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Neha Deopa  
and  
Piergiuseppe  
Fortunato

Division on Globalisation  
and Development  
Strategies, UNCTAD

[Neha.deopa@graduateinstitute.ch](mailto:Neha.deopa@graduateinstitute.ch)  
[piergiuseppe.fortunato@unctad.org](mailto:piergiuseppe.fortunato@unctad.org)

# *Coronagraben. Culture and social distancing in times of COVID-19*

## Abstract

Social distancing measures have been introduced in many countries in response to the COVID-19 pandemic. The rate of compliance to these measures has varied substantially. We study how cultural differences can explain this variance using data on mobility in Swiss cantons between January and May 2020. We find that mobility declined after the outbreak but significantly less in the German-speaking region. Contrary to the evidence in the literature, we find that within the Swiss context, higher generalized trust in others is strongly associated with lower reductions in individual mobility. We attribute these results to the German-speaking cantons having a combination of not only high interpersonal trust but also conservative political attitudes which may have altered the trade-off between the chance of contracting the virus and the costs associated with significant alterations of daily activities.

**Key words:** COVID-19, Culture, Social distancing, trust, political attitudes



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# 1. Introduction

After the initial outbreak in Wuhan in early January 2020, COVID-19 quickly spread across all regions of the world, achieving a pandemic status. Flattening the contagion curve has rapidly become a priority in many countries in an attempt to reduce the load on the healthcare system and the overall mortality rate. A two-months strict lockdown was introduced in the Chinese province of Hubei on January 23, and Western democracies followed suit enacting shelter-in place and social distancing measures and large cut backs on production activities. Many countries have also tried to reduce interpersonal contact and mobility through massive “stay at home” media campaigns aimed at altering citizens habits. While the health measures enacted have been, on average, homogeneous across countries, compliance to these rules varied widely within the local context. In the absence of perfect enforcement capacity by the states, cultural attitudes and behavioral norms, which typically vary from country to country, can make an important difference and explain deviations in voluntary compliance. This is all the more true when it comes to individual mobility decisions, which entails a delicate trade-off between the chance of contracting (or diffusing) a disease and the economic (and individual well being) costs associated to significant alterations of daily activities.

There are major cultural differences, for example, in the physical distance that people keep when interacting with others, with Southern Europeans preferring closer interpersonal distance than Northern Europeans and Northern Americans (Remland et al. (1995); Sorokowska et al. (2017)). Since social contact patterns are a crucial factor behind the spread of the disease, the benefit of abiding to strict social distancing rules and reducing mobility will be higher in societies accustomed to close interactions (Prem et al. (2017); Oksanen et al. (2020)). Can there be a role for cultural biases in the spread of pandemics? We study how cultural values may play a role in the evolution of individual mobility under COVID-19 measures. Our work contributes to a growing body of studies linking cultural variables, social distancing, and the spread of COVID-19 (Durante et al. (2020); Barrios et al. (2020); Borgonovi and Andrieu (2020); Brodeur et al. (2020); Egorov et al. (2020)). Building on these papers, we investigate various dimensions of culture and focus our analysis on Switzerland, which provides a unique case due to its native language groups which are shared by the adjoining countries and the distinct linguistic geographical areas with deep historical roots. These areas are associated with specific cultural traits and an example that highlights this is the colloquial name for the border between the French and German speaking region, called *Röstigraben*. *Rösti* refers to a hashed potato dish which originated in the canton of Bern and is typical of Swiss German cuisine, and *Graben* is a trench or division. The intensity of the COVID-19 pandemic has varied substantially between the Swiss regions and the divide around the spread of the virus has been defined by some observers as a *Coronagraben*, in reference to the cultural border. We discuss this in further detail in section 2.

We add to the existing literature by focusing on a set of cultural dimensions and mechanisms that might have shaped the actual adherence to social distancing in Switzerland. More precisely, we examine the relationship between average distance travelled in a day and language, trust, altruistic beliefs, political leaning and preferences for re-distributive policies. Using European Social Survey and Swiss Household Panel, we measure these cultural values and attitudes. To capture the adherence to social distancing, we rely on phone location tracking records of 3000 individuals, collected by Intervista on behalf of the Swiss Federal Statistical Office (FSO). Our analysis focuses on two important dates. The first is February 25, when the first COVID-19 case was reported in Switzerland, marking the beginning of the outbreak in the country. The second is March 16, when the Swiss government declared an “extraordinary situation” over the coronavirus, instituting a ban on all private and public events and closing places such as restaurants and bars. In our empirical model, we include canton and daily fixed effects and also control for time-varying number of COVID-19 cases reported and fatalities at the canton level and the interaction of a rich set of geographic, demographic, and socio-economic controls with time dummies.

Using this approach, we find surprising results showing that cantons in the German linguistic region, which are also high in generalized trust towards others and have higher altruistic beliefs, reduced their mobility significantly less than the French speaking cantons. Therefore, within the Swiss context, high interpersonal

trust is strongly associated with lower reductions in individual mobility. These findings are at odds with Durante et al. (2020) and Brodeur et al. (2020), who document a significantly higher decline in mobility in areas with higher civic capital and trust. The results may be explained due to the belief that other individuals in society will respect, among other things, infection prevention and control norms (IPC), thus making mobility reduction less relevant. Additionally it is important to note that these cantons are also relatively right leaning on the political scale, support a limited role of the state in matters of welfare and greatly value individual freedom. For these cantons, reducing individual mobility due to government imposition could be perceived as a sacrifice of a higher order than in more collectivist regions. Overall, our results show that the costs and benefits associated with compliance changes with culture and suggests that contextual conditions, shaped by the culture of reference, are key in determining how traits such as interpersonal trust, preference for re-distributive policies and political attitudes, mediate the social distancing process.

The remainder of the paper is organized as follows. Section 2 presents our conceptual framework, discusses the cultural differences in Switzerland and gives a background on the COVID-19 emergency in the country. Section 3 describes the data used for our analysis and Section 4 presents our empirical and identification strategy. Section 5 discusses the results while Section 6 concludes.

