individuals from municipalities with historical self-governance are 11 percentage points more likely to donate to charities (column 1) by over 200 Swiss Francs per year (Column 2). They are also 24 percentage points more likely to be members of associations (column 3) and 46 percentage points more likely to engage in environmental protection (column 4). The first principal component of all pro-social behaviors turns out to be 59 percentage points higher in historically self-governing municipalities (column 5). These effects are large relative to the baseline mean in municipalities without historical self-governance. Results from IV estimation confirm these findings. Panel C reports first-stage estimates and shows that the F-statistics are large, thereby confirming that the instrument is relevant. Panel B shows that the second-stage estimates while being statistically significant are either the same or slightly larger in magnitude than their OLS counterparts. Figure A.13 shows that both OLS and IV results hold regardless of the configuration of control variables. Figure A.14 further shows that these results are robust to the inclusion of fixed effects.

Table 5: Historical Self-Governance, Norms of Cooperation, and Prosocial Behaviors

	Donations to charities	Amount of donation	Membership associations	Environmental protection	All prosocial behaviors
	(1)	(2)	(3)	(4)	(5)
	Panel A: OLS estimates				
	Dependent variable: Pro-social Behavior				
Experience	0.114	203.436	0.235	0.459	0.591
	(0.029)	(99.451)	(0.058)	(0.139)	(0.144)
	Panel B: Second-stage IV estimates				
	Dependent variable: Pro-social Behavior				
Experience	0.248	341.751	0.278	0.741	0.977
	(0.054)	(173.408)	(0.103)	(0.196)	(0.205)
	Panel C: First-stage IV estimates				
	Dependent variable: Experience				
Zaehringen	0.516	0.520	0.516	0.515	0.520
imperial fief	(0.132)	(0.131)	(0.132)	(0.132)	(0.132)
F-statistics	17.21	17.45	17.28	16.91	17.19
Controls	Yes	Yes	Yes	Yes	Yes
Observations	1880	1819	1886	1854	1786
Baseline mean	0.64	512.47	-0.15	-0.29	-0.37

Notes: OLS and IV estimates with standard errors clustered on the municipality. Donations to organizations equals 1 if an individual donated to an organization. Amount of donation is in Swiss Francs. Membership in associations is a principal component that includes environmental protection, charitable organization, sports or leisure, culture, and political party. Environmental protection is a principal component that includes recycling, payment of trash fee, consumption of ecological friendly products, and purchase of local fruits and vegetables to offset carbon costs. All prosocial behaviors is a principal component of all prosocial behaviors used in columns 1-4. Control variables include age, education, male, log household income, Catholic, Protestant, left wing, center, altitude, navigability, church, and Gini of income. Baseline mean refers to the average in municipalities without historical self-governance. Data are from Swiss Household Panel.

VI.B. Voter-Turnout and Decision-Making in Referendums

Switzerland has been using federal referendums since 1848. Voter-turnout in these events can be considered as reflecting pro-social behavior because voting is individually costly, non-pivotal, and socially beneficial. This offers a unique opportunity to investigate the effect of historical self-governance over a period of 150 years and only a few decades after the introduction of reforms by Napoleon.

Voter Turnout.– Barring the first referendum for which the data is not available, I study voter turnout in all referendums and initiatives. This dataset is available only at the cantonal level and includes 676 events held from 1866-2022. From 1960s, the data is also available at the municipal level and it covers 483 events until 2022.

Table 6 reports the results. I start by comparing cantons in which a large fraction of municipalities were historically self-governing to cantons in which a large fraction of municipalities were not.[15] Panel A reports OLS estimates. Column 1 is without any controls

[15]I code cantons of Uri, Schwyz, Obwalden, Nidwalden, Glarus, Zug, Basel Stadt, Schaffhausen, Appenzell Ausser and Inner Rhoden, Grisons, Valais, and Zurich as largely self-governing. In contrast, Fribourg, Basel Land, Thurgau, Vaud, Geneva, and Jura are coded as largely without historical self-governance.

and shows that cantons with a large share of historically self-governing municipalities witnessed a higher voter turnout by 5 percentage points, which is statistically significant at the 10-percent level. In column 2, when I introduce controls variables alongside referendum-year fixed effects, the coefficient doubles in magnitude to 11.23 and is now statistically significant at the 1-percent level. The magnitude of the effect is large given that the baseline mean is 45 percent. Table A.21 shows that this result holds when I introduce fixed effect for language.[16]

Table 6: Historical Self-Governance and Voter Turnout: in Referendums and Initiatives

	Cantonal sample		Municipality sample	
	No controls	All controls	No controls	All controls
	(1)	(2)	(3)	(4)
	Panel A: OLS Estimates			
	Dependent variable – Voter turnout (%)			
Experience	4.998	11.235	1.574	2.539
	(2.907)	(2.746)	(0.799)	(0.862)
	Panel B: IV Estimates – Second-Stage			
	Dependent variable – Voter turnout (%)			
Experience			1.777	5.674
			(4.654)	(2.813)
	Panel C: IV Estimates – First-Stage			
	Dependent variable – Experience			
Zaehringen imperial fief			0.251	0.329
			(0.091)	(0.092)
F-statistics			7.59	12.87
Control variables	No	Yes	No	Yes
Observations	12,542	12,542	79,508	79,508
Events	676	676	483	483
Clusters	19	19	174	174
Baseline mean	45.28		43.43	

Notes: OLS and IV estimates. Standard errors in parenthesis are clustered on the canton and referendum in columns 1-2 and on the municipality and referendum in columns 3-4. In column 1, control variables include altitude, navigability, Church, log population in 1850, population growth in 1850-60, student-teacher ratio in primary school in 1888, share of male population in 1850, and indicator for cantons with public assemblies. In columns 3-4, control variables include altitude, navigability, church, Gini of income in 2006, indicator for municipalities with public assemblies, log income per capita in 2010, secondary and tertiary education share in 2000, share of Catholics in 2000, share of center votes in 2011. These years were chosen because of data availability. Events refers to number of referendums and initiatives. Clusters refers to number of cantons in columns 1-2 and number of municipalities in columns 3-4. Baseline mean refers to the average in cantons or municipalities without historical self-governance. Data are from the Swiss Federal Office for Statistics.

In columns 3-4, I conduct this analysis at the municipal level. According to the OLS estimates in Panel A, in the model with full set of controls, historically self-governing municipalities witnessed a higher voter-turnout by 2.5 percentage points, which is statistically significant at the 1-percent level. Panel B shows the corresponding IV estimate in column 4 is also positive and statistically significant. The magnitude of the IV coefficient is larger than its OLS counterpart and implies a stronger voter-turnout in historically

[16]Since this estimation is at the cantonal level, I cannot conduct IV estimation.

self-governing municipalities by over 5 percentage points. These findings are economically significant relative to the baseline mean of 43 percent.[17] Table A.21 shows that these results hold when I introduce additional controls and fixed effects or when I conduct within Zaehringen analysis.

Inclusive Decision-Making.– Since 1848, 11 referendums and initiatives were held on topics covering women's suffrage and easier citizenship to immigrants. Of these, data at the municipal level are available for seven events that took place after 1960. These include : a) suffrage to women (1971); b) suffrage to 18 years old (1979); c) equal rights for men and women (1981); d) easier citizenship for young foreigners (1994); e) fair representation of women in federal authorities (2000); f) easier citizenship for young second generation foreigners (2004); and g) easier citizenship for young third generation foreigners (2004). I investigate the share of "yes" votes in these seven events. Table A.22 reports the results. According to the OLS estimate in Panel A, municipalities with historical self-governance witnessed a significantly higher share of yes votes by over 2 percentage points. Panel B shows that the corresponding IV estimates, while also positive and statistically significant, are larger than their OLS counterparts.

VI.C. Norms, Attitudes, and Prosocial Behaviors

In line with the literature, I show a positive association of conditional cooperation and attitudes towards cooperation with a variety of pro-social behaviors.

Conditional cooperation and pro-social behaviors.– Table A.23 reports the results. There is a positive and statistically significant association between conditional cooperation and proxies of environmental protection like use of public transport to cut down pollution and consumption of ecologically friendly products to offset carbon costs, as well as voter turnout in referendums. One standard deviation increase in conditional cooperation is associated with an increase in the use of public transport and consumption of sustainable food by 13 percentage points and voter turnout by 1.1 percentage points.

Attitudes towards cooperation and pro-social behaviors.– Table A.24 uses data from SHP to show a strong positive and statistically significant association between attitudes towards cooperation and pro-social behaviors. One standard deviation increase in the principal component of attitudes is associated with a rise in the likelihood of donation by 4 percentage points, amount donated by nearly 128 Swiss Francs, membership in associations by 6 percentage points, environmental protection by 14 percentage points, and all pro-social

[17]The IV estimate are twice as large because of two plausible reasons. First, for over 20 percent of the municipalities in the sample, data on voter-turnout is missing for over 100 referendums, creating a measurement error. Second, now all municipalities, whether big or small, get equal weights. However, when I use weights based on population, the gap between OLS and IV estimates becomes smaller.

behaviors by 18 percentage points.

VII. Plausible Channels

All Swiss municipalities acquired self-governance in the post-Napoleon period, so why haven't the gaps in norms of cooperation disappeared? The municipalities have a strong presence of state agencies, which rules out state capacity, protection of property rights, and constraints on executive. After ruling out prosperity, education, trade, and alliances as plausible channels, I focus on cultural transmission, low historical migration, and feedback loop between self-governance and norms of cooperation.

VII.A. Economic Prosperity, Education, and Trade

Literature suggests that democratic experience is associated with higher education and prosperity (Lipset, 1960; Barro, 1999; Papaioannou and Siourounis, 2008; Persson and Tabellini, 2009; Acemoglu et al., 2019), which in turn are associated with higher civic capital (Knack and Keefer, 1997; Tabellini, 2010). Therefore, it could be that historical self-governance led to higher education and prosperity, when then led to higher conditional cooperation today. Earlier, we saw that municipalities without and with historical self-governance are similar with respect to historical and contemporaneous proxies of education and prosperity (see Table 1, Figure A.9, and Figure A.10). This casts doubt on education and prosperity as likely channels, which is also confirmed by results in Table A.25. When I include these variables as additional controls, the coefficient on historical self-governance retains its magnitude and statistical significance.

Trade is also an unlikely channel because the results hold when I control for location on navigable rives and lakes and being a Roman town in the past, or when I restrict the sample to rural municipalities less engaged in trade than the urban ones (see Table A.26).

VII.B. Old Swiss Confederacy

As mentioned in Section II.A. some self-governing areas formed an alliance called the Old Swiss Confederacy (OSC), whose members often cooperated, inter alia, to prevent falling under the Habsburg rule. It is plausible that exposure to this alliance shaped norms of cooperation. I test this by splitting the set of historically self-governing municipalities into two groups: a) those that experienced only historical self-governance but were not directly associated with the confederacy (experience only), and b) those that experienced historical self-governance and were also directly associated with the confederacy (experience plus OSC). Table A.27 reports the results. I find no difference between the coefficients on the two indicators, suggesting that the confederacy did not have any special effect. This could

be because the confederacy was a loose alliance whose members sometimes fought with each other. Moreover, the alliance was divided after the reformation.

VII.C. Cultural Transmission

I use the epidemiological approach pioneered by Fernandez (2007); Giuliano (2007) to investigate the scope of cultural transmission in explaining persistence. I compare conditional cooperation across migrants who reside in the same canton but differ in exposure to historical self-governance from their birth municipality. If people carry their norms when they move, then individuals whose birth municipality experienced historical self-governance should display stronger conditional cooperation than individuals whose birth municipality did not, holding common residence canton fixed. Table 7 presents the results after accounting for individual and municipal level controls, the length of stay in the resident municipality, and fixed effects. Column 1 shows that migrants whose birth municipality experienced historical self-governance exhibit economically and significantly higher conditional cooperation than migrants whose birth municipality did not.

Table 7: Historical Self-Governance and Conditional Cooperation
Migrant Sample (Epidemiological Approach)

	Dependent variable: Conditional Cooperation	
	(1)	(2)
Experience – Birth municipality	0.606	0.571
	(0.183)	(0.168)
Experience – Residence municipality		0.108
		(0.176)
R^2	0.52	0.52
Control variables	Yes	Yes
Fixed effects	Yes	Yes
Observations	89	89

Notes: OLS estimates with standard errors in parenthesis clustered on the municipality. Control variables include age, education, male, log household income, Catholic, Protestant, center, altitude, navigability, church, and Gini of income. Fixed effects are for residence canton, language, and historical canton.

In column 2, when I additionally control for historical self-governance from the resident municipality, the coefficient on experience from the birth municipality retains its magnitude and significance. In contrast, the coefficient on historical self-governance from the residence municipality is smaller in magnitude and is also statistically insignificant. The two coefficients are also significantly different from each other (p-value = 0.05).

VII.D. Historical Migration

For cultural transmission to serve as credible mechanism, historical migration between municipalities must have been low. Christ (2006) reports that 60 percent of the Swiss resided in their ancestral municipality until the 19th century. This was due to several reasons. First, in the Middle Ages, Swiss municipalities provided commons. This discouraged migration because the residents were reluctant to share their scarce resources with outsiders. Second, starting from the 16th century, the welfare of citizens was the obligation of the ancestral municipality, which created further hurdles to migration. In times of crisis, non-citizens were ineligible for social support and were even deported to their ancestral municipality. It was not until 1934 that many resident municipalities were mandated to provide welfare. Third, it is likely that geography also played a role, as mountains and lakes created barriers to migration.

Studying persistence in the face of migration is difficult because data on historical migration are rarely available. I use a novel dataset from HLS to measure migration rates in the 19th century (HLS, 2018). The dataset includes a comprehensive listing of family names holding citizenship in a Swiss municipality at a given point in time. I compute municipality specific incoming migration rates for the period 1800-1900 as the proportion of new family names that acquired the citizenship to the number of family names already holding the citizenship. The average migration rate turns out to be 40 percent. Column 1 of Table A.28 shows that the coefficient on experience is robust to controlling for migration, which enters with a small and statistically insignificant coefficient. In columns 2-3, I report the results separately by median migration rate. While the coefficient retain its statistical significance, the magnitude is larger in the sample with migration rates below the median; however, the difference is not statistically significant. This result is in line with Henrich and Boyd (1998) who show that cultural transmission can maintain between-group differences for a wide range of migration rates.

VII.E. Discussion on Feedback Loop

The transition from autocratic rule to self-governance does not occur overnight. In a study of democratic transitions in Europe, Berman (2007) found that the initial phase was marked by ineffectual reforms, as well as frequent switching between autocratic rule and self-governance. These occurrences were also common in newly liberated areas in Switzerland (see (Meuwly, 2017). Since historically self-governing municipalities transitioned earlier, they had much more time to consolidate and build democratic capital (see Persson and Tabellini, 2009). This could have generated a feedback loop between self-governance and norms of cooperation reinforcing each other (Besley and Persson, 2019). Below I present evidence in support of this argument by showing that historically self-governing municipalities have stronger institutions of direct democracy and individuals

residing therein hold stronger attitudes towards democracy.

Figure A.15 shows that the extent of direct democracy is significantly higher in cantons where many municipalities experienced historical self-governance than otherwise. I complement this result with data on how often the municipalities use local referendums and initiatives for decision-making. These data were collected by Andreas Ladner using surveys with municipal administrators in 2009 and 2016 Ladner (2022). Table A.29 reports the results. In municipalities with historical self-governance, the frequency of using referendums and initiatives is nearly twice as high as in municipalities without historical self-governance.

Further support for these findings comes from data on attitudes and support for democracy from the World Values Survey and Swiss Household Panel. I show in Table A.30 that individuals from historically self-governing municipalities show stronger attitudes and support for democracy than individuals from municipalities that were not. These results suggest of a feedback loop in which institutions and culture reinforce each other.