## 2. Cultural dimensions

**We first clarify what we mean by culture. We follow the definition proposed by Guiso et al. (2006), where culture is defined as a set of “customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation”. We focus on language as a proxy for culture and further look at two specific dimensions or traits of culture and explain their place in the context of Switzerland:**

**Language:** There is a large literature linking culture and language. These are based on The Sapir–Whorf hypothesis also known as the linguistic relativity hypothesis, which highlights how the language one speaks influences the way one perceives the world. This hypothesis is a culmination of several early contributions in anthropology that explored this link, spanning from the works of van Humboldt (1836) to Mandelbaum (1951), Whorf (1956), Sapir (1968) and Boas (1982) whose work on cultural relativism further highlighted that language and culture were interdependent. Several studies, across various disciplines, have shown that an examination of cultural groups can be engaged by language since it has an impact on identity, values, attitudes and behaviour (Heslop et al. (1998); Schulz et al. (2006); Laesser et al. (2014)). More recently works of economists such as Bisin and Verdier (2011) and Ginsburgh and Weber (2020) show that the notion of a common native language is inextricably linked with cultural proximity. This goes beyond language proficiency and ability to speak and in fact captures the vertical and horizontal transmission of values.

**Generalized trust:** One of the most commonly defined cultural trait is generalized trust towards others i.e. the beliefs held about others’ trustworthiness. Alesina and La Ferrara (2002) hypothesize that this belief is a moral or cultural attitude and is positively correlated with individual characteristics such as the level and type of education received and occurrence of recent misfortunes. They also show the importance of community characteristics such as high income inequality which often leads to low interpersonal trust. From the early work of Arrow (1972), who recognized the importance of mutual trust in commercial and noncommercial transactions, the relation between generalized trust and economic development is well established (Algan and Cahuc (2014); Butler et al. (2016)). It is important to note that this differs

from the concept of trust in institutions, which may simply be capturing the efficiency or corruption of the government in power.

**Preferences for redistribution:** Alesina and Giuliano (2011) define preferences for redistribution as a situation in which one agent also cares about the utility of somebody else. They reject the notion of these preferences being unpredictable “social noise” and highlight the role of culture as an important determinant. Different cultures may have distinct approaches in contrasting the merits of equality versus individualism. As shown by Alesina and Giuliano (2015), views on inequality and redistribution emphasize both the value and belief component of culture. Luttmer and Singhal (2011) highlight the former by showing a significant correlation between second-generation immigrants’ redistributive preferences and the average preference in their birth countries. An individual’s predisposition to support a welfare state may also be determined by cultural traits such as perception of poverty and fairness. Think of an individual who not only cares about his own income but dislikes inequality due to luck rather than effort and ability. His belief that success is primarily determined by luck and personal connections, rather than hard work, will determine his preferences for redistribution and social policies. Furthermore, these cultural values and attitudes are significantly persistent and tend to remain fairly stable over time and generations.

Alesina and Giuliano (2011, 2015) show that these preferences also underlie the formation of political attitudes and are in fact a crucial factor in dividing the political left and the political right. Perception about fairness (work vs. luck) in the income-generating process is key in formation of political attitudes and supporting a welfare state. Luttmer and Singhal (2011) find evidence that cultural influences affect voting behaviour by documenting that immigrants from high-preference countries are more likely to vote for more pro - redistribution parties.

## 2.1 Why Switzerland?

Switzerland provides an excellent case of where language is in fact a very appropriate proxy for culture (Bu'chi (2001)). Switzerland has twenty-six cantons and four official languages having equal status in law - German, French, Italian and Romansh. According to the 2000 census, German is spoken by 63.7% of the population, French by 20.4%, Italian by 6.5%, and Romansh by 0.5%. Three cantons - Valais, Fribourg, and Berne - are bilingual (French, German); one canton - Graubünden - is officially trilingual (German, Romansh, Italian). From the remaining cantons, seventeen are German speaking, four French speaking and one Italian speaking. Looking at Panel (a) in Figure 1, we observe that there are geographically distinct linguistic regions. These language borders have deep historical roots and with the exception of few minor movements, the early historical development of the German-French and German-Italian language boundaries has been relatively stable since AD 1100 (Sonderegger et al. (1967); Egger and Lassmann (2015); Bu'chi (2001)). For example, historically the border of the canton Valais traced along the border of the Roman-Catholic Diocese of Sion and most of the canton Graubünden was once part of a Roman province called Raetia, which was established in 15 BC, resulting in multilingualism (Eugster et al. (2017)). These language borders are a measure of cultural values and beliefs manifested by means of differences in native languages. Therefore these explicit language regions can be thought of as pockets of different cultures and the Röstigraben exemplifies this fact. The language frontier manifests itself through different preferences in many aspects of everyday life and provides an ideal context to study the effects of culture. There are several works of public economics and trade that have exploited this unique variation in languages within Switzerland (Eugster et al. (2017), Athias and Wicht (2014), Egger and Lassmann (2015) and Eugster and Parchet (2011)).

These distinct language zones also capture the variation in preferences for redistributive and social policies. One can see this in the voting shares of Swiss citizens on several federal popular initiatives<sup>1</sup>. These initiatives tackle various socio-economic issues and are very informative about the attitudes and perception of cantons towards matters of welfare and social spending. One issue that has always brought the cultural divide to the forefront is the unemployment insurance (assurance- chômage). In 1997 and 2010, the citizens voted on whether there should be further cuts on the financing of unemployment benefits. The variation in vote share, as seen in Panel (b) of Figure 1, results in a map with demarcations that look strikingly similar to the language borders seen in Panel (a). Despite the thirteen year gap, note the persistence in the preferences across the cultural borders. Thus one can say the Röstigraben is also reflective of the left-leaning voting behavior of the French-speaking part, especially for votes on social policy issues (Germann et al. (2012)).