VIII. Conclusions

I study how norms of cooperation emerge, whether they persist, and why do they persist. My focus is on the role of inclusive political institutions that encourage participatory self-governance. The main challenges in conducting such a study are establishing causality, measuring norms independent of confounding motives, tracking effects over time, and studying persistence in the face of migration. I mitigate these challenges by combining a historical natural experiment in self-governance from Switzerland with behavioral, survey, administrative, and migration data. The natural experiment stems from the extinction of the Zaehringen dynasty, which resulted in some municipalities acquiring historical self-governance, whereas the others remaining under autocratic rule for hundreds of years. The Swiss experience of historical self-governance lasted long and was based on cooperation and compromise, which was particularly conducive to fostering norms of cooperation.

I find a positive and significant effect of historical self-governance on experimental and survey measures of norms of cooperation. Instrumental variables estimate that use the Zaehringen imperial fief as an instrument for historical self-governance yield similar results. Administrative data on referendums reveals that these effects persist for over 150 years through stronger voter-turnout and inclusive decision-making. Furthermore, norms of cooperation matter for prosocial behaviors, such as donations to charities and environmental protection. I highlight that persistence is due to feedback loop between self-governance and norms of cooperation reinforcing each other. This was facilitated by cultural transmission and and low historical migration, measured using a unique data tracking citizenship by family names over time.

These findings highlight that the interaction between institutions and culture can lead

to patterns that could endure over time. They help us understand the mechanisms through which self-governance affects cooperation outcomes. Banerjee et al. (2005) and Duflo and Pande (2007) suggest that the poor performance of landlord districts in India was autocratic landlord rule which prevented individuals from engaging in collective action. This autocratic rule may have led to weaker norms of cooperation, resulting in failure of collective action.

References

Acemoglu, Daron, Davide Cantoni, Simon Johnson, and James A Robinson (2011): "The consequences of radical reform: The French Revolution," *American economic review*, 101, 3286–3307.

Acemoglu, Daron, Suresh Naidu, Pascual Restrepo, and James A Robinson (2019): "Democracy does cause growth," *Journal of political economy*, 127, 47–100.

Alesina, Alberto and Paola Giuliano (2015): "Culture and institutions," *Journal of economic literature*, 53, 898–944.

Ammann, Hektor and Karl Schib (1958): *Historischer Atlas der Schweiz: Atlas historique de la Suisse: Atlante storico della Svizzera*, HR Sauerländer.

Ashraf, Quamrul and Oded Galor (2011): "Dynamics and stagnation in the Malthusian epoch," *American Economic Review*, 101, 2003–2041.

Banerjee, Abhijit, Lakshmi Iyer, and Rohini Somanathan (2005): "History, social divisions, and public goods in rural India," *Journal of the European Economic Association*, 3, 639–647.

Barro, Robert J (1999): "Determinants of democracy," *Journal of Political economy*, 107, S158–S183.

Bénabou, Roland and Jean Tirole (2006): "Incentives and prosocial behavior," *American economic review*, 96, 1652–1678.

Bentham, Jeremy (1816): *Political tactics*, Oxford University Press, reprint 1999.

Berman, Sheri (2007): "How democracies emerge: Lessons from Europe," *Journal of Democracy*, 18, 28–41.

Berner, Hans (2006): "Grosser Rat," *in: Historisches Lexikon der Schweiz (HLS)*.

Besley, Timothy (2020): "State capacity, reciprocity, and the social contract," *Econometrica*, 88, 1307–1335.

Besley, Timothy and Torsten Persson (2019): "Democratic values and institutions," *American Economic Review: Insights*, 1, 59–76.

Bettinger, Eric and Robert Slonim (2007): "Patience among children," *Journal of Public Economics*, 91, 343–363.

Bicchieri, Cristina (1990): "Norms of cooperation," *Ethics*, 100, 838–861.

Bisin, Alberto and Thierry Verdier (2001): "The economics of cultural transmission and the dynamics of preferences," *Journal of Economic theory*, 97, 298–319.

Bochet, Olivier, Talbot Page, and Louis Putterman (2006): "Communication and punishment in voluntary contribution experiments," *Journal of Economic Behavior & Organization*, 60, 11–26.

Bowles, Samuel (1998): "Endogenous preferences: The cultural consequences of markets and other economic institutions," *Journal of Economic Literature*, 36, 75–111.

Boyd, Robert and Peter J Richerson (1988): *Culture and the evolutionary process*,

University of Chicago press.

Bursztyn, Leonardo, Davide Cantoni, Patricia Funk, Felix Schönenberger, and Noam Yuchtman (2017): "Identifying the Effect of Election Closeness on Voter Turnout: Evidence from Swiss Referenda," Tech. rep., National Bureau of Economic Research.

Bursztyn, Leonardo, Georgy Egorov, and Stefano Fiorin (2020): "From extreme to mainstream: The erosion of social norms," *American economic review*, 110, 3522–3548.

Christ, Thierry (2006): "Fuersorge," *in: Historisches Lexikon der Schweiz (HLS)*.

Croson, Rachel TA (2007): "Theories of commitment, altruism and reciprocity: Evidence from linear public goods games," *Economic Inquiry*, 45, 199–216.

Dal Bó, Pedro, Andrew Foster, and Louis Putterman (2010): "Institutions and behavior: Experimental evidence on the effects of democracy," *American Economic Review*, 100, 2205–29.

De Tocqueville, Alexis (1835): *Democracy in America*, Edited by JP Mayer and translated by George Lawrence in 1969, Anchor Books.

Dell, Melissa, Nathan Lane, and Pablo Querubin (2018): "The historical state, local collective action, and economic development in Vietnam," *Econometrica*, 86, 2083–2121.

DellaVigna, Stefano, John A List, and Ulrike Malmendier (2012): "Testing for altruism and social pressure in charitable giving," *The quarterly journal of economics*, 127, 1–56.

Deploige, Simon and Jules Heuvel (1898): *The referendum in Switzerland*, 4, Longmans, Green, and Company.

Deutsch, Karl W and Hermann Weilenmann (1965): "The Swiss City Canton: A Political Invention," *Comparative Studies in Society and History*, 7, 393–408.

Duflo, Esther and Rohini Pande (2007): "Dams," *The Quarterly Journal of Economics*, 122, 601–646.

Elster, Jon (1989): "Social norms and economic theory," *Journal of economic perspectives*, 3, 99–117.

Eugster, Erwin (2020): "Zähringen, von," *in: Historisches Lexikon der Schweiz (HLS)*.

Fehr, Ernst and Klaus M Schmidt (1999): "A theory of fairness, competition, and cooperation," *The quarterly journal of economics*, 114, 817–868.

Fehr, Ernst and Ivo Schurtenberger (2018): "Normative foundations of human cooperation," *Nature human behaviour*, 2, 458–468.

Fernandez, Raquel (2007): "Women, work, and culture," *Journal of the European Economic Association*, 5, 305–332.

Fischbacher, Urs and Simon Gächter (2010): "Social preferences, beliefs, and the dynamics of free riding in public goods experiments," *American Economic Review*, 100,

541–56.

Fischbacher, Urs, Simon Gächter, and Ernst Fehr (2001): "Are people conditionally cooperative? Evidence from a public goods experiment," *Economics Letters*, 71, 397–404.

FORS, (Swiss Centre of Expertise in the Social Sciences) (2022): *Swiss Household Panel*, `https://forscenter.ch/projects/swiss-household-panel/data/`, Accessed 2022-04-25.

Frey, Bruno S and Stephan Meier (2004): "Social comparisons and pro-social behavior: Testing" conditional cooperation" in a field experiment," *American Economic Review*, 94, 1717–1722.

Gächter, Simon (2006): "Conditional cooperation: Behavioral regularities from the lab and the field and their policy implications," Tech. rep., CeDEx Discussion Paper Series.

Galor, Oded and Ömer Özak (2016): "The agricultural origins of time preference," *American economic review*, 106, 3064–3103.

Gasser, Adolf (1932): *Die territoriale Entwicklung der Schweizerischen Eidgenossenschaft, 1291-1797*, HR Sauerländer.

Gennaioli, Nicola and Ilia Rainer (2006): "Precolonial centralization and institutional quality in Africa," *Institutions and norms in economic development*, 21–46.

——— (2007): "The modern impact of precolonial centralization in Africa," *Journal of Economic Growth*, 12, 185–234.

Giuliano, Paola (2007): "Living arrangements in western europe: Does cultural origin matter?" *Journal of the European Economic Association*, 5, 927–952.

Guiso, Luigi, Paola Sapienza, and Luigi Zingales (2011): "Civic Capital as the Missing Link," *Handbook of Social Economics*, 1, 417–480.

——— (2016): "Long-term persistence," *Journal of the European Economic Association*, 14, 1401–1436.

Habermas, Jürgen (1996): *Between facts and norms: Contributions to a discourse theory of law and democracy*, MIT Press.

Henrich, Joe and Robert Boyd (1998): "The evolution of conformist transmission and the emergence of between-group differences," *Evolution and human behavior*, 19, 215–241.

Heyck, Eduard (1895): *Geschichte der Herzoge von Zähringen*, Akademische Verlagsbuchhandlung von J.C.B. Mohr.

HLS (2018): *Historisches Lexikon der Schweiz*, `https://hls-dhs-dss.ch`, Accessed on 2018-12-20.

Hoffmann-Rehnitz, Philip (2010): *Discontinuities: Political Transformation, Media Change, and the City in the Holy Roman Empire from the 15 to 17th Centuries*, Ed. Coy, J.P. et al. "The Holy Roman Empire, Reconsidered," Berghahn Books.

Holenstein, André (2013): "Untertanengebiete," *in: Historisches Lexikon der Schweiz (HLS)*.

——— (2014): "Räte," *in: Historisches Lexikon der Schweiz (HLS)*.

Hug, Lina and Richard Stead (1893): *The Story of Switzerland*, vol. 13, Putnam.

Inglehart, Ronald, Christian Haerpfer, Alejandro Moreno, Christian Welzel, Kseniya Kizilova, Jaime Diez-Medrano, Marta Lagos, Pippa Norris, Eduard Ponarin, and Puranen (2022): *World Values Survey*, `https://www.worldvaluessurvey.org/WVSContents.jsp`, Accessed on 2022-04-25.

Iyer, Lakshmi (2010): "Direct versus indirect colonial rule in India: Long-term consequences," *The Review of Economics and Statistics*, 92, 693–713.

Knack, Stephen and Philip Keefer (1997): "Does social capital have an economic payoff? A cross-country investigation," *The Quarterly journal of economics*, 112, 1251–1288.

Kobach, Kris William (1993): *The referendum: direct democracy in Switzerland*, Dartmouth Publishing Company.

Kosfeld, Michael and Devesh Rustagi (2015): "Leader punishment and cooperation in groups: Experimental field evidence from commons management in Ethiopia," *American Economic Review*, 105, 747–83.

Ladner, Andreas (2022): *Schweizer Gemeindemonitoring*, `https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/OLM3QO`, Accessed 2022-12-29.

Leeson, Peter T (2008): "Media freedom, political knowledge, and participation," *Journal of Economic Perspectives*, 22, 155–169.

Lipset, Seymour Martin (1960): *Political man. The social bases of politics*, vol. 492, Doubleday.

Lowes, Sara, Nathan Nunn, James A Robinson, and Jonathan L Weigel (2017): "The evolution of culture and institutions: Evidence from the Kuba Kingdom," *Econometrica*, 85, 1065–1091.

Lyon, Jonathan R (2013): *Princely brothers and sisters: the sibling bond in German politics, 1100-1250*, Cornell University Press.

McCrackan, William Denison (1901): *The Rise of the Swiss Republic: A History*, H. Holt.

Meuwly, Olivier (2017): "Waadt (Vaud)," *in: Historisches Lexikon der Schweiz (HLS)*.

Michalopoulos, Stelios and Elias Papaioannou (2014): "National institutions and subnational development in Africa," *The Quarterly Journal of Economics*, 129, 151–213.

Mill, Jon Stuart (1816): *On liberty and considerations of representative government*, Blackwell, reprint 1946.

Moehling, Carolyn M and Melissa A Thomasson (2020): "Votes for Women: An Economic Perspective on Women's Enfranchisement," *Journal of Economic Perspectives*, 34, 3–23.

Nunn, Nathan (2009): "The importance of history for economic development," *Annu. Rev. Econ.*, 1, 65–92.

Orbell, John M, Alphons J Van de Kragt, and Robyn M Dawes (1988): "Explaining discussion-induced cooperation." *Journal of Personality and social Psychology*, 54, 811.

Oster, Emily (2019): "Unobservable selection and coefficient stability: Theory and evidence," *Journal of Business & Economic Statistics*, 37, 187–204.

Ostrom, Elinor (2000): "Collective action and the evolution of social norms," *Journal of economic perspectives*, 14, 137–158.

Papaioannou, Elias (2020): "A comment on:"State capacity, reciprocity, and the social contract" by Timothy Besley," *Econometrica*, 88, 1351–1358.

Papaioannou, Elias and Gregorios Siourounis (2008): "Democratisation and growth," *The Economic Journal*, 118, 1520–1551.

Persson, Torsten and Guido Tabellini (2009): "Democratic capital: The nexus of political and economic change," *American Economic Journal: Macroeconomics*, 1, 88–126.

Platteau, Jean-Philippe (2015): *Institutions, social norms and economic development*, Routledge.

Putnam, Robert D, Robert Leonardi, and Rafaella Y Nanetti (1993): *Making democracy work: Civic traditions in modern Italy*, Princeton university press.

Rodrik, Dani (2000): "Participatory politics, social cooperation, and economic stability," *American Economic Review*, 90, 140–144.

Rustagi, Devesh (2023): "Market Exposure, Civic Values, and Rules," Tech. rep., University of Warwick Working Paper.

Rustagi, Devesh, Stefanie Engel, and Michael Kosfeld (2010): "Conditional cooperation and costly monitoring explain success in forest commons management," *Science*, 330, 961–965.

Sauerländer, Dominik, Jörg Rentsch, Ernst Bruckmüller, Claus Hartmann, and Christina Böttcher (2004): *Putzger–Historischer Weltatlas, Kartenausgabe für de Schweiz*, Cornelsen.

Schlaak, Alexander (2010): *Overloaded interaction: Effects of the growing use of writing in German imperial cities, 1500–1800*, Ed. Coy, J.P. et al. "The Holy Roman Empire, Reconsidered," Berghahn Books.

Stadler, Hans (2008): "Landsgemeinde," *in: Historisches Lexikon der Schweiz (HLS)*.

Stanyan, Abraham (1714): *An account of Switzerland: written in the year 1714*, Jacob Tonson.

Suter, Andreas (2016): "Demokratie," *in: Historisches Lexikon der Schweiz (HLS)*.

Sutter, Matthias, Stefan Haigner, and Martin G Kocher (2010): "Choosing the carrot or the stick? Endogenous institutional choice in social dilemma situations," *The Review of Economic Studies*, 77, 1540–1566.

Swiss Federal Office for Statistics, Swiss (2022): *Volksabstimmungen: Anzahl angenommene und verworfene Abstimmungsvorlagen, nach Typ seit 1848*, `https://www.pxweb.bfs.admin.ch/pxweb/de/px-x-1703010000_102/px-x-1703010000_102/px-x-1703010000_102.px`, Accessed, 2022-05-11.

Tabellini, Guido (2010): "Culture and institutions: economic development in the regions of Europe," *Journal of the European Economic association*, 8, 677–716.

Thöni, Christian, Jean-Robert Tyran, and Erik Wengström (2012): "Microfoundations of social capital," *Journal of Public Economics*, 96, 635–643.

Trebbi, Francesco, Philippe Aghion, and Alberto Alesina (2008): "Electoral rules and minority representation in US cities," *The Quarterly Journal of Economics*, 123, 325–357.

Voth, Hans-Joachim (2021): "Persistence–myth and mystery," in *The handbook of historical economics*, Elsevier, 243–267.

Zschokke, Heinrich (1860): *History of Switzerland*, Hurst and Company.

ONLINE APPENDIX:
Historical Self-Governance and Norms of Cooperation

Devesh Rustagi

Appendix A

I. Field Setting

A. Plausible Reasons behind Frederick II's Decision

I discuss four plausible reasons. First, assigning the Zaehringen imperial fiefs to competing noble dynasties would have made them more powerful and a contender to the throne. The emperor was not a stranger to such challenges, as his family lost the crown to a rival dynasty for 17 years and recovered it only when he became the king. Second, though Frederick II was a German king, his training, lifestyle, and temperament were "most of all Sicilian" – He was interested in "expanding the Sicilian kingdom into Italy rather than the German kingdom southward" (Maehl, 1979). This could be the reason why he allowed these areas to engage in self-governance under his tutelage. Third, the self-governing areas did not have strong dynastic aspirations. From his experience with the free cities of Italy, he learnt that this could serve useful to counteract the power of rival nobles and the Pope with whom he had frequent squabbles. Lastly, Frederick II was an imaginative king, who was called *stupor mundi* or the "astonishment of the world". Historical accounts speak highly of the egalitarian nature of his court, administrative and judicial reforms, and religious tolerance. It could be that self-governance was in his repertoire of reforms and the Zaehringen extinction offered him the opportunity to implement these.

B. Styles of Historical Self-Governance

Figures A1-A3 show simplified versions of historical forms of self-governance that were typically in operation in Switzerland. Figure A.1 shows historical self-governance in rural areas like Uri. Figure A.2 shows the structure of governing council in urban areas with historical self-governance like Zurich. Figure A.3 shows governance in feudal areas like Vaud. In these areas, the foreign power was responsible for the appointment and nomination of important positions (in this case Bern) and local individuals had hardly any say in decision-making. These figures are modified from Historical Lexicon of Switzerland.

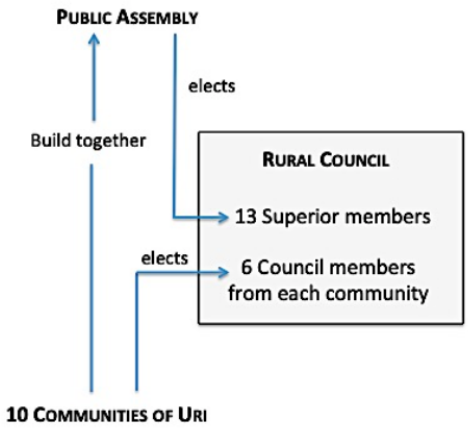


Figure A.1: Historical Self-Governance in Rural Areas

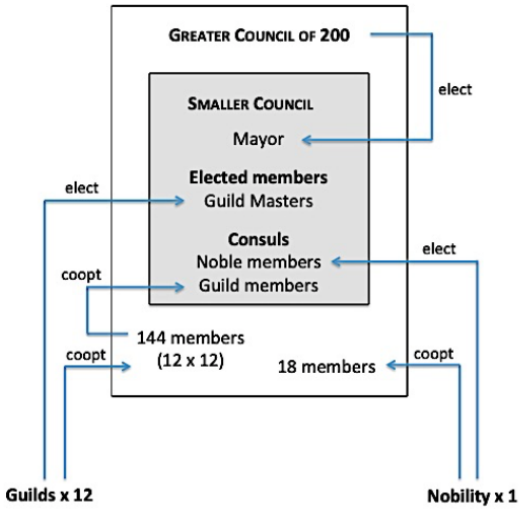


Figure A.2: Historical Self-Governance in Urban Areas

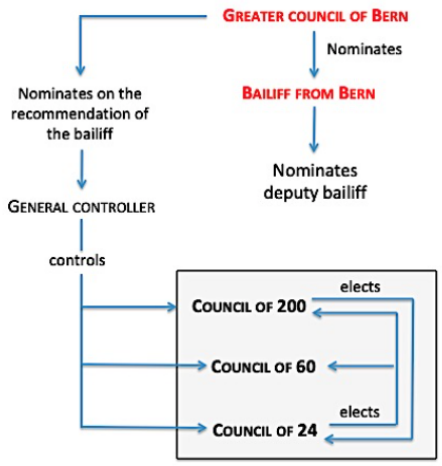


Figure A.3: Historical Self-Governance in Feudal Areas

C. Importance of Self-Governance

Historical evidence suggests that the emergence of self-governance was a major political change that people cared about and were willing to spend resources to retain this institution. After the great interregnum ended, Rudolf of Habsburg became the German king. He desired tighter control of privileges enjoyed by self-governing areas. His son Albrecht I of Habsburg, who succeeded the throne after Rudolf died in 1291, was keen on taking these privileges away. During this time, some of the self-governing areas forged an eternal alliance (First Federal Charter) that laid the foundation of the Old Swiss Confederacy. Arguably, one of the objectives of this alliance was to defend self-governance.

From 1315-1399, the Habsburg fought three wars to subjugate self-governing areas, but lost all three of them.

- In 1315, the Habsburg lost the first war at Morgarten. After their success, the self-governing areas renewed their alliance through the Treaty of Brunnen.
- In 1386, the Habsburg lost the second war at Sempach. After their success, the self-governing areas renewed their alliance through the Treaty of Sempach.
- In 1388, the Habsburg lost the third and the final war at Naefels.

In these wars, the self-governing areas did not have a professional army but were represented by peasants who fought with halberd. They were also not backed by other noble dynasties or outside powers. These historical events clearly suggest that people valued self-governance, otherwise, they would not go to the extent of forming alliances and fighting three costly wars against the Habsburg, a major power of that time. The self-governing areas could have easily avoided these wars by accepting Habsburg suzerainty, much like the other areas surrounding them.

In addition to the treaties and wars listed above, an etching from 1698 shows self-governance through public assembly (landsgemeinde) in the canton of Zug. It is evident from the figure that the public assembly is well attended, suggesting that people did care about self-governance.[1]

[1] While there is a book on Swiss Confederation from 1550 by Aegidius Tschudi, there are serious doubts on the authenticity of this book, so I refrain from using it.

Figure A.4: Landsgemeinde in Zug - early 17th century.

Notes: Etching from der Karte Helvetia, Rhaetia, Valesia. Source: HLS, 2021 (Published by Heinrich Ludwig Muos in Zug 1698, Kunstmuseum Basel, Photography: Martin Bühler).

II. Sample Construction

In the behavioral experiment, the participants were recruited through the largest and most reputed survey agency in Switzerland – Institute for Opinion Research (LINK). The agency maintains a database of 10,000 individuals who are representative of Swiss households. I requested LINK to randomly select from this database a sample of about 1000 individuals who are representative of the three main linguistic groups and the 26 cantons of Switzerland. These individuals turned out to be from 548 municipalities. I invited all of these individuals to take part in an online study.[2] I dropped individuals from the canton of Ticino, which comprises exclusively of Swiss Italians. This is because Ticino is unlikely to be a valid counterfactual. It was not part of the Swiss historical landscape and was integrated only in the 16th century, some 300 years after the Zaehringen extinction. This is possibly because of its location to the south of the Alps, which created geographical barriers to movement. This leaves me with an effective sample of 889 individuals from 518 municipalities in 25 cantons. Of these, 262 individuals from 174 municipalities in 23 cantons participated in the study, implying a response rate of 30 percent at the individual level and 34 percent at the municipal level.

Since all individuals, regardless of their participation, agreed to be on the database of LINK, they share common characteristics from being on that platform. This is akin to recruiting individuals from Mechanical Turk or Prolific. In such situations, the selection concern arises from participation by some and not the others in the experiment. I check this in many ways. First, I show that the participation rate is not different across cantons either at the individual (p-value $= 0.37$) or at the municipal level (p-value $= 0.58$). Second, the share of German and French speakers in the sample is not significantly different from

[2] According to the Swiss Federal Statistical Office (2014), 84 percent of all adult German speakers and 82 percent of all adult French speakers used the internet in the first quarter of 2014.

the share of speakers of these languages in the country population (after excluding Swiss Italians). Third, comparing participants and non-participants, I show below that there is no selection on key observables both at the individual and municipal level. Fourth, the municipalities in the sample appear to be generally representative of municipalities in Switzerland. These findings suggest that the sample has many appealing characteristics.

Scope of selection at the municipal level

Historical self-governance is measured at the municipal level. I test for selection in Table A.1 by comparing the means of important variables across municipalities that are not in the sample (column 1) to those that are in the sample (column 2). Columns 3-5 report the difference in means, estimated using a regression of each variable on an indicator for participation. Column 3 is without any controls, column 4 includes controls, and column 5 canton fixed effects. Regardless of the specification, I find that the differences are small in magnitude and and are also statistically insignificant. These findings suggest that municipalities in the sample are comparable to those that are not.

Scope of selection at the individual level

I test for selection at the individual level in Table A.2 by comparing individuals that are not in the sample (column 1) to those than are in the sample (column 2). Columns 3-5 reports the difference in means, estimated using a regression of each covariate on an indicator for participation. Column 3 is without any controls, column 4 includes other variables as controls, and column 5 additionally controls for canton fixed effects. As before, there are no differences in these variables by participation. The only exception is education, which is significant at the 10 percent level. However, the magnitude of the difference is small relative to the mean and standard deviation of education in the full sample (mean 0.39, s.d. 0.49). Using the Bonferroni correction, the joint null that these differences are not significantly different from zero cannot be rejected.

Comparison to all municipalities in Switzerland

Finally, I show in Table A.3 that the municipalities in the sample do not differ from municipalities in Switzerland that are not in the sample. The differences are small in magnitude and are also mostly statistically significant. The only exceptions are Age index and share of protestants, where the differences though small in magnitude are statistically significant at the 5 percent and 10 percent level. However, using the Bonferroni correction, the joint null that these differences are not significantly different from zero cannot be rejected. These results suggest that municipalities in the sample are comparable to Swiss municipalities that are not along a number of important dimensions.

Table A.1: Comparison of Municipal Level Covariates by Participation in the Study

	Mean by Participation (s.d.)		Coefficient on Participation Indicator (s.e.)		
	No	Yes	No controls	with controls	with FE
	(1)	(2)	(3)	(4)	(5)
Age index	62.96	61.81	−1.153	−0.809	−0.751
	(7.38)	(6.60)	(0.639)	(0.644)	(0.622)
Tertiary degree	20.20	19.64	−0.556	−0.034	−0.071
	(7.38)	(6.43)	0.629)	(0.325)	(0.305)
Log income per capita	11.20	11.17	−0.028	−0.011	−0.007
	(0.26)	(0.20)	(0.020)	(0.01)	(0.008)
Catholic	42.93	42.40	−0.532	−0.507	0.351
	(24.16)	(22.42)	(2.141)	(0.602)	(0.428)
Protestant	38.45	37.98	−0.466	−0.451	−0.41
	(22.80)	(21.85)	(2.062)	(0.58)	(0.449)
Left wing	17.22	17.81	0.589	0.093	0.384
	(7.38)	(7.75)	(0.709)	(0.639)	(0.412)
Centre	15.32	14.41	−0.91	−0.454	−0.303
	(10.08)	(10.76)	(0.979)	(0.953)	(0.408)
Altitude	4.86	4.71	−0.151	−0.122	−0.133
	(1.62)	(1.43)	(0.139)	(0.128)	(0.113)
Gini income	0.34	0.34	−0.005	0.002	0.001
	(0.07)	(0.06)	(0.006)	(0.004)	(0.003)
Controls	No	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes
Obs.	344	174	518	518	518

Notes: Columns 1-2 report the mean and the standard deviation (s.d.) of covariates across municipalities of non-participants and participants in the experiment. Column 3 reports the raw difference obtained from the regression of each covariate on an indicator for participation. Column 4 reports the same after controlling for additional variables listed in the table as well as an indicator for Bishop, and column 5 after controlling for canton fixed effects. While controlling for additional variables, I exclude protestant in the regression of catholic and vice versa because of mechanical correlation between these two variables. Age index is measured as the dependency ratio: share of population in 2010 that is between 0-19 and over 64 per 100 persons divided by the share in the age group of 20-64. Tertiary education is measured as the share of individuals with tertiary education in 2000 (data is available for this year only). Income is measured as log income per capita in 2014. Catholic and Protestant are the share of population in 2000 that is Catholic and Protestant respectively (data is available for this year only). Left wing and Center capture the share of eligible population that voted for SDP and FDP in 2011 elections. Altitude is measured in meters/100. Gini of income is from 2006. Bishop is excluded because all five Bishop cities are in the sample. Water is excluded because these data are not readily available for all municipalities and were hand coded for municipalities with historical self-governance. Otherwise stated, all data are from the Swiss federal statistical office. Data on altitude are from the Swiss geographical information platform. Data on Gini of income are from Swiss tax administrative office.

Table A.2: Comparison of Individual Level Covariates by Participation in the Study

	Mean by Participation (s.d.)		Coefficient on Participation Indicator (s.e.)		
	No	Yes	No controls	with controls	with FE
	(1)	(2)	(3)	(4)	(5)
Age	42.793	43.905	1.112	0.664	1.016
	(15.158)	(13.500)	(1.069)	(1.065)	(1.105)
Education	0.367	0.450	0.084	0.064	0.067
	(0.482)	(0.498)	(0.037)	(0.039)	(0.038)
Male	0.493	0.538	0.045	0.035	0.033
	(0.500)	(0.499)	(0.042)	(0.041)	(0.042)
HH income	11.582	11.602	0.020	0.014	0.014
	(0.548)	(0.532)	(0.038)	(0.037)	(0.038)
Catholic	0.365	0.321	−0.045	−0.032	−0.036
	(0.482)	(0.468)	(0.035)	(0.027)	(0.027)
Protestant	0.349	0.363	0.013	−0.011	−0.021
	(0.477)	(0.482)	(0.033)	(0.026)	(0.026)
Left wing	0.313	0.332	0.019	0.028	0.024
	(0.464)	(0.472)	(0.038)	(0.033)	(0.034)
Centre	0.392	0.431	0.039	0.052	0.048
	(0.489)	(0.496)	(0.034)	(0.030)	(0.031)
Controls	No	No	No	Yes	Yes
Fixed Effects	No	No	No	No	Yes
Observations	627	262	889	889	889

Notes: Columns 1-2 report the mean and the standard deviation (s.d.) of covariates across non-participants and participants in the experiment. Columns 3-5 report the difference obtained from the OLS regression of each covariate on an indicator for participation, whereby standard errors are clustered on the municipality. Column 3 reports the raw difference without any controls, column 4 after including the remaining variables, altitude, Bishop, and Gini of income as controls, and column 5 after including canton fixed effects. As before, while controlling for the remaining variables, I exclude protestant in the regression of catholic and vice versa because of mechanical correlation between these two variables The definition of these variables is in Table 1 of the main paper.

Table A.3: Comparison of Municipal Level Covariates by Inclusion in the Sample

	Coefficient on Sample Indicator
Age index	-1.223
	(0.560)
Tertiary degree	-0.144
	(0.303)
Log income per capita	-0.013
	(0.008)
Catholic	0.510
	(1.667)
Protestant	-2.819
	(1.612)
Left wing	0.711
	(0.563)
Center	-0.344
	(0.845)
Altitude	-0.125
	(0.109)
Gini income	-0.000
	(0.003)

Notes: Column 1 reports the difference obtained from the regression of each covariate on an indicator for being in the sample, after controlling for additional variables listed in the table as well as an indicator for Bishop. For the definition of variables, see table A.1.

III. Behavioral Experiment

Table A.4 and Figure A.5 show the behavior and distribution of behavioral types.