## 2.2 COVID-19 in Switzerland

The first case of COVID-19 in Switzerland was confirmed on February 25 a 70-year-old man tested positive in Ticino, followed by a second case on February 26 in Geneva. Due to its proximity to Lombardia, Ticino took early restrictive measures while the only rule imposed on the remaining cantons was a relatively moderate step taken by the federal government - to raise the alert level to “special situation” by banning events with more than 1,000 people<sup>2</sup>. However by mid March the country was particularly affected by the epidemic, the increase in confirmed cases accelerated with the reproductive number oscillating between 1.5 and 2 (Sciré et al. (2020)). With more than 2,600 people infected, there was a need to mobilise up to 8,000 members of the military to help contain the rapid spread, representing the largest army mobilisation since the Second World War. The Swiss government also introduced border checks with Germany, France and Austria. This was the turning point for Switzerland and on March 16 the government declared an “extraordinary situation”, instituting a ban on all private and public events and closing restaurants, bars, leisure facilities and shops apart from grocery stores and pharmacies. It is important to note that unlike its neighbours, Switzerland did not announce a definite lockdown but encouraged its citizens to follow “social distancing” as one of the precautions called for as part of an information campaign by the Federal Office of Public Health (FOPH). The first phase of relaxing the restrictions began on April 27. Figure A.1 shows the evolution of the total cases reported in Switzerland for three different periods.

The intensity of the health crisis has varied substantially in the country. An invisible border has divided Switzerland during the emergency: the French- and Italian-speaking parts have been significantly more severely affected than the German-speaking areas, with only few exceptions. The cantons of Geneva, Ticino and Vaud lead by far the ranking of most cases per 10,000 inhabitants, recording values that more than double the majority of German speaking cantons. This linguistic divide around the spread of the virus has been defined by some observers as a Coronagraben, in reference to the cultural Röstigraben.

## 3. Data

**Before we proceed to describe the variables we use for our empirical analysis, we address one major limitation. Although it would be ideal to have data at the municipal level and use the multilingual cantons as a way to investigate our research question, unfortunately neither the mobility data nor the statistics related to the pandemic are available for municipalities. All the data described below is at the cantonal level.**

<sup>1</sup> This is a unique aspect of Swiss democracy which allows citizens to propose changes to the Swiss Federal Constitution. For a popular initiative to succeed, those launching the initiative need to collect 100,000 signatures from people entitled to vote within eighteen months. If Parliament decides that the initiative is valid, it is put to a popular vote.

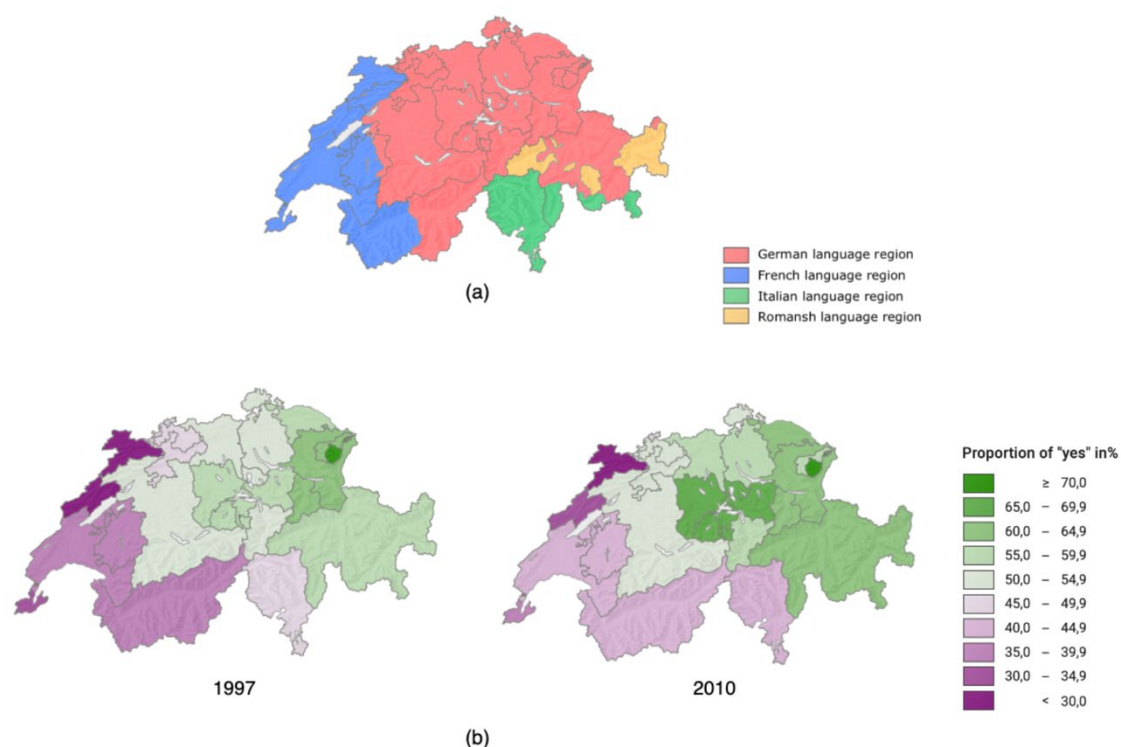
<sup>2</sup> This included football and ice hockey championships, carnivals in Basel and Lucerne, the Geneva Motor Show and Baselworld watch fair



Therefore we drop five cantons from our sample of twenty-six: Bern, Valais, Fribourg and Graubünden, as they are officially multilingual. Additionally we also drop Ticino because of its proximity to the Italian region of Lombardia which may bias our results. This limits our focus to studying the impact of cultural differences between the French and German speaking cantons.

**Social Distancing:** We use daily data on individual mobility in each canton between January 1 and April 27, 2020. This has been collected by Intervista, a market research institute, on behalf of the Swiss Federal Statistical Office (FSO). It is based on the phone location tracking records of 3,000 individuals, selected according to several criteria, such as sex, age, canton of residence and mobility behavior in accordance with the representative guidelines provided by the FSO. The data consists of average distance travelled each day as well as the radius of daily travel, both in kilometres. The former indicates the sum of all journeys made by an individual during a day, by foot or by means of transport such as car, bicycle or public transportation. The daily radius indicates the distance from the overnight accommodation, the night before, to the most distant location reached in one day as the crow flies.

**Culture:** For the first indicator of culture, language, we associate each canton with a dummy variable equal to one if the official language is German and zero if French. This information is available on the official websites of the FSO and of every canton. To measure cultural traits we use two surveys: Swiss Household Panel<sup>3</sup> (SHP) and European Social Survey (ESS)<sup>4</sup>.



<sup>3</sup> It is an annual panel study based on a random sample of private households in Switzerland over time. The aim is to observe social change, in particular the dynamics of changing living conditions and representations in the population of Switzerland. We use wave 19 (2017) and wave 20 (2018).

<sup>4</sup> The ESS is a cross-sectional survey administered in a large sample of mostly European nations, containing information on individuals' social values, cultural norms, and behavioral patterns. We use round 8, 2016 for Switzerland.

**Figure 1.** Panel (a) - Language regions of Switzerland. The grey lines are the canton borders. Panel (b) - Percentage of yes votes for the Law on unemployment insurance in 1997 and the revision of this law in 2010. Source: Swiss Federal Statistical Office (FSO)

For generalized trust towards others, the survey elicits beliefs by asking - *Would you say that most people can be trusted or that you can't be too careful in dealing with people, if 0 means "Can't be too careful" and 10 means "Most people can be trusted"?* Using the average intensity of trust beliefs we classify cantons as "high trust in others" and "low trust in others". To gauge interpersonal trust we also look at an additional question - *Would you say that most of the time people try to be helpful or that they are mostly looking out for themselves?* Similar to above, the response is on scale from 0 to 10, where 0 means people mostly look out for themselves and 10 means that people mostly try to be helpful. The intended contrast is between self-interest and altruistic helpfulness. We classify cantons as "high altruistic beliefs" and "low altruistic beliefs".

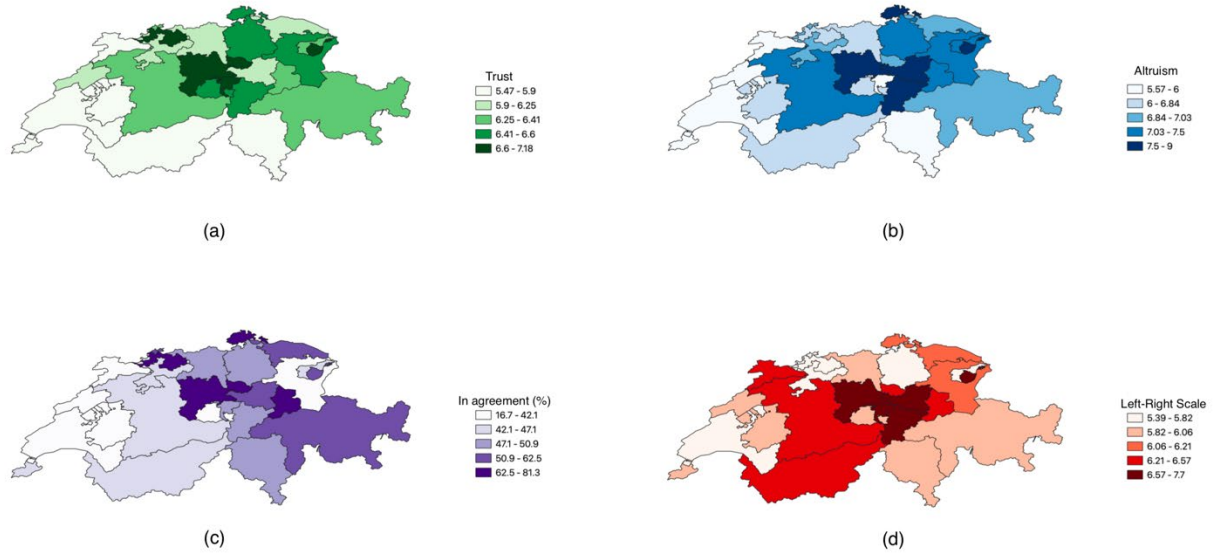
To capture views on equality and beliefs about preferences for redistribution, the survey asks the respondents to agree or disagree with the statement - *Large differences in people's incomes are acceptable to properly reward differences in talents and efforts.* Using the percentage of respondents who agreed, we classify cantons as "high acceptance of income differences" and "low acceptance of income differences"<sup>5</sup>. As discussed in Section 2, cultural perceptions of the role of state are central to formation of political attitudes and ideologies. Utilizing the survey question - *In politics people sometimes talk of "left" and "right". Where would you place yourself on this scale, where 0 means the left and 10 means the right?* - we focus on political positioning along the left-right spectrum and classify cantons as "right leaning" and "left leaning". The cantonal distribution of these measures can be seen in Figure 2.

**Other variables:** To distinguish the effect of culture from other factors, we include a rich set of economic, demographic and geographic controls at the cantonal level. To capture the quality of the health system and hospital capacity, we use data on the number of hospital beds per 1000 inhabitants. We also control for two measures of vulnerability to the pandemic: the share of population older than 65, representing the at-risk individuals and the tourism statistics which is the total number of arrivals in hotels and health establishments. Our specification also includes population density, area, share of urban and foreign population in the canton, graduation rate in higher education institutions, household disposable income, temperature and GDP per capita. These help control for the fact that they maybe potentially correlated with both mobility and the cultural traits. This information is publicly available on the FSO website. Additionally to control for the severity of COVID-19 at the local level, we control for the total cases reported and fatalities recorded. The data on daily COVID-19 statistics is taken from the website [corona-data.ch](https://corona-data.ch), which uses official information communicated by the cantons and FOPH.

Finally, to ensure the effect we are capturing is from our stated cultural dimensions and not other elements of social capital we control for average time spent watching, reading or listening to news and trust in institutions. Although we do not have a variable on physical proximity, we use information on frequency of interpersonal relations, which maybe a likely determinant of mobility. This information is taken from ESS and SHP. Summary statistics for all variables are reported in Table A1

<sup>5</sup> The survey provides five options: strongly agree, agree, neither agree nor disagree, disagree and strongly disagree. We look at the share of first two responses.