Table A.4: Frequency of Types and their Propensity to Cooperate Conditionally

	Obs.	Share	Average Spearman	Historical Self-Governance		Difference (5)-(4) Controls	
				No	Yes	No	Yes
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Cond. cooperator	178	0.68	0.97	0.50	0.83	0.34	0.34
			(0.05)	(0.50)	(0.38)	(0.05)	(0.06)
Free rider	28	0.11	0.12	0.15	0.07	-0.08	-0.07
			(0.26)	(0.36)	(0.26)	(0.04)	(0.04)
Altruist	10	0.04	0.00	0.06	0.02	-0.04	-0.04
			(0.00)	(0.24)	(0.14)	(0.02)	(0.03)
Flat	10	0.04	0.00	0.07	0.01	-0.05	-0.04
			(0.00)	(0.25)	(0.12)	(0.03)	(0.02)
Hump-shaped	7	0.03	-0.06	0.03	0.02	-0.01	-0.01
			(0.46)	(0.18)	(0.14)	(0.02)	(0.03)
Unclassifiable	29	0.11	-0.20	0.19	0.04	-0.15	-0.17
			(0.74)	(0.40)	(0.20)	(0.04)	(0.06)

Notes: The numbers in parenthesis are standard deviation in column 3-5 and standard errors clustered on the municipality in columns 6-7. The difference in columns 6-7 are obtained from a regression without and with main controls. The control variables include age, education, male, log household income, Catholic, Protestant, left wing, center, altitude, navigability, church, and Gini of income.

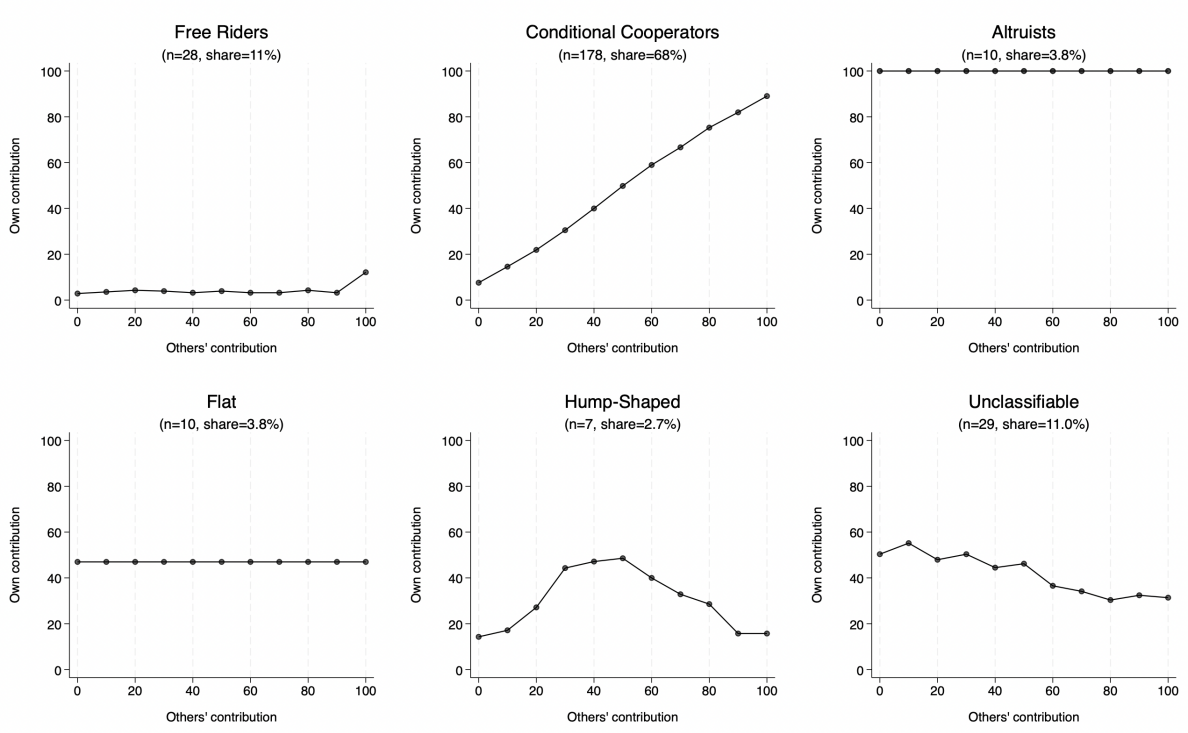


Figure A.5: Player Types from the Conditional Decision of the Public Goods Game

Note that unclassifiable does not imply contribution pattern which is all over the place. It implies difficulty in sorting into clearly pre-defined types in the existing literature. Below, I list common contribution patterns observed among 29 unclassifiable type and plot these in Figure A.6: (i) 10 individuals have Spearman *rho* of -1. These individuals have a preference over public goods provision: if others defect they cooperate, but if others cooperate, they defect (Croson, 2007). Since in a public goods game, social surplus is maximized if both players contribute their full endowment, such types lead to under provision of public goods; (ii) 7 individuals are weak free riders (average Spearman *rho*, 0.06). Their contribution is mostly below 20 regardless of other person's contribution; (iii) 4 individuals are weak conditional cooperators (average Spearman *rho*, 0.56); (iv) 4 individuals are weak flat contributors (average Spearman *rho*, 0.09); (v) 1 individual is a weak altruist; and (vi) 3 individuals have noisy contribution patterns (average Spearman *rho*, 0.09). Data on prosocial behaviors confirms that most unclassifiable types have free riding tendency. The likelihood of using public transport is 43 percent among free riders, 38 percent among unclassifiable, and 60 percent among conditional cooperators. Similarly, the likelihood of consuming sustainable food items is 18 percent among free riders, 17 percent among unclassifiable, and 40 percent among conditional cooperators. These differences are statistically significant (p-value < 0.05).

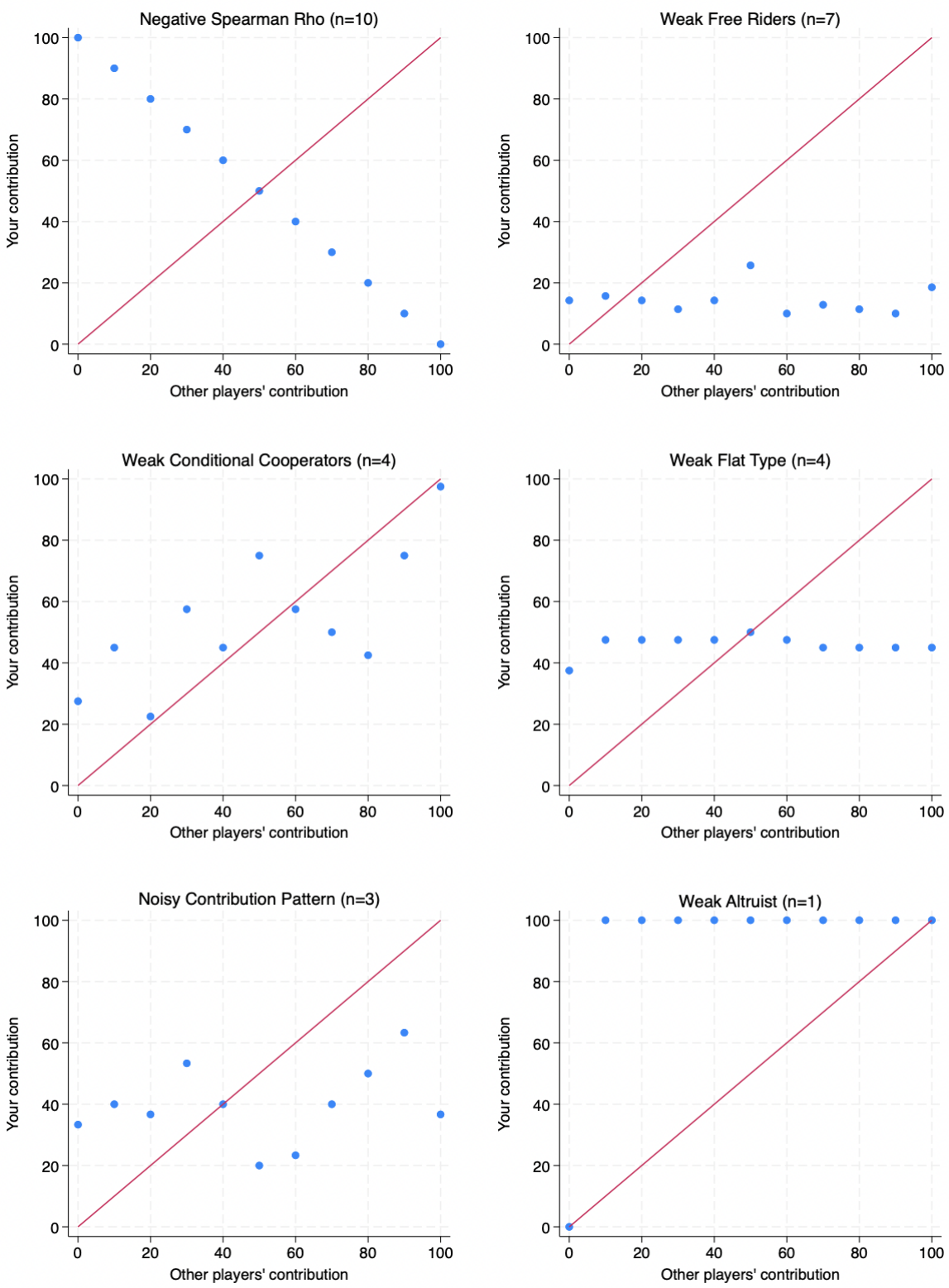


Figure A.6: Unclassifiable Types

IV. Data and Descriptive Statistics

a) Conditional Cooperation

Figure A.7 shows the raw difference in conditional cooperation across municipalities without and with historical self-governance by socio-demographic characteristics including religion, rural-urban divide, gender, politics, and education.

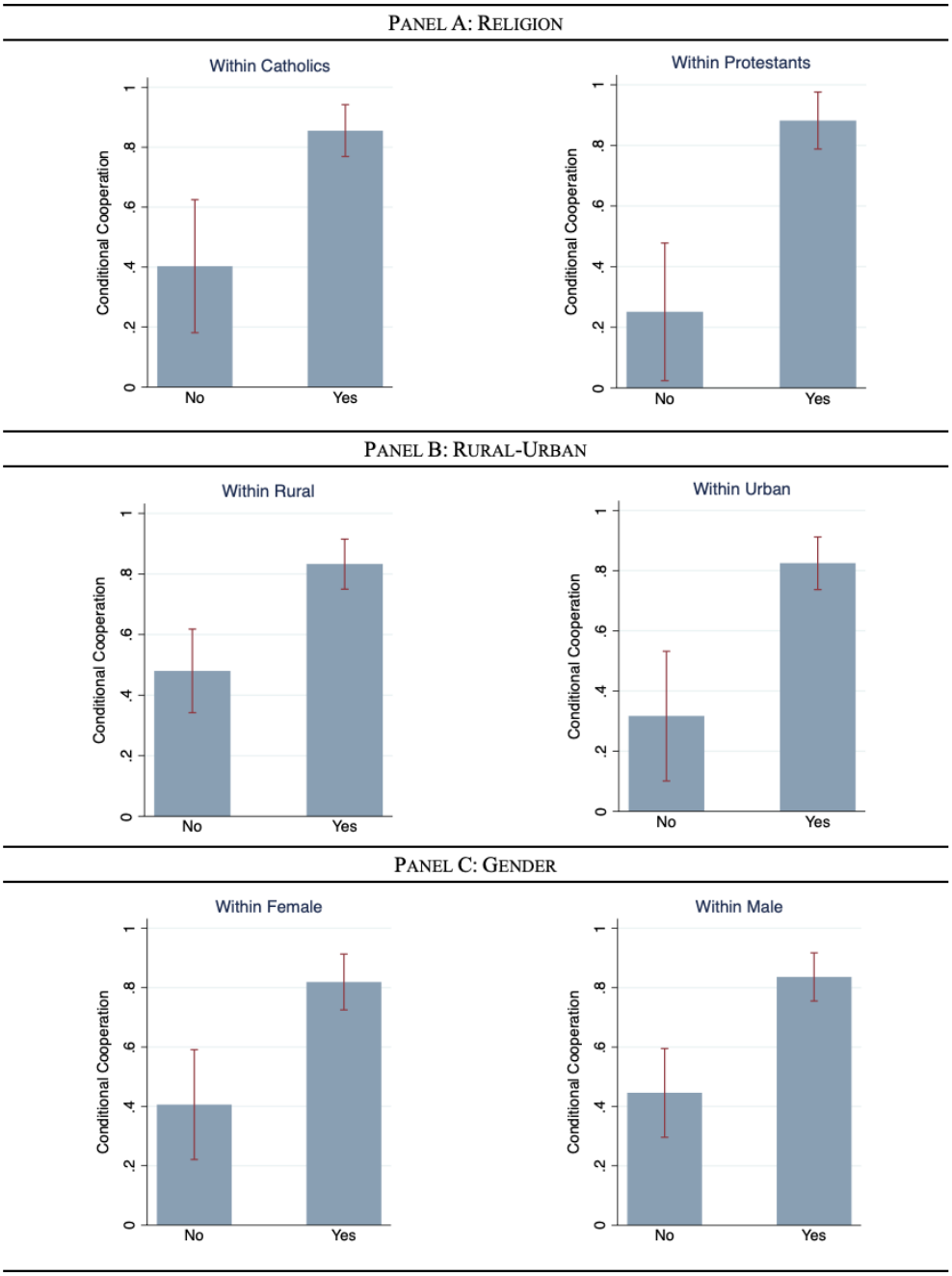


Figure A.7: Conditional Cooperation and Historical Self-Governance by Religion, Rural-Urban Divide, and Gender (continued on the next page...)

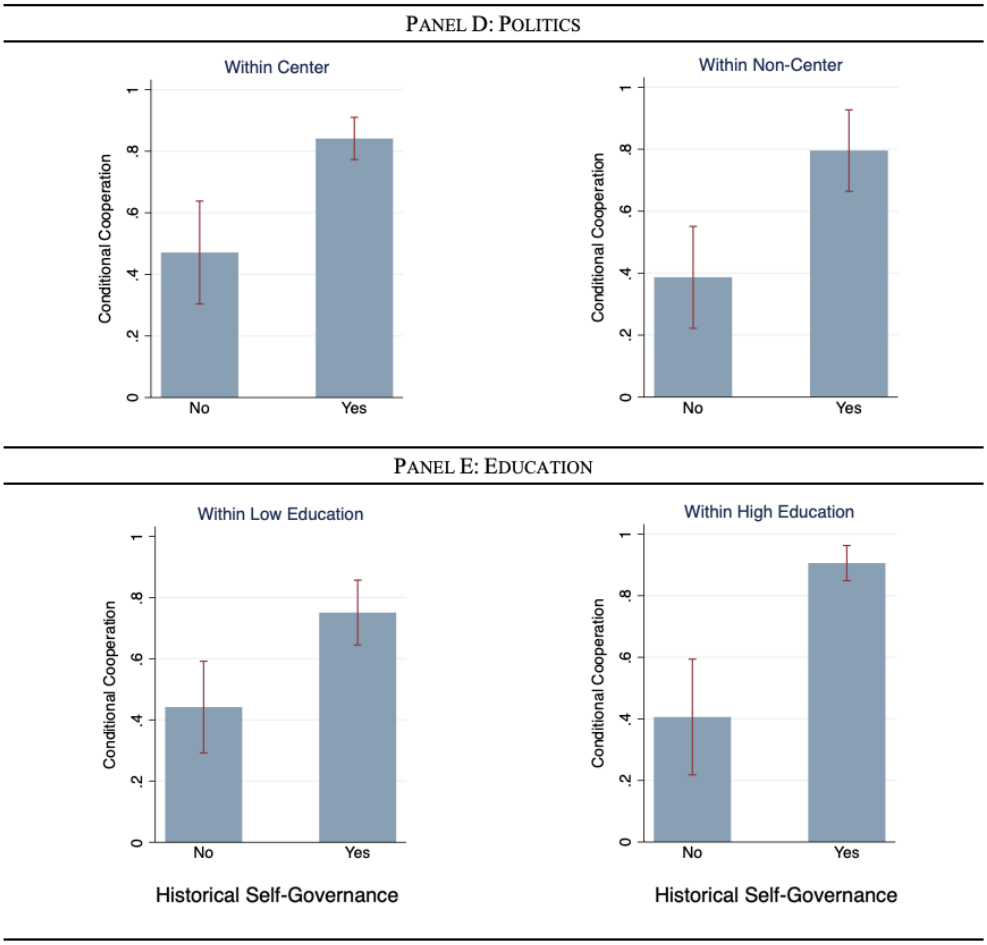
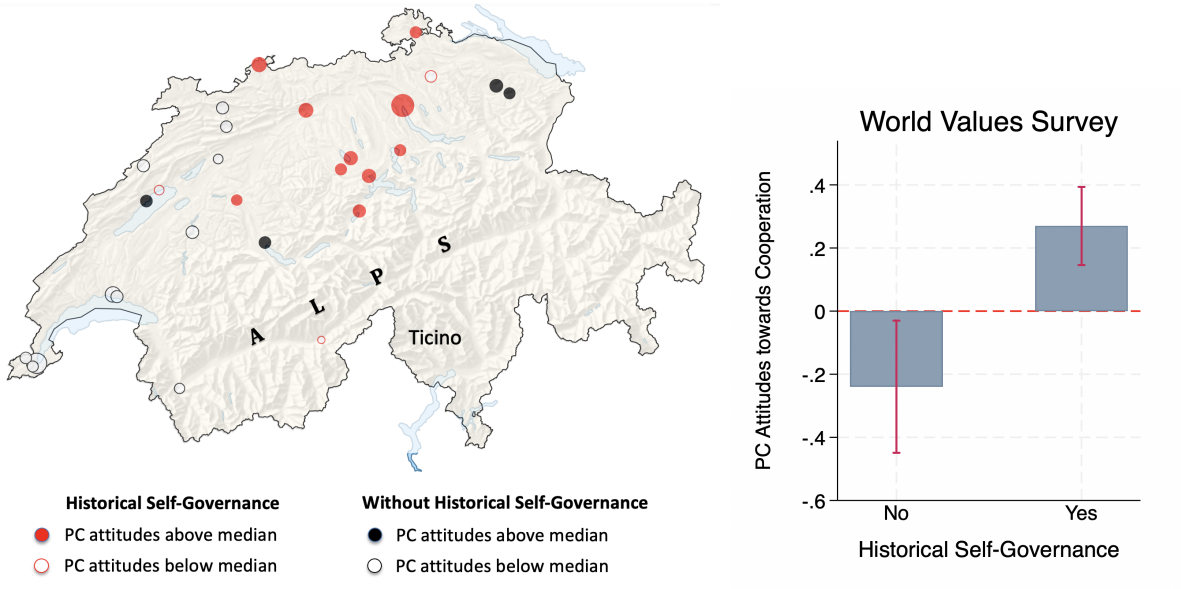