**Figure 2.** Panel (a),(b) - Distribution of measures of trust. Panel (c),(d) - Preferences for redistribution and political positioning

## 4. Empirical strategy

We estimate the following equation:

$$Y_{ct} = \alpha_c + \theta_t + \beta Culture_c \times D_t + \delta X_{ct} + \varepsilon_{ct} \quad (1)$$

$Y_{ct}$  is the average distance travelled in a day  $t$ , in a given canton  $c$ , measuring individual mobility and adherence to social distancing.  $Culture_c$  is a dummy variable reflecting one of the five indicators discussed in section 3.  $D_t$  is a vector of time dummies indicating the three phases of the pandemic:

- Phase 1: January 1 - February 25 → Pre-outbreak
- Phase 2: February 25 - March 16 → Post-outbreak & Pre - “extraordinary situation”
- Phase 3: March 16 - April 27 → Post - “extraordinary situation”

Our main interest is in the coefficient  $\beta$  on the interaction between  $Culture_c$  and  $D_t$ . This captures the differential evolution of mobility in areas with different cultural values over the different phases. Note that Phase 1 is excluded as the reference.  $X_{ct}$  is a vector of controls that includes average monthly temperature and log of total COVID-19 cases and fatalities reported in the canton up until day  $t - 1$ , which captures the degree of exposure and the urgency to comply with social distancing measures. To isolate the effect of the cultural dimension and to control for factors that maybe correlated with it and may affect the change in mobility, we include interactions between the phase time dummies and all the economic, geographic and demographic controls described in section 3. Additionally we include daily fixed effects  $\theta_t$  and canton fixed effects  $\alpha_c$  to account for difference in

mobility levels across cantons and the the common evolution of mobility in all cantons in any give day. Similar to Durante et al. (2020), the identifying assumption for (1) comes from the fact that after controlling for canton observable and unobservable time invariant characteristics, severity of the pandemic at the cantonal level and daily changes in mobility at the country level, the differential change in mobility in German and French speaking cantons is unrelated to factors other than the ones explicitly controlled for.

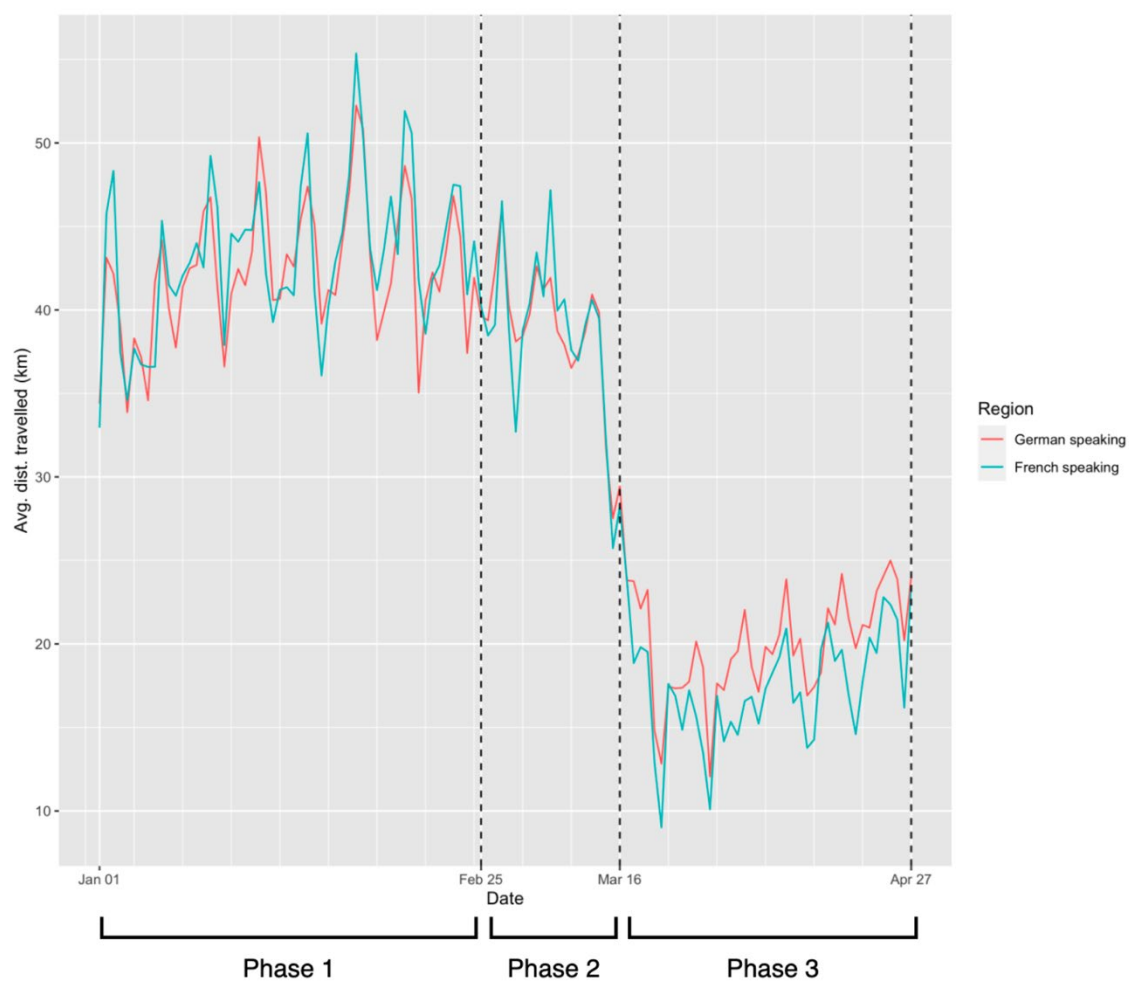
## 5. Results

Figure 3 shows the relationship between mobility and linguistic regions using the raw data<sup>6</sup>. In the weeks prior to the outbreak, cantons in both linguistic regions had more or less similar mobility patterns. Soon after the first case was reported we can observe elements of divergence. Although there is a marked drop in mobility for both areas, there is a clear difference between the two, especially in phase three. After the government declared “extraordinary situation”, observe the fall in average distance travelled daily is notably less for German speaking region as compared to the French speaking. Figure A.2, in the Appendix, shows how the difference, between the two regions evolves over time, and the mean value of the difference for each phase. Note how the average value of the difference becomes positive post-outbreak. This is validated by our results from estimating (1) and the cultural trait indicators provide an explanation as to why we may be observing this behaviour.

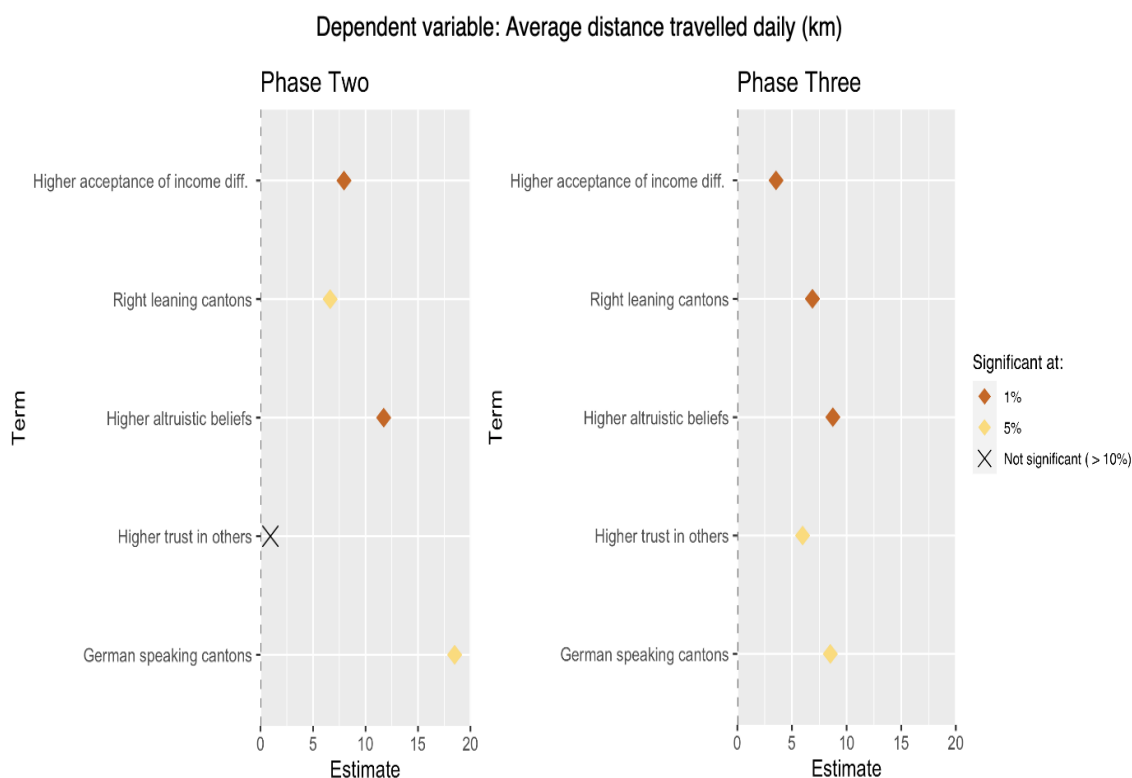
Figure 4 shows our main results. The left panel shows the results for phase two i.e. post-outbreak and pre - “extraordinary situation” and the right panel shows the results for phase three which is post - “extraordinary situation”. Observe that during phase two, the drop in mobility for German speaking cantons was, on average, around 18 kilometres less than French speaking region. Although this difference reduced post introduction of federal measures, it continued to remain positive and significant, with German speaking cantons reducing their average mobility by 8 kilometres less than their counterpart. When comparing cantons with high trust towards others and greater altruistic beliefs, the results remain consistent with a positive difference of about 6 and 8 kilometres during phase three. Similar outcome emerges when we contrast cantons which are more accepting of inequality and position themselves towards the political right, which reflects the diffusion of individualistic attitudes in the society. For cantons with higher acceptance of income differences, the drop in mobility was around 6 kilometres less in both phases of the pandemic. Lastly, in cantons which are right leaning we observe a similar behaviour where post outbreak the mobility reduction was 8 kilometres less than the left leaning region. This difference, post federal measures, reduced and was small, 3 kilometres, but remained positive and significant.

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<sup>6</sup> This depiction comprises all the cantons in both the linguistic regions, including the multilingual ones.



**Figure 3. Daily mobility (average distance travelled in a day) across the linguistic regions**



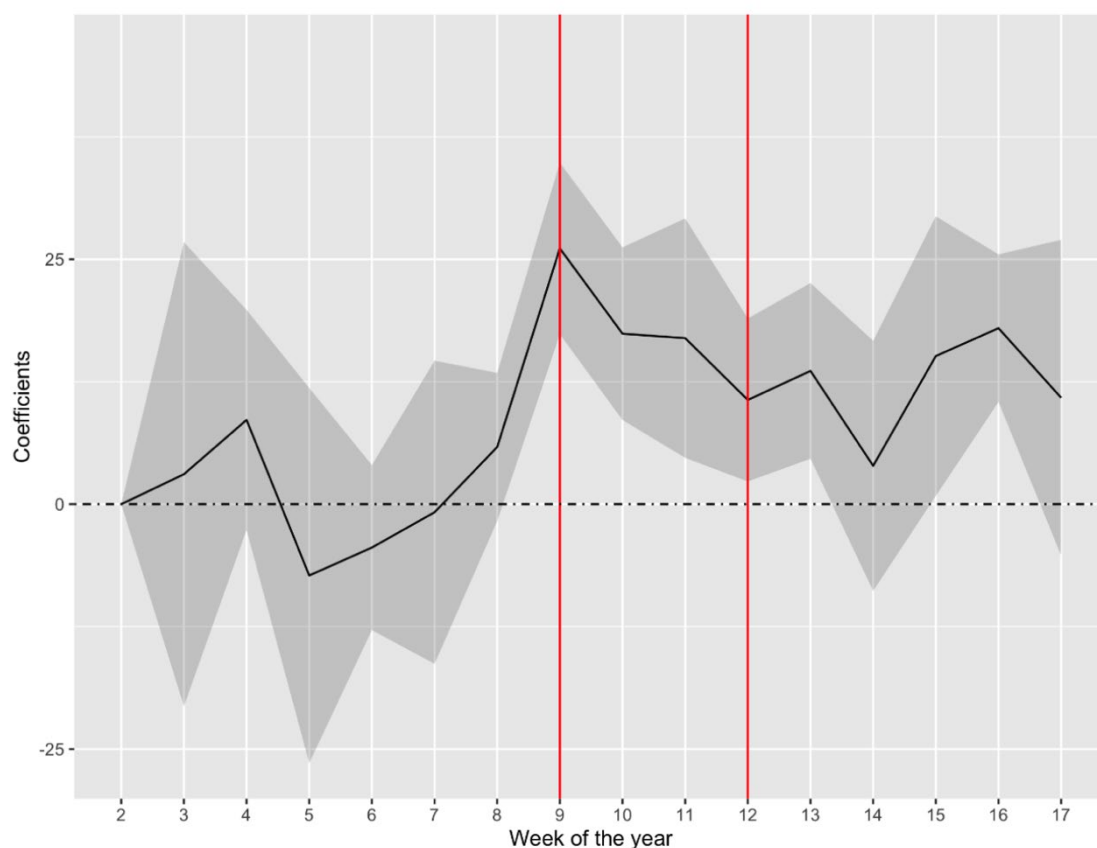
**Figure 4. Economic, Demographic, Geographic and COVID -19 Controls. Daily and Canton FE. Standard errors are wild bootstrapped and clustered at canton level**