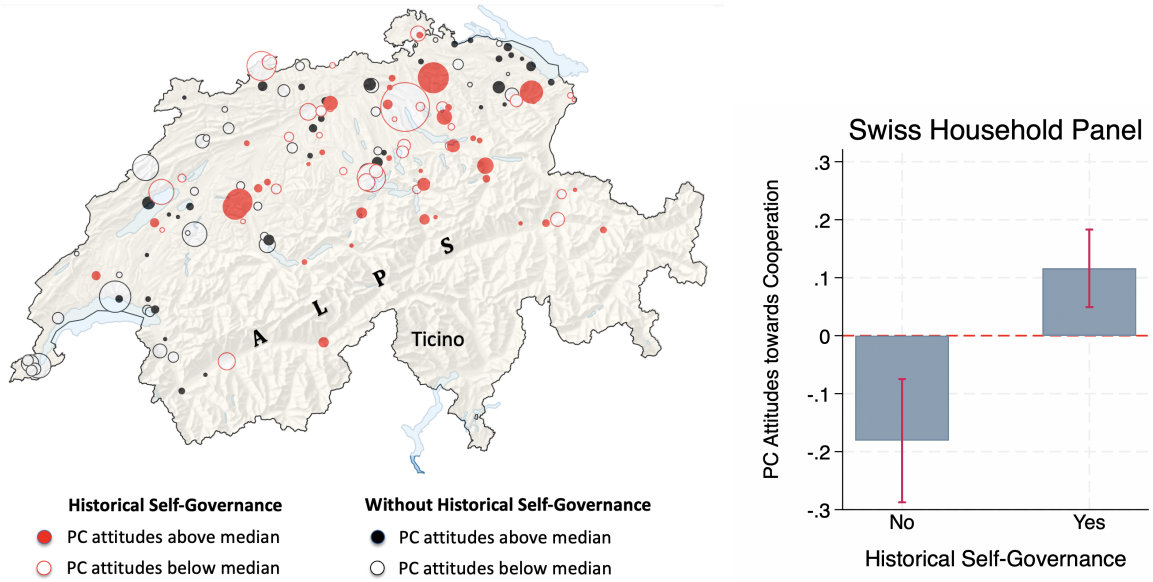
Figure A.7: Conditional Cooperation and Historical Self-Governance by Politics and Education

b) Attitudes towards Cooperation

Figure A.8 uses data from the the World Values Survey (Panel A) and Swiss Household Panel (Panel B) to show: a) the location of municipalities with and without historical self-governance on a map of Switzerland; b) the raw association between historical self-governance and an indicator of attitudes towards cooperation (median split for the ease of interpretation) on the map, and c) a bar graph showing the raw difference in attitudes towards cooperation by historical self-governance. It is evident from the map that in municipalities without historical self-governance attitudes towards cooperation are below the median, whereas in municipalities with historical self-governance attitudes towards cooperation are above the median. Results from the bar graph confirm these patterns.



Panel A: World Values Survey



Panel B: Swiss Household Panel

Figure A.8: Historical Self-Governance and Attitudes towards Cooperation

Notes. In the Left figure, each circle represents a municipality. Circles with red outline are municipalities with historical self-governance, whereas those with black outline are municipalities without historical self-governance. Solid circle (red or black) means the principal component of attitudes towards cooperation is above the median, whereas hollow circles (red or black) mean otherwise. The size of the circle represents the frequency of individuals. Ticino is excluded from the study. The right figure shows a bar graph of average principal component of attitudes in municipalities without and with historical self-governance. The capped bars indicate 95 percent confidence bands. Data on attitudes are from World Values Survey in panel A and Swiss Household Panel in panel B.

V. Empirical Strategy

a) Data on covariates

Data on most municipal level covariates were obtained from the Swiss Federal Statistical Office (geographical information platform, tax administration, and agriculture). Data on navigability in the Middle Ages, medieval church, and Roman town were obtained from maps prepared by Marco Zanoli. These maps are based on data from Ammann and Schib (1958) and Sauerländer et al. (2004). Data on population in the Middle Ages (available for 16 municipalities, 11 with and 8 without historical self-governance) were obtained via municipality specific articles in HLS. Data on distance from medieval cantonal capital were computed via Google Maps to account for the importance of terrain in travel time. Data on access to monasteries was obtained first by preparing a list of different orders (Capuchin, Carthusian, Cistercian, Dominican, Franciscan, and Benedictine) and then using Google Maps to identify their location within a radius of 5km from a municipality. Data on individual-level covariates were obtained from the post-experimental survey. The summary statistics on municipal level variables are in Table A.5 and individual level variables in Table A.6.

Table A.5: Summary Statistics: Municipal Level

	Panel A: Main covariates
Altitude	4.710
	(1.428)
Navigability	0.466
	(0.500)
Church	0.103
	(0.305)
Gini income	0.339
	(0.060)
	Panel B. Additional covariates
Climate	1.345
	(0.727)
Soil	1.506
	(1.626)
Roman town	0.092
	(0.290)
Distance	21.232
	(16.888)
Monastery	0.253
	(0.436)
Population	24.13
	(22.83)
Observations	174

Notes: Mean and standard deviation (parentheses) of main and additional variables. Population data is for the Middles Ages and is available for 19 municipalities only. Population is divided by 100. See Table 1, main paper for the definition of these variables.

Table A.6: Summary Statistics: Individual Level

	Panel A: Conditional cooperation
Spearman ρ	0.646
	(0.545)
	Panel B: Main covariates
Age	43.905
	(13.500)
Education	0.450
	(0.498)
Male	0.538
	(0.499)
HH income	11.602
	(0.532)
Catholic	0.321
	(0.468)
Protestant	0.363
	(0.482)
Left wing	0.332
	(0.472)
Center	0.431
	(0.496)
	Panel C: Additional covariates
Naturalized citizen	0.202
	(0.402)
Swiss migrant	0.374
	(0.485)
Game comprehension	0.592
	(0.492)
Observations	262

Notes: Mean and standard deviation (parentheses) of main and additional variables. See Table 2, main paper for the definition of these variables.

b) Balance check: historical prosperity

Figure A.9 shows that municipalities without and with historical self-governance are similar with respect to proxies of historical prosperity like population density and population growth.

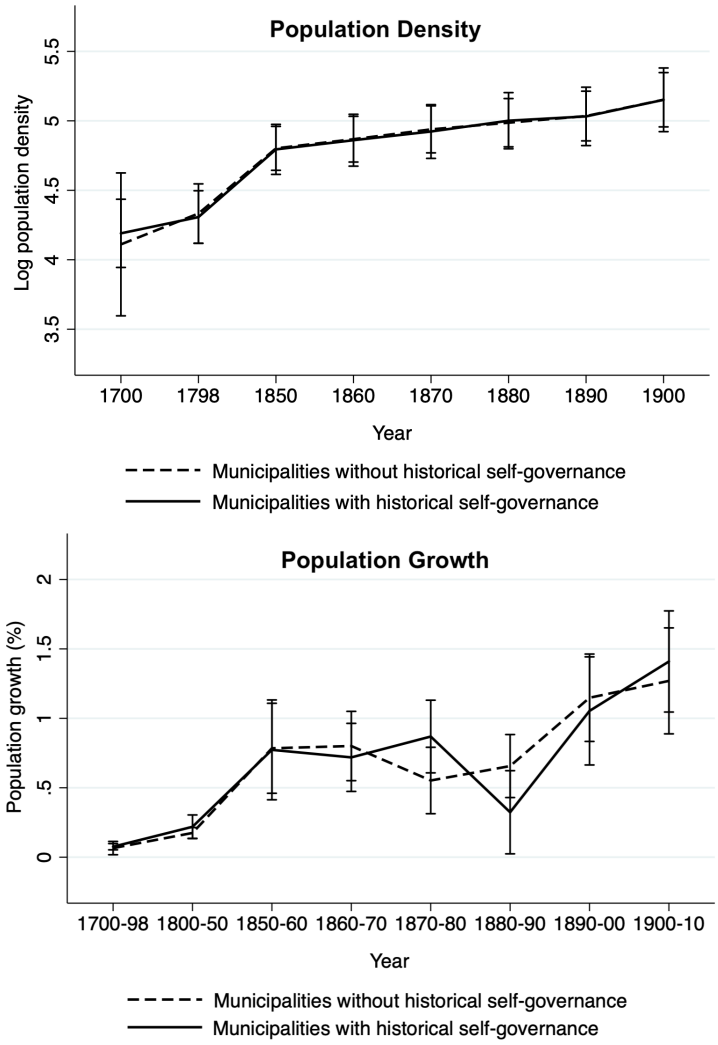


Figure A.9: Historical Self-Governance, Population Density and Population Growth

Notes. The figure tracks population density and population growth across municipalities over time, from ca. 1600-1900. The capped bars indicate 95 percent confidence intervals. Data are from municipality specific articles in the Historical Lexicon of Switzerland and from 1850 onwards from the Swiss Federal Office for Statistics.

c) Balance check: current prosperity

Figure A.10 shows that municipalities without and with historical self-governance are similar with respect to a number of current proxies of prosperity and education. The differences are mostly small and statistically insignificant, except for the share of tertiary sector units (p-value = 0.07) and the number of start-ups (p-value = 0.09), both of which are weakly significantly higher in municipalities with historical self-governance. This may be due to chance, so I use the first principal component of these variables to show that the overall association is not significantly different from zero (p-value = 0.35). A Bonferroni correction also reveals that the joint null of these differences being not significantly different from zero cannot be rejected.

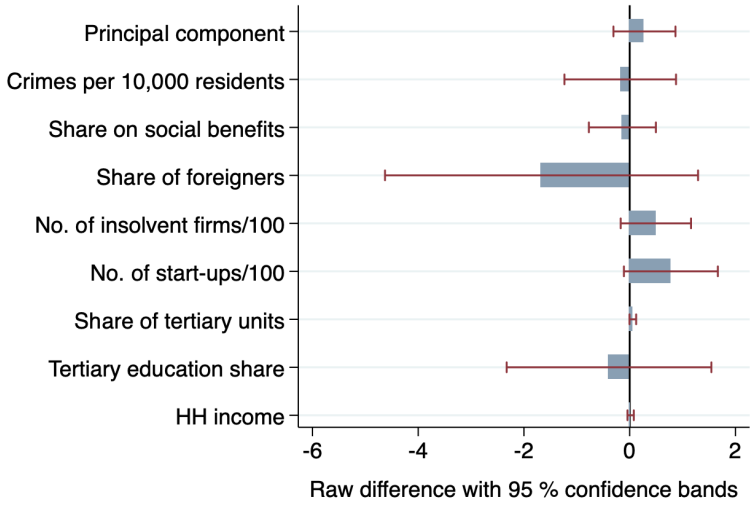


Figure A.10: Historical Self-Governance and Current Proxies of Prosperity and Education

Notes. The figure plots the coefficient from a regression of each variable on the y-axis on an indicator for historical self-governance. The capped bars indicate 95 percent confidence interval. Household income is for the year 2000 and is measured in logs. Tertiary education share is from 2000 (more recent data is not available). Share of tertiary units is from 2011. It is measured as the number of work units that are in the tertiary sector (non-manufacturing and non-agriculture). It is missing for four municipalities (2 without and 2 with historical self-governance). Number of start-ups is from 2014. Data for this variable was missing for 22 municipalities (14 without and 8 with historical self-governance). I code these as zero under the assumption that there were no start-ups. However, results remain unchanged when these municipalities are dropped. Number of insolvent firms is from 2014. This data is not available for 23 municipalities (16 without and 7 with historical self-governance). I code these as zero under the assumption that there were no firm closures in these municipalities. It is not the case that these municipalities do not have firms. As before, results remain unchanged when these municipalities are dropped. Share of foreigners, share of working population on social benefits, and crime per 1000 residents are from 2010. Data are at the municipal level and were obtained from the Swiss Federal Office for Statistics.

d) Fixed effects

Figure A.11 shows that the raw difference in conditional cooperation by historical self-governance holds within canton, historical canton, and language.

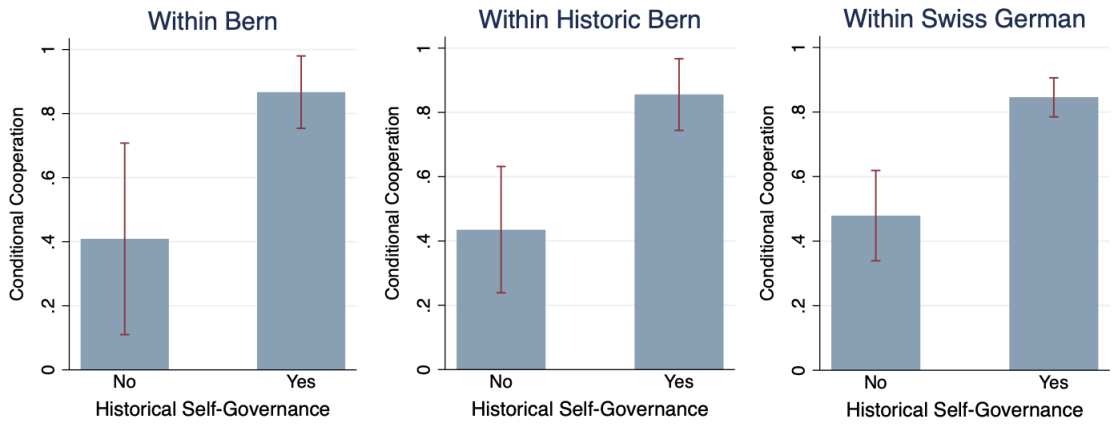


Figure A.11: Conditional Cooperation and Historical Self-Governance within Canton, Historical Canton, and Linguistic Group

Notes. The capped bars indicate 95 percent confidence bands.

e) Acquisition of Imperial Fiefs by the Zaehringen Family

The Zaehringen family acquired imperials fiefs in Switzerland on two separate occasions from emperors Henry IV and Lothar III. The first set of imperial fiefs were acquired by Berthold II of Zaehringen. This happened in the context of the investiture conflict between Henry IV and Pope Gregory VII. During this conflict, Rudolf of Rheinfelden (Duke of Swabia) and brother-in-law of Henry IV was elected as the anti-king. When Rudolf and his son died, Frederick I of Hohenstaufen and Berthold II of Zaehringen contended for the duchy of Swabia. The Diet in Mainz awarded most of the duchy to Frederick, but offered Berthold fiefs to the south of the Rhine in 1098, which is in Switzerland today.