Cultural values and beliefs may provide an insight to the divergence in mobility patterns between the two linguistic regions. Observe in Figure 2, cantons with higher generalized trust towards others and politically right leaning with stronger stance against redistributive social policies, tend to broadly fall in the German speaking linguistic region. These cantons may believe that even while travelling, fellow citizens will behave responsibly by following social distancing and hygiene rules, reducing the benefit of limiting individual mobility as meeting strangers and acquaintances involves a relatively lower (perceived) risk of contracting the disease. Additionally their attitude towards income differences and poverty may reflect their position on the role of state and the fact that the population is likely to be more uncomfortable with public decisions entailing severe limitations of personal liberties to preserve the social welfare. This is also reflected in a recent public survey where a third of Swiss Germans believed that the closing of shops and establishments of personal services was too extreme, against 18% of Swiss French<sup>7</sup>. It is also of interest to note that many cantons within the German linguistic region are the stronghold of The Swiss People's Party also known as the Democratic Union of the Centre (SVP/UDC), who have consistently won the largest share of votes on the national council since 1999. Ideologically the party stands for the rejection of the expansion of the welfare state, lower taxation and was extremely critical and vocal during the pandemic to reopen the economy.

<sup>7</sup> This survey was carried out by Sotomo research institute and more information can be found on: <https://www.rts.ch/info/suisse/11314737-coronagraben-quand-romands-et-alemaniques-ne-vivent-pas-la-meme-crise.html>

As discussed in the introduction, a part of our results is at odds with the recent work on civic capital and mobility, and especially the results by Brodeur et al. (2020) who show high-trust American counties decrease their mobility significantly more than low-trust counties post-lockdown. However our results on political attitudes and role of state are broadly consistent with the second finding of Brodeur et al. (2020), that counties with relatively more self-declared democrats decrease significantly more their mobility. Thus we can infer that a combination of higher interpersonal trust and conservative political attitude shaped the lower reduction in mobility for the German speaking cantons. This emphasizes the fact that the same cultural traits may elicit different responses under a crises situation such as a pandemic and understanding the country specific context is crucial to policy implementation. It is extremely telling that the Swiss government did not impose any stringent lockdown like several other European countries and even while preparing for a possible second wave the government is against imposing nationwide lockdown restrictions.

Figure 5 shows average differences in weekly mobility between German and French speaking cantons over several phases of the pandemic. The pattern is broadly consistent with that of Figure 3. Prior to the outbreak, there is no significant difference but the divergence in mobility patterns between the two linguistic regions becomes significantly positive after the identification of the first COVID- 19 case in the country (phase two) and remains significant up until week 13 of phase three. We show a similar trend for the other cultural indicators in Figure A.3.



**Figure 5. Difference in mobility between German and French speaking cantons. Week 9: 24 February - 1 March. Week 12: 16 March - 22 March. Date of outbreak: 25 February and implementation of federal measures: 16 March**

In the Appendix Figure A.4, we show results from estimating (1) but using an alternative measure for mobility. Our dependent variable is now average radius of daily travel. Observe, although the difference in reduction of daily mobility between the two linguistic regions is not significantly very different in phase two, it becomes strongly significant in phase three. Post federal measures, the German speaking region reduced their radius of daily travel by 5 kilometres less than the French speaking area. This is also clearly visible in the raw data in

Figure A.5, where there is a marked difference in the mobility levels of the two regions after March 16. Consistent with our main results, when comparing regions across different cultural dimensions we observe a similar trend. Cantons having higher trust, altruistic beliefs and conservative political ideologies reduced their radius of daily travel by less when compared to other areas. Figure A.6, similar to Figure 5 and A.3, shows average differences in weekly radius of daily travel between the two regions, over several phases of the pandemic, and confirms that there wasn't a significant difference in the mobility patterns prior to the outbreak. However, post February 25 and the introduction of federal measures, one can observe a significant and positive change.

## 6. Conclusion

Rarely in history have we witnessed such homogeneous policy response to shocks as in the case of the COVID-19 pandemic. In an attempt to contain the spread of the virus and reducing the load on the healthcare system, virtually all countries have adopted restrictive measures aimed at reducing individual mobility and inducing social distancing. Interestingly, however, the rate of compliance to such measures has varied enormously. This paper examines to what extent cultural differences can explain these variations. We focus on a specific set of cultural dimensions that might have shaped the actual adherence to social distancing in Switzerland, a country characterized by cultural differences that vary across its cantons. More precisely, we examine the relationship between average distance travelled in a day and language, trust, altruistic beliefs, political leaning and preferences for re-distributive policies. We document how the Swiss reduced their mobility first as a (voluntary) response to the outbreak in Ticino and Geneva during the last week of February and later in response to the federal measures introduced by the government on March 16. This reduction, however, was lower in German cantons than in French speaking areas of the country. We also document how specific cultural traits, can shape individual mobility decisions. Our results suggest that the perceived costs and the benefits of complying to individual mobility restrictions norms change with culture. As a consequence, contextual conditions, shaped by the culture of reference, are of critical importance in determining how traits such as interpersonal trust, preference for re-distributive policies and political attitudes, mediate the social distancing process.

## Appendix

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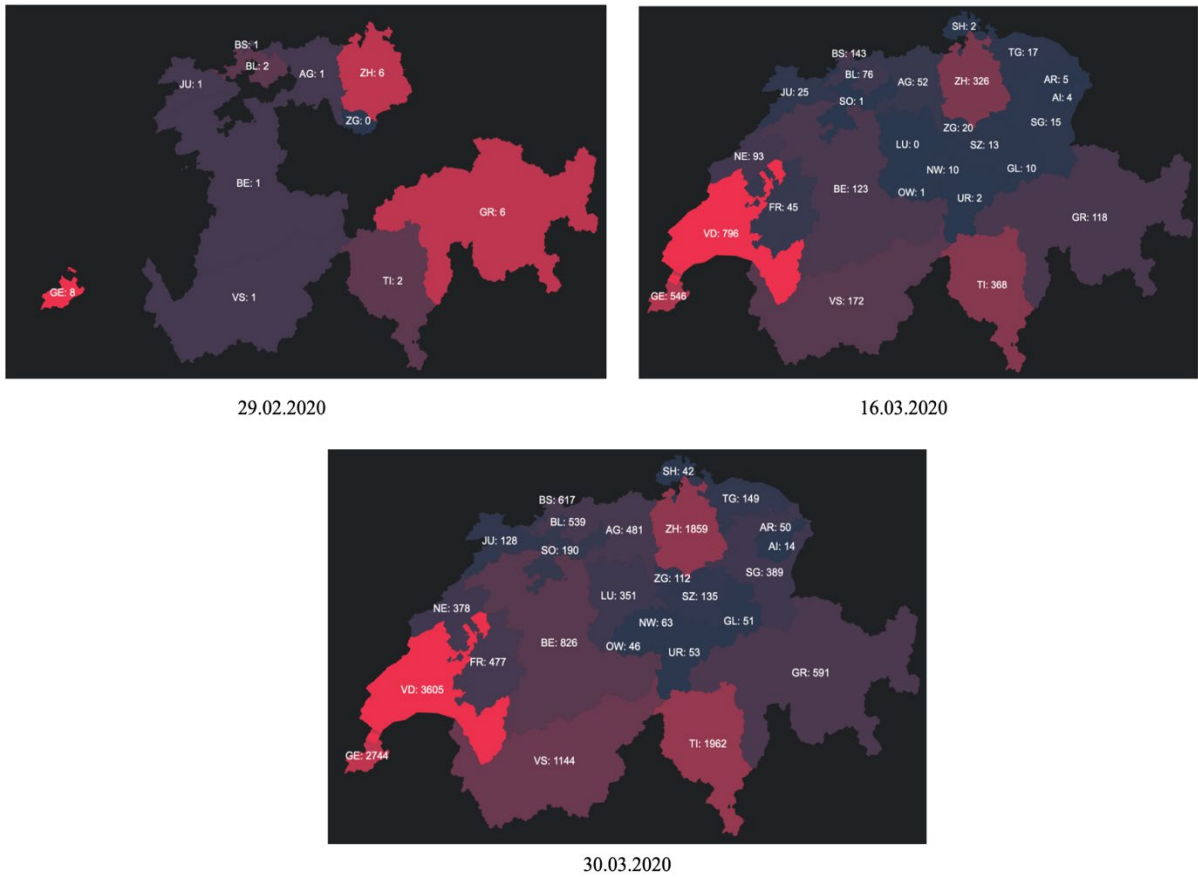
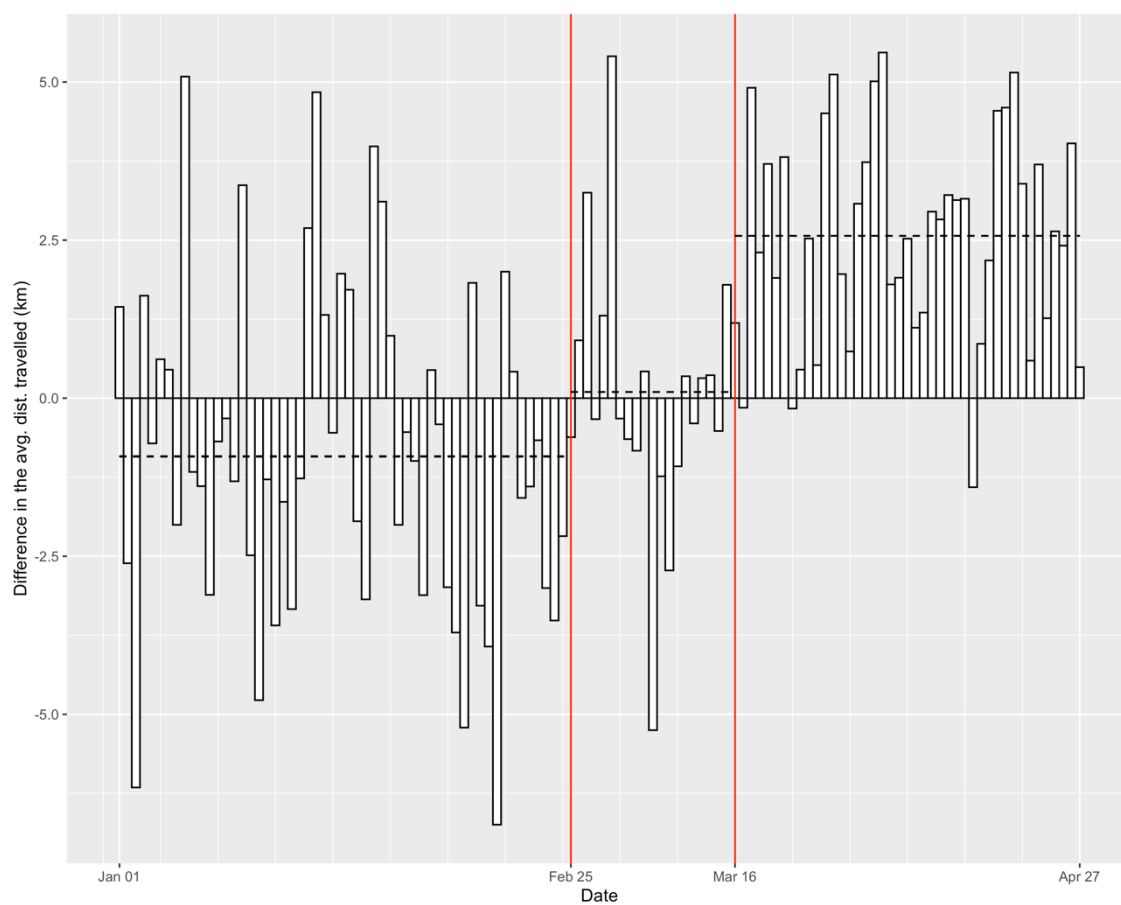