The second set of imperial fiefs were acquired by Conrad I of Zaehringen. When William III, the Duke of Burgundy, was assassinated, two of his close relatives – Conrad and Reginald III laid claim to the fiefs of Burgundy. However, the Burgundian nobles supported Reginald and appointed him as the count of Burgundy. When Reginald attempted independence of Burgundy from the Holy Roman Empire, it led to a conflict with Emperor Lothar III. Reginald lost and had to forfeit a part of Burgundy to the east of the Jura to Lothar III, who made Conrad a legitimate heir of these lands in 1127.

In both the cases, the Zaehringen family laid claim to an entire section of territories of their relatives but acquired only a part thereof, which was not of their choosing. It seems that geographical boundaries played a role. In the Duchy of Swabia, the territories happened to be to the south of Rhine, whereas in Burgundy, to the east of Jura moun-

tains. Both the territories were on the Swiss plateau, where the territories of other noble dynasties were also located (see Figure 1, main paper).

f) Balance check - Within Zaehringen Rule

Table A.7: Balance Test by Zaehringen Imperial Fief: Within Zaehringen

	Zaehringen Fief		Difference in means (1) – (2)
	Imperial	Private	No controls
	(1)	(2)	(3)
	Panel A. Main variables		
Altitude	4.767	5.153	-0.386
	(1.108)	(1.072)	(0.459)
Navigability	0.515	0.714	-0.199
	(0.508)	(0.488)	(0.210)
Church	0.212	0.000	0.212
	(0.415)	(0.000)	(0.159)
Gini of income	0.309	0.311	-0.002
	(0.039)	(0.026)	(0.016)
	Panel B. Additional variables		
Climate	1.485	1.429	0.056
	(0.712)	(0.535)	(0.286)
Soil	1.818	1.143	0.675
	(1.845)	(1.574)	(0.751)
Roman	0.182	0.000	0.182
	(0.392)	(0.000)	(0.150)
Distance	22.876	17.714	5.161
	(19.527)	(12.388)	(7.733)
Monastery	0.273	0.429	-0.156
	(0.452)	(0.535)	(0.194)
Observations	33	7	40

Notes: Columns 1-2 report the means in Zaehringen imperial fief and Zaehringen private fief. Column 3 reports the difference in means obtained from the regression of each covariate on an indicator for Zaehringen imperial fief. The number of municipalities in column 2 is small because only a handful of Zaehringen fiefs were under private custody. Note that I exclude population in the late middle ages because of very small number of observations. The numbers in parentheses are standard deviations in columns 1-2 and standard error in columns 3. Data are at the municipal level.

VI. Main Results

a) Main results with coefficient on control variables

Table A.8: OLS and IV Estimates:
Coefficient on Control Variables

	Dependent Variable: Conditional Cooperation	
	OLS estimates	IV estimates
	(1)	(2)
Experience	0.439	0.521
	(0.069)	(0.170)
Age	0.001	0.002
	(0.002)	(0.002)
Education	0.067	0.058
	(0.064)	(0.065)
Male	0.009	0.011
	(0.068)	(0.067)
HH Income	0.037	0.041
	(0.066)	(0.063)
Catholic	-0.010	-0.016
	(0.081)	(0.081)
Protestant	-0.081	-0.090
	(0.086)	(0.088)
Left wing	0.026	0.029
	(0.088)	(0.088)
Center	-0.082	-0.085
	(0.085)	(0.084)
Altitude	-0.043	-0.045
	(0.034)	(0.033)
Navigability	-0.031	-0.032
	(0.065)	(0.063)
Church	-0.011	-0.031
	(0.075)	(0.082)
Gini income	-1.632	-1.694
	(0.658)	(0.644)
Observations	262	262

Notes: Column 1-2 report OLS and IV estimates with standard errors in parentheses clustered on the municipality.

b) Reduced-form estimates (ITT)

Table A.9: Reduced-Form Estimates

	Conditional Cooperation (1)	World Values Survey (2)	Swiss Household Panel (3)
Zaehringen imperial fief	0.197	0.360	0.192
	(0.081)	(0.171)	(0.092)
R^2	0.06	0.08	0.07
Controls	Yes	Yes	Yes
Observations	262	336	1866

Notes: OLS estimates with standard errors clustered on the municipality in parentheses. Controls include altitude, navigability, church, Gini of income, age, education, male, log household income, Catholic, Protestant, left wing, center.

c) Dropping one type at a time

Figure A.12 shows the raw difference in conditional cooperation by historical self-governance holds when I drop one type at a time except for conditional cooperators.

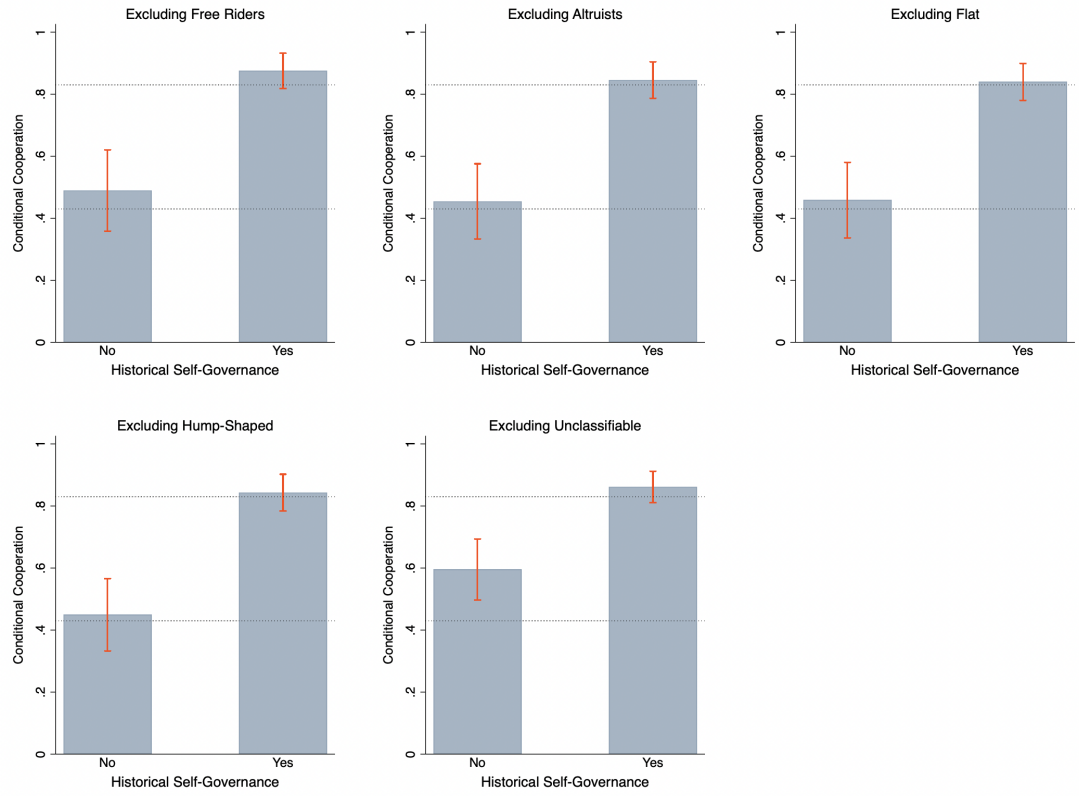


Figure A.12: Historical Self-Governance and Conditional Cooperation Excluding Each Type at a Time

Notes. The capped bars indicate 95 percent confidence bands.

Table A.10: Historical Self-Governance and Conditional Cooperation: Dropping Each Types at a Time

	Dependent variable: Conditional Cooperation				
	Excluding at a time				
	Free riders	Altruist	Flat	Hump-shaped	Unclassifiable
	(1)	(2)	(3)	(4)	(5)
Experience	0.434	0.440	0.425	0.427	0.261
	(0.079)	(0.074)	(0.073)	(0.071)	(0.061)
Controls	Yes	Yes	Yes	Yes	Yes
Observations	234	252	252	255	233

Notes: OLS estimates with standard errors clustered on the municipality. Controls include controls age, education, male, log household income, Catholic, Protestant, left wing, center, altitude, navigability, church, and Gini of income.

Table A.10 shows that the result is robust to including control variables. Though the coefficient declines in magnitude to 0.26 when unclassifiable types are dropped, it remains economically large and statistically significant at the 1-percent level. This drop is expected because the average Spearman rho for unclassifiable types is negative (see Table A.4) and the frequency of these types is significantly larger in municipalities without historical self-governance.

d) Robustness Checks

Dropping one canton at a time.– Table A.11 shows that the OLS and IV estimates are robust in magnitude and significance to dropping one canton at a time.

Table A.11: OLS and IV Estimates: Dropping One Canton at a Time

	Dependent Variable: Conditional Cooperation			
	OLS estimates		IV estimates	
	Coefficient	Standard error	Coefficient	Standard error
	(1)	(2)	(3)	(4)
Zurich	0.423	0.076	0.526	0.189
Bern	0.414	0.076	0.555	0.234
Lucerne	0.447	0.071	0.539	0.160
Uri	0.437	0.070	0.514	0.183
Schwyz	0.428	0.070	0.537	0.165
Obwalden	0.442	0.069	0.519	0.170
Glarus	0.439	0.069	0.521	0.170
Zug	0.447	0.070	0.519	0.168
Fribourg	0.435	0.070	0.513	0.169
Solothurn	0.421	0.071	0.444	0.144
Basel city	0.445	0.070	0.561	0.192
Basel land	0.444	0.070	0.545	0.188
Schaffhausen	0.438	0.070	0.520	0.172
Appenzell AR	0.438	0.069	0.511	0.171
St. Gallen	0.443	0.069	0.515	0.166
Grisons	0.439	0.069	0.521	0.170
Aargau	0.461	0.072	0.527	0.167
Thurgau	0.441	0.069	0.527	0.165
Vaud	0.437	0.075	0.531	0.181
Valais	0.456	0.071	0.521	0.170
Neuchatel	0.439	0.069	0.537	0.159
Geneva	0.412	0.071	0.419	0.189
Jura	0.445	0.070	0.550	0.179

Notes: Columns 1-2 report coefficient and standard error on experience from OLS estimation and columns 3-4 from IV estimation after dropping the canton listed in the row. The standard errors are clustered on the municipality.

Alternative standard errors.– Table A.12 reports results using alternative standard errors.

Table A.12: Historical Self-Governance and Norms of Cooperation: Alternative standard errors

	Conditional Cooperation (1)	World Values Survey (2)	Swiss Household Panel (3)
	Panel A: OLS estimates		
	Dependent variable: Norms of Cooperation		
Experience	0.439	0.433	0.340
	(0.069)	(0.131)	(0.073)
	{0.050}	{0.136}	{0.076}
	{0.048}	{0.137}	{0.077}
	[0.066]	[0.136]	[0.062]
	Panel B: IV Second-Stage		
	Dependent variable: Norms of Cooperation		
Experience	0.521	0.428	0.375
	(0.169)	(0.158)	(0.117)
	{0.121}	{0.130}	{0.123}
	{0.114}	{0.124}	{0.118}
	[0.170]	[0.133]	[0.117]
Control variables	Yes	Yes	Yes
Observations	262	336	1866

Notes: OLS and IV estimates with standard errors clustered on the municipality in parentheses, municipality and canton in the first row of curly brackets, municipality and historical canton in the second row of curly brackets, and adjusted for spatial clustering with a threshold of 50 Km in square brackets. Controls include altitude, navigability, church, Gini of income, age, education, male, log household income, Catholic, Protestant, left wing, center.

Additional controls.– Table A.13 reports the results. In column 1, I introduce additional individuals level controls: game comprehension, naturalized citizen, and Swiss migrant. These data are available only for the experimental sample. In columns 2-4, I introduce additional municipal level controls: climate, soil, and Roman town. Columns 1-2 report the results using the experimental sample and columns 3-4 using the WVS and SHP samples.

Table A.13: Historical Self-Governance and Norms of Cooperation: Additional Individual and Municipal Level Controls

	Conditional Cooperation (Experiment)		Attitudes towards cooperation (WVS)	Attitudes towards cooperation (SHP)
	(1)	(2)	(3)	(4)
	Individual	Municipal	Municipal	Municipal
	Panel A: OLS Estimates			
Experience	0.440	0.449	0.440	0.359
	(0.070)	(0.070)	(0.123)	(0.073)
	Panel A: IV Estimates – Second-Stage			
Experience	0.521	0.534	0.424	0.420
	(0.169)	(0.173)	(0.171)	(0.128)
	Panel A: IV Estimates – First-Stage			
Zaehringen imperial fief	0.380	0.390	0.874	0.509
	(0.106)	(0.118)	(0.195)	(0.141)
F-statistics	13.73	11.41	19.97	12.97
Control variables	Yes	Yes	Yes	Yes
Additional individual controls	Yes	No	No	No
Additional municipal controls	No	Yes	Yes	Yes
Observations	262	262	336	1866

Notes: OLS and IV estimates with standard errors in parenthesis clustered on the municipality. Control variables include age, education, male, log household income, Catholic, Protestant, left wing, center, altitude, navigability, church, and Gini of income. Additional individual controls include naturalized citizen, Swiss migrant, and game comprehension. Additional municipal level controls include climate, soil, and Roman town.

Fixed effects.– Table A.14 reports OLS estimates after controlling for fixed effects using the experimental and SHP sample. I do not conduct this analysis for the WVS sample because it has fewer observations (28 municipalities).

Table A.14: Historical Self-Governance and Norms of Cooperation: Fixed Effects using the Full Sample

	Conditional Cooperation (Experiment) (1)	Attitudes towards Cooperation (SHP) (2)
Experience	0.413	0.192
	(0.119)	(0.099)
Control variables	Yes	Yes
Fixed effects	Yes	Yes
Observations	262	1866
Municipalities	174	144

Notes: OLS estimates with standard errors in parenthesis clustered on the municipality. Control variables include age, education, male, log household income, Catholic, Protestant, left wing, center, altitude, navigability, church, and Gini of income. Fixed effects include canton, historical canton, and language.

The instrument varies mainly between cantons. The only exception is the historical canton of Bern which offers large within variation. So, I report results using this sub-sample in Table A.15. Column 1 reports OLS and IV estimates using the experimental sample. Column 2 reports results using the SHP sample. The WVS sample is excluded because of very few municipalities in this sub-sample (7 only).

Table A.15: Historical Self-Governance and Norms of Cooperation: Fixed Effects using within Historical Canton of Bern

	Conditional Cooperation (Experiment) (1)	Attitudes towards Cooperation (SHP) (2)
	Panel A: OLS Estimates	
Experience	0.365	0.282
	(0.137)	(0.122)
	Panel A: IV Estimates – Second-Stage	
Experience	0.403	0.263
	(0.185)	(0.162)
	Panel A: IV Estimates – First-Stage	
Zaehringen imperial fief	0.672	0.867
	(0.145)	(0.093)
F-statistics	21.45	87.16
Control variables	Yes	Yes
Observations	71	368
Municipalities	45	35

Notes: OLS and IV estimates with standard errors in parenthesis clustered on the municipality. Control variables include age, education, male, log household income, center, altitude, navigability, Church, and Gini of income.

Within Zaehringen comparison.– Table A.16 reports results using the experimental sample and the SHP sample. The number of observations in WVS is very small to conduct this exercise (8 municipalities).

Table A.16: Historical Self-Governance and Norms of Cooperation: Within Zaehringen Analysis

	Conditional Cooperation (Experiment) (1)	Attitudes towards Cooperation (SHP) (2)
	Panel A: OLS Estimates	
Experience	0.469	0.253
	(0.137)	(0.099)
	Panel A: IV Estimates – Second-Stage	
Experience	0.467	0.301
	(0.264)	(0.099)
	Panel A: IV Estimates – First-Stage	
Zaehringen imperial fief	0.673	0.955
	(0.117)	(0.049)
F-statistics	33.16	375.88
Control variables	Yes	Yes
Observations	82	654
Municipalities	40	33

Notes: OLS and IV estimates with standard errors in parenthesis clustered on the municipality. Control variables include age, education, male, log household income, Catholic, Protestant, left wing, center, altitude, navigability, church, and Gini of income.

Main results with Duration.– Table A.17 reports results using the duration of historical self-governance.

Table A.17: Historical Self-Governance and Norms of Cooperation
OLS and IV Estimates using Duration

	Experimental Sample	World Values Survey	Swiss Household Panel
	(1)	(2)	(3)
	Panel A: OLS estimates		
	Dependent variable: Norms of Cooperation		
Experience	0.095	0.084	0.068
	(0.014)	(0.026)	(0.014)
R^2	0.19	0.09	0.08
	Panel B: IV Second-Stage		
	Dependent variable: Norms of Cooperation		
Experience	0.099	0.090	0.077
	(0.032)	(0.033)	(0.026)
R^2	0.19	0.09	0.08
	Panel C: IV First-Stage		
	Dependent variable: Duration		
Zaehringen imperial fief	1.988	4.019	2.504
	(0.573)	(0.960)	(0.754)
F-statistics	12.05	17.51	11.03
Control variables	Yes	Yes	Yes
Observations	262	336	1866

Notes: OLS and IV estimates with standard errors clustered on the municipality. The dependent variable in column 1 is conditional cooperation. In columns 2-3, it is the principal component of attitudes towards cooperation. Control variables include age, education, male, log household income, Catholic, Protestant, left wing, center, altitude, navigability, church, and Gini of income.

Other robustness checks.– Table A.18 shows that the results are robust to dropping municipalities for which precise date of change in historical self-governance was not available (column 1) or re-assigning them to without historical self-governance (column 2). The change in WVS is negligible (only 1 municipality), so I exclude it.

Table A.18: Historical Self-Governance and Norms of Cooperation: Dropping observations and alternative assignment with missing dates

	Drop observations (1)	Reassign experience (2)
	Panel A: Conditional Cooperation	
OLS	0.485	0.429
	(0.076)	(0.072)
IV Second-Stage	0.459	0.515
	(0.167)	(0.187)
IV First-Stage	0.426	0.382
	(0.119)	(0.116)
F-statistics	12.93	10.79
Observations	232	262
Municipalities	145	174
	Panel B: Swiss Household Panel	
OLS	0.385	0.378
	(0.070)	(0.066)
IV Second-Stage	0.345	0.380
	(0.120)	(0.120)
IV First-Stage	0.526	0.504
	(0.141)	(0.139)
F-statistics	13.93	13.05
Control variables	Yes	Yes
Observations	1735	1866
Municipalities	118	144

Notes: OLS and IV estimates with standard errors in parenthesis clustered on the municipality. Control variables include age, education, male, log household income, center, altitude, navigability, church, and Gini of income.

Main results including Ticino.– Table A.19 shows that the results hold when I include municipalities from the canton of Ticino. Column 1 uses the actual status of historical self-governance, column 2 assumes that all municipalities in Ticino were without historical self-governance, and column 3 assumes the opposite, i.e., all were with historical self-governance.

Table A.19: Historical Self-Governance and Norms of Cooperation Including Ticino

	Actual status of self-governance (1)	All without self-governance (2)	All with self-governance (3)
	Panel A: Conditional Cooperation		
OLS	0.407	0.422	0.373
	(0.066)	(0.069)	(0.072)
IV Second-Stage	0.568	0.500	0.563
	(0.191)	(0.171)	(0.193)
IV First-Stage	0.349	0.396	0.352
	(0.102)	(0.104)	(0.105)
F-statistics	11.66	14.64	11.13
Observations	303	303	303
Municipalities	202	202	202
	Panel B: World Values Survey		
OLS	0.397	0.375	0.392
	(0.136)	(0.129)	(0.123)
IV Second-Stage	0.381	0.353	0.361
	(0.168)	(0.167)	(0.166)
IV First-Stage	0.774	0.835	0.817
	(0.186)	(0.168)	(0.186)
F-statistics	17.58	25.02	19.50
Observations	403	403	403
Municipalities	35	35	35
	Panel C: Swiss Household Panel		
OLS	0.330	0.311	0.339
	(0.073)	(0.072)	(0.073)
IV Second-Stage	0.372	0.354	0.374
	(0.118)	(0.119)	(0.118)
IV First-Stage	0.500	0.526	0.497
	(0.134)	(0.128)	(0.135)
F-statistics	13.96	16.77	13.59
Observations	1942	1942	1942
Municipalities	166	166	166
Controls	Yes	Yes	Yes

Notes: OLS and IV estimates with standard errors clustered on the municipality in parentheses. Municipality level controls include altitude, navigability, church, and Gini of income. Individual level controls include age, education, male, log household income, Catholic, Protestant, left wing, center.

Self-Efficacy Beliefs.– Table A.20 uses data from the WVS. When I control for self-efficacy beliefs, the coefficient on experience retains its magnitude and significance. In contrast, the coefficient on self-efficacy beliefs is very small in magnitude and is also statistically insignificant. This analysis was not carried out using experimental and SHP samples because of on self-efficacy beliefs is not available for these samples.

Table A.20: Historical Self-Governance and Conditional Cooperation: Self-Efficacy Beliefs

	Dependent Variable: Attitudes towards Cooperation:
	Panel A: OLS estimates
Experience	0.424
	(0.130)
Self-efficacy belief	-0.036
	(0.032)
	Panel B: IV - Second Stage
Experience	0.410
	(0.162)
Self-efficacy belief	-0.036
	(0.031)
	Panel C: IV - First Stage
Zaehringen imperial fief	0.835
	(0.182)
F-statistics	21.02
Control variables	Yes
Observations	333

Notes: OLS and IV estimates with standard errors clustered on the municipality. Controls include age, education, male, log household income, Catholic, Protestant, left wing, center, altitude, navigability, church, and Gini of income. Data are from the World Values Survey.

VII. Pro-Social Behaviors

a) Historical Self-Governance and Pro-social Behaviors

Figure A.13 plots the coefficient on experience. It shows that without or with a different configuration of controls, both OLS and IV estimates show a positive and significant effect of historical self-governance on pro-social behaviors.

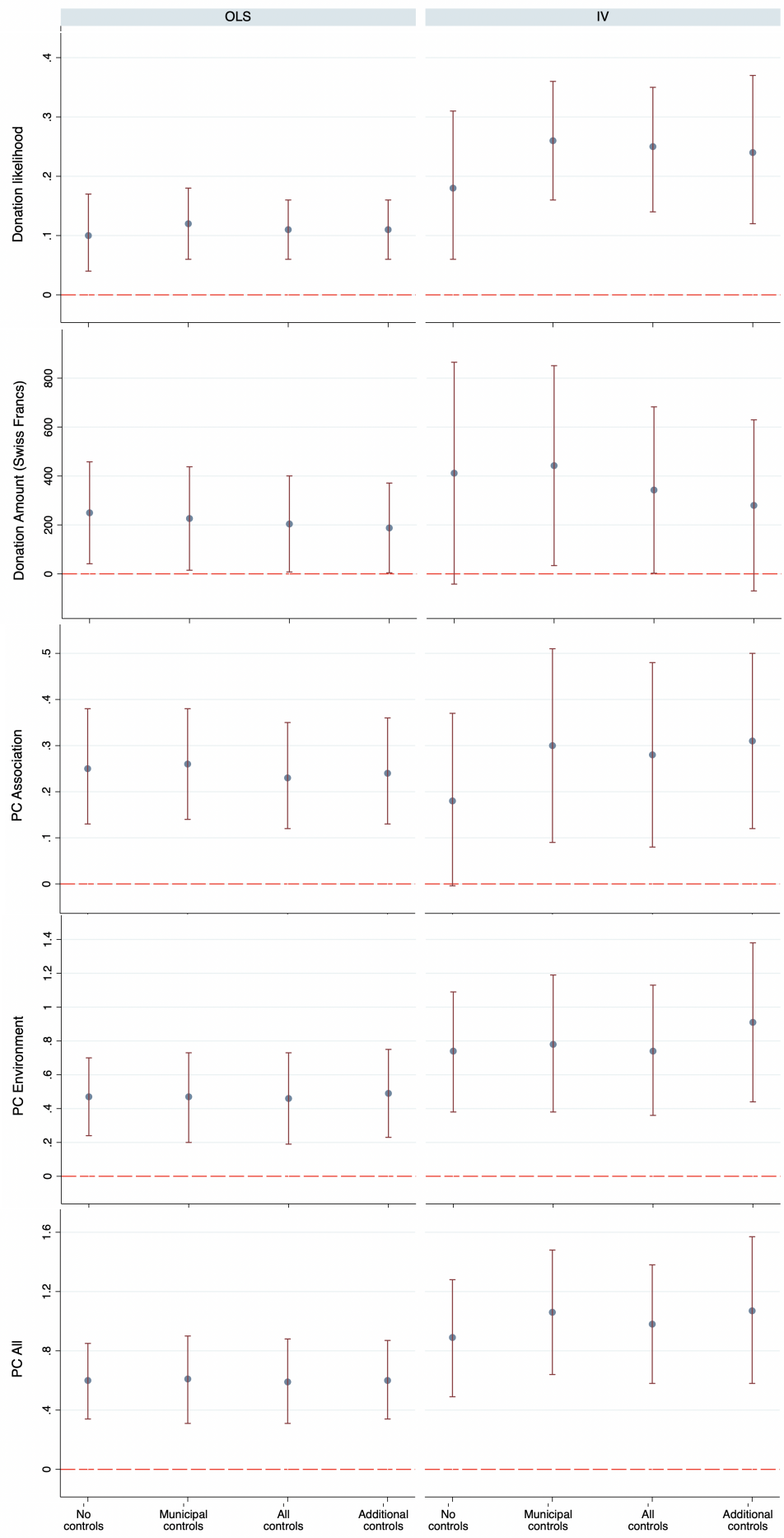


Figure A.13: Historical Self-Governance and Pro-social Behaviors

Figure A.14 plots the coefficient on experience from a regression of each pro-social behavior (listed on the x-axis) on historical self-governance using OLS estimation. It shows that the coefficient on experience is robust to the inclusion of fixed effects. The corresponding exercise is not possible with IV estimation because of little variation in the instrument within the fixed effects in this sample.

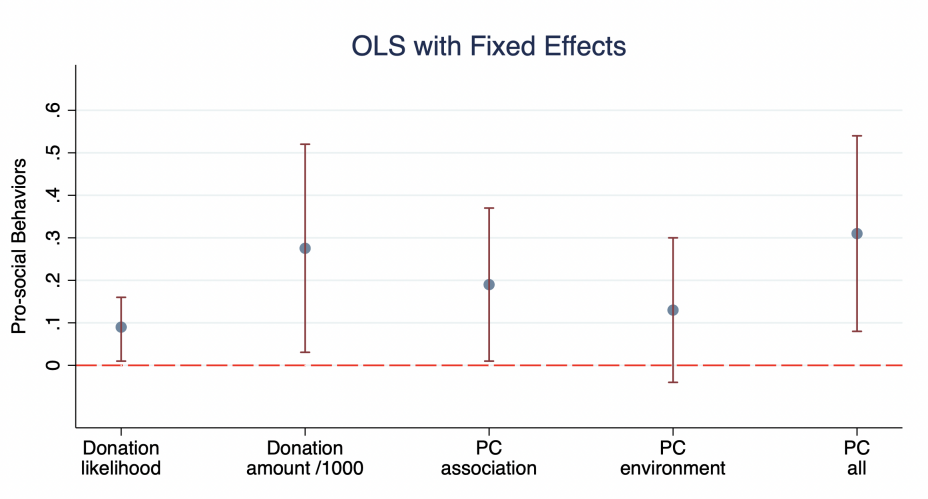


Figure A.14: Historical Self-Governance and Pro-social Behaviors - FE estimates

b) Historical Self-Governance and Voter-Turnout

Table A.21 shows the robustness of the result on voter turnout. Column 1 presents results at the cantonal level and shows that the effect of historical self-governance is robust to controlling for language. Since this analysis is at the cantonal level, it is not possible to include additional controls which are measured at the municipal level. Columns 2-4 present results at the municipal level and show the results hold when I include additional controls in column 2, fixed effects in column 3, and carry out within Zaehringen analysis in column 4.

Table A.21: Historical Self-Governance and Voter-Turnout: Robustness Checks

	Cantonal Sample	Municipal Sample		
	Fixed effects	Additional controls	Fixed effects	Within Zaehringen
	(1)	(2)	(3)	(4)
	Panel A: OLS Estimates			
Experience	9.779	2.624	2.064	3.575
	(4.452)	(0.894)	(0.868)	(1.312)
	Panel A: IV Estimates – Second-Stage			
Experience		6.221	5.247	6.846
		(3.014)	(3.165)	(2.520)
	Panel A: IV Estimates – First-Stage			
Zaehringen imperial fief		0.325	0.296	0.807
		(0.091)	(0.088)	(0.136)
F-statistics		12.86	11.43	35.07
Control variables	Yes	Yes	Yes	Yes
Observations	12,542	79,508	79,508	18,605
Clusters	19	174	174	40

Notes: OLS and IV estimates. Standard errors in parenthesis are clustered on the canton and referendum in column 1 and on the municipality and referendum in columns 2-4. In column 1, control variables include altitude, navigability, log population in 1850, population growth in 1850-60, student-teacher ratio in primary school in 1888, share of male population in 1850, and indicator for cantons with public assemblies. In columns 2-4, control variables include altitude, navigability, church, Gini of income in 2006, indicator for municipalities with public assemblies, log income per capita in 2010, secondary and tertiary education share in 2000, share of Catholics in 2000, share of center votes in 2011. Additional controls include: Soil, Climate, Roman. Clusters refers to number of cantons in columns 1-2 and number of municipalities in columns 3-4. Data are from the Swiss Federal Office for Statistics.

Table A.22 shows that municipalities with historical self-governance show stronger support for women's participation in decision-making and easier citizenship for foreigners.

Table A.22: Historical Self-Governance and Decision-Making in Referendums

	Full sample	Women only	Foreigners only
	(1)	(2)	(3)
	Panel A: OLS Estimates		
Experience	2.178	2.017	2.389
	(0.576)	(1.180)	(0.632)
	Panel B: IV Estimates - Second Stage		
Experience	8.012	7.742	8.370
	(3.474)	(3.509)	(4.385)
	Panel C: IV Estimates - First Stage		
Zaehringen imperial fief	0.294	0.294	0.294
	(0.089)	(0.090)	(0.090)
F-statistics	10.86	10.80	10.69
Control variables	Yes	Yes	Yes
Observations	1215	693	522
Municipalities	174	174	174
Events	7	4	3

Notes: OLS and IV estimates with standard errors in parenthesis clustered on the municipality and referendum. Control variables include altitude, navigability, church, indicator for municipality with public assemblies, female share in 2010, share of adults with secondary and tertiary education in 2000, share of Catholics in 2000, log of income per capita in 2010, Gini of income in 2006, and an indicator for Swiss German. Controls variables are from years for which data were available.

VIII. Norms, attitudes, and prosocial behaviors

Table A.23 shows there exists a positive and statistically significant association between conditional cooperation and prosocial behaviors. Table A.24 shows a positive and statistically significant association between attitudes towards cooperation and a variety of prosocial behaviors.

Table A.23: Conditional Cooperation and Prosocial Behaviors

	Public transport	Sustainable food	Voter turnout
	(1)	(2)	(3)
Conditional cooperation	0.135	0.137	1.233
	(0.050)	(0.042)	(0.598)
Control variables	Yes	Yes	Yes
Observations	262	262	79,508
No. of municipalities	174	174	174

Notes: OLS estimates with standard errors in parenthesis clustered on the municipality in columns 1-2, and on municipality and referendum topic in column 3. In columns 1-2, data is at the individual level. Control variables include age, education, male, log household income, Catholic, Protestant, center, left, altitude, navigability, church, and Gini of income. In column 3, data are at the municipal level. Control variables include altitude, navigability, church, Gini of income, indicator for municipalities with public assemblies, log income per capita in 2010, secondary and tertiary education share in 2000, share of Catholics in 2000, share of center votes in 2011. Public transport and sustainable food consumption are binary variables, where 1 implies regular use or consumption. Voter turnout is in percentage.

Table A.24: Attitudes towards Cooperation and Prosocial Behaviors

	Donations to charities	Amount of donation	Membership associations	Environmental protection	All prosocial behaviors
	(1)	(2)	(3)	(4)	(5)
PC Attitudes	0.040	128.775	0.057	0.143	0.179
	(0.011)	(21.782)	(0.019)	(0.024)	(0.029)
Controls	Yes	Yes	Yes	Yes	Yes
Observations	1859	1801	1864	1836	1770

Notes: OLS estimates with standard errors in parenthesis clustered on the municipality. Control variables include age, education, male, log household income, Catholic, Protestant, center, left, altitude, navigability, church, and Gini of income. PC attitudes is the principal component of attitudes towards cooperation, such as cheating on tax declaration, lying in own interest, claiming state benefits not entitled to. The definition of dependent variables is in the footnotes of Table 5, main paper.

IX. Plausible Channels

a) Prosperity and education

Table A.25 shows that the effect of historical self-governance is robust to controlling for the principal component of current and past proxies of prosperity and education, which themselves enter with mostly small and statistically insignificant coefficients.

Table A.25: Historical Self-Governance and Conditional Cooperation Controlling for Past and Current Proxies of Prosperity and Education

	Dependent Variable: Conditional Cooperation				
	PC current prosperity	PC population density	PC population growth	Monastery access	All of them
	(1)	(2)	(4)	(3)	(5)
Experience	0.453	0.446	0.460	0.423	0.437
	(0.070)	(0.069)	(0.070)	(0.069)	(0.068)
R^2	0.19	0.19	0.20	0.19	0.20
Controls	Yes	Yes	Yes	Yes	Yes
Observations	262	262	262	262	262

Notes: OLS estimates with standard errors clustered on the municipality. Controls include age, education, male, log household income, Catholic, Protestant, left wing, center, altitude, navigability, church, and Gini of income. PC current prosperity is the first principal component of current measures of economic prosperity (see Figure A.10 for the list of included variables). PC population density is the principal component of past population density and PC population growth is the principal component of past population growth (see Figure A.9 for the years included). Monastery access is an indicator for access to education in the Middle ages which equals 1 if a monastery was located within 5 km distance, otherwise 0.

b) Trade and urbanization

Panel B in Figure A.7 shows that the raw difference in conditional cooperation is positive and statistically significant in the sample of rural municipalities that were less integrated in trade and commerce. Column 1 of Table A.26 confirms that this result is robust to

the inclusion of control variables. Historical self-governance has a positive and statistically significant effect on conditional cooperation. The magnitude of the coefficient on experience is similar to that obtained in the full sample. Though the coefficient is smaller than in the sample of urban municipalities included in column 2, the difference is not statistically significant (p-value = 0.25).

Table A.26: Historical Self-Governance and Conditional Cooperation: Rural and Urban Municipalities

	Dependent Variable: Conditional Cooperation	
	Rural	Urban
	1	2
Experience	0.376	0.545
	(0.087)	(0.121)
R^2	0.19	0.26
Control variables	Yes	Yes
Observations	140	122
Municipalities	126	48

Notes: OLS estimates with standard errors clustered on the municipality. Controls include age, education, male, log household income, Catholic, Protestant, left wing, center, altitude, navigability, church, and Gini of income.

c) Formation of the Old Swiss Confederacy

Table A.27 splits the indicator for experience into those that experienced only historical self-governance and those that additionally experienced Old Swiss Confederacy. There is no difference between the two coefficients.

Table A.27: Historical Self-Governance and Conditional Cooperation
Old Swiss Confederacy

	Dependent variable: Conditional Cooperation	
	No controls	Full controls
	(1)	(2)
Experience only	0.411	0.420
	(0.071)	(0.074)
Experience plus OSC	0.388	0.468
	(0.065)	(0.084)
Control variables	No	Yes
Observations	262	262

Notes: OLS estimates with standard errors in parenthesis clustered on the municipality. Control variables include age, education, male, log household income, Catholic, Protestant, left wing, center, altitude, navigability, church, and Gini of income. Experience only is an indicator for municipalities that experienced historical self governance but were not directly associated with the Old Swiss Confederacy (OSC). Experience plus OSC is an indicator for municipalities that experienced historical self governance and were also directly associated with the OSC.

d) Historical migration

Table A.28 shows the effect of historical self-governance on conditional cooperation after controlling for migration rate from 1800-1900. Column 1 reports result using the full sample. Column 2-3 report results from samples below and above the median migration rate (34.35 percent).

Table A.28: Historical Self-Governance, Conditional Cooperation, and Historical Migration

	Dependent Variable: Conditional Cooperation		
	Full sample	Migration < median	Migration > median
	(1)	(2)	(3)
Experience	0.423	0.492	0.417
	(0.072)	(0.100)	(0.115)
Migration rate	0.001	0.006	0.001
	(0.001)	(0.005)	(0.003)
R^2	0.18	0.26	0.23
Controls	Yes	Yes	Yes
Observations	259	130	129

Notes: OLS estimates with standard errors clustered on the municipality. Controls include controls age, education, male, log household income, Catholic, Protestant, left wing, center, altitude, navigability, church, and Gini of income. Data were not available for two municipalities. Data on migration are computed from the register of Swiss family names with citizenship in a Swiss municipality made available by Historical Lexicon of Switzerland (HLS).

e) Discussion on feedback loop

Index of direct democracy

The index of direct democracy was compiled by Stutzer (1999) and Fischer (2009). It rates cantons on the ease of participatory decision-making from 1970-2005 on a scale of 1-6, where 1 is the worst and 6 is the best. Figure A.15 show that the index is around 5 in cantons where many municipalities experienced historical self-governance. However, it is around 3 in cantons where most municipalities were without historical self-governance.

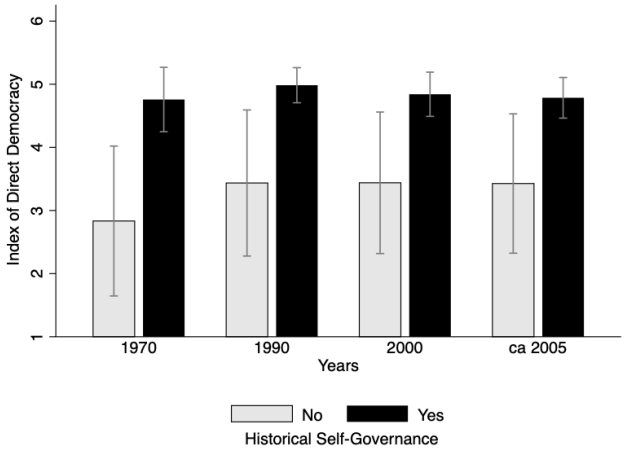


Figure A.15: Historical Self-Governance and Index of Direct Democracy Over Time

Notes. The capped bars indicate 95 percent confidence intervals. Data are from Stutzer (1999) and Fischer (2009).

Frequency of referendums and initiatives

Table A.29 shows municipalities with historical self-governance hold more than twice as many referendums and initiatives in a year to arrive at local decision-making. These results hold whether without or with controls.

Table A.29: Historical Self-Governance and Frequency of Referendums and Initiatives

	Dependent variable: Frequency of Referendums and Initiatives				
	Combined			Referendum only	Initiative only
	No controls	Year FE	Full controls	Full controls	Full controls
	(1)	(2)	(3)	(4)	(5)
Experience	1.530	1.645	1.540	2.374	0.712
	(0.270)	(0.281)	(0.409)	(0.747)	(0.296)
Year fixed effects	No	Yes	Yes	Yes	Yes
Control variables	No	No	Yes	Yes	Yes
Observations	328	328	328	151	177
Baseline mean		1.36		1.82	0.90

Notes: OLS estimates with standard errors clustered on municipalities and cantons in parentheses. The results hold when standard errors are clustered only at the municipal level. Controls variables are at the municipal level from years for which data were available and which are close to the years in which the dependent variable is measured. These include tertiary education share in 2000, log income per capita in 2010 and 2014, Catholic share in 2000, center vote share in 2007 and 2015, center vote share in 2007 and 2015, Gini of income in 2006 and 2010, altitude, navigability, and church. Protestant share is excluded because it is highly correlated with Catholic share ($r = 0.92$). Data on tertiary education and Catholic share are available only for the year 2000. Data on the dependent variable are from Andreas Ladner for 2009 and 2016. Data on control variables are from the Swiss Federal Office for Statistics.

Attitudes towards democracy and support for democracy

Table A.30 shows individuals from municipalities with historical self-governance show stronger attitudes and support for democracy. Data on attitudes towards democracy are obtained from the World Values Survey (WVS). In the survey, individuals are asked to rate on a scale of 1-10 whether it is an essential characteristic of democracy that (i) governments tax the rich and subsidize the poor, (ii) religious authorities interpret the laws, (iii) people choose their leaders in free elections, (iv) people receive state aid for unemployment, (v) the army takes over when the government is incompetent, (vi) civil rights protect people's liberty, (vii) people can change the laws in referendums, (viii) women have the same rights as men, and (ix) democracy in own country. In columns 1-2, I use the first principal component of these nine attitudes towards democracy as the dependent variable.[3] In columns 3-4, I use data on support for democracy from the Swiss Household Panel (SHP), which is on a scale of 1-10, where 1 means no support and 10 means full support.

Table A.30: Historical Self-Governance, Attitudes towards Democracy, and Support for Democracy

	Dependent variable is:			
	PC of attitudes towards democracy (WVS)		Support for democracy (SHP)	
	No controls	Controls	No controls	Controls
	(1)	(2)	(3)	(4)
Experience	0.952	0.920	0.445	0.334
	(0.184)	(0.181)	(0.099)	(0.084)
Control variables	No	Yes	No	Yes
Observations	301	300	1903	1865

Notes: OLS coefficients with standard errors in parentheses clustered at the municipal level. Controls include age, education, male, log household income, Catholic, Protestant, left wing, center, altitude, navigability, church, and Gini of income.

[3]The results hold individually for all questions except (ii) and (v), which is not surprising.

Appendix B Experimental Instructions

Introduction

You are taking part in a research by ETH Zurich. This is a research about decision-making by individuals.

The contents will be kept highly confidential and will be only used for scientific purposes. Whatever decisions you take will be ANONYMOUS.

You will take part in THREE studies. Depending on your and other players' decisions in these studies, you can earn up to 175 Swiss Francs. Therefore, please read the instructions carefully.

In the end, we will use a lottery to select 40 participants and pay them the exact amount earned by them in one of the three studies. We will get in touch with the selected participants to transfer the money.

Please take all the decisions without consulting anyone else.

Please, do not use the back and forward button of the browser.

Basic Instructions

We will now introduce you to the basic situation in which you have to take a decision. You will confront this situation in all the three studies.

You are a member of a group comprising two players A and B.

YOU ARE ALWAYS PLAYER A

Player B is not a computer, but a real person.

You don't know who player B is. Similarly, player B does not know who you are. You are also not known to us.

Each player gets 100 Francs at the start of the study. You have to decide what to do with this money.

You can either keep the Francs in your "private account" or you can invest them in a "common fund". Francs not invested in the common fund are automatically transferred to your private account.

Earnings from the private account: For each Franc you keep in the private account, you get exactly 1 Franc. For example, if you put 50 Francs in your private account, you will earn exactly 50 Francs. Except for you, no one else has access to earnings from your

private account.

Earnings from the common fund: For each Franc that you invest in the common fund you get 0.75 Francs and player B also gets 0.75 Francs. Of course, you also get 0.75 Francs for each Franc invested by player B.

Earnings from the common fund = total number of Francs invested in the common fund by you and player B multiplied by 0.75.

Example, if the sum of Francs invested by you and player B in the common fund is 200, you and player B earn 200 x 0.75 = 150 Francs each from the common fund.

Total earnings = earnings from the private account + earnings from the common fund.

Control Questions

Now we will ask you to answer three questions to help you understand the instructions better. Please answer the following questions carefully.

Question 1: Out of 100 Francs, player A and B invest 0 Francs each in the common fund.

How much does each player earn from the common fund?

What are the total earnings of player A?

What are the total earnings of player B?

Question 2: Out of 100 Francs, Player A invests 100 Francs in the common fund, and player B also invests 100 Francs.

How much does each player earn from the common fund?

What are the total earnings of player A?

What are the total earnings of player B?

Question 3: Out of 100 Francs, Player A invests 0 Francs in the common fund, but player B invests 100 Francs.

How much does each player earn from the common fund?

What are the total earnings of player A?

What are the total earnings of player B?

STUDY 1

Study 1 contains the decision situation we have just described to you. You will get 100 Francs. You can put them into your private account or you can invest them into a common fund. You will have to take two types of decisions. We will call them Decision I and Decision II.

Decision I: You will have to decide how many out of 100 Francs to invest into the common fund. You can ONLY invest in multiples of 10. Example: 0, 10, 20, 30 and so on till 100. You will have to enter the amount in a box like this:

Decision II: You will have to indicate the amount of Francs you would like to invest into the common fund for each possible investment by player B. This will become clear to you, if you look at the table on the screen below (please, do not fill in the table as yet):

Player B (Anonymous)	Player A (You)	Player B (Anonymous)	Player A (You)
0			
		60	
10			
		70	
20			
		80	
30			
		90	
40			
		100	
50			

You will have to enter your decision into the box next to the investment of player B. For example: How many Francs would you like to invest into the common fund if player B invests zero Francs in the common fund? How many Francs would you like to invest into the common fund if player B invests 10 Francs. . . and so on till 100 Francs.

You will have to make an entry into each box. Make sure that no box is empty.

After all participants have taken their decisions I and II, we will use a lottery to select one of the two decisions taken by you. This will be matched with the remaining decision of the other player to determine your payoffs in study 1.

You are now taking part in study 1. It will be conducted only once.

Decision I: Out of 100 Francs, how many would you like to invest into the common fund? Please enter the amount into the box below:

Decision II: How many Francs would you like to invest into the common fund for each possible investment by player B? Please choose between the amounts 0, 10, 20, 30, 40, 50 and so on till 100. Make sure that you fill each empty box.

Player B (Anonymous)	Player A (You)	Player B (Anonymous)	Player A (You)
0			
		60	
10			
		70	
20			
		80	
30			
		90	
40			
		100	
50			

REFERENCES

Fischer, J.A.V. 2009. "Development of Direct Democracy in Swiss Cantons between 1997 and2003," MPRA Paper, No. 16140.

Maehl, W. H. (1979). Germany in Western Civilization. The University of Alabama Press.

Stutzer, A. 1999. "Democracy Indices for the Cantons of Switzerland," Working Paper 23, Institute for Empirical Research in Economics, University of Zurich.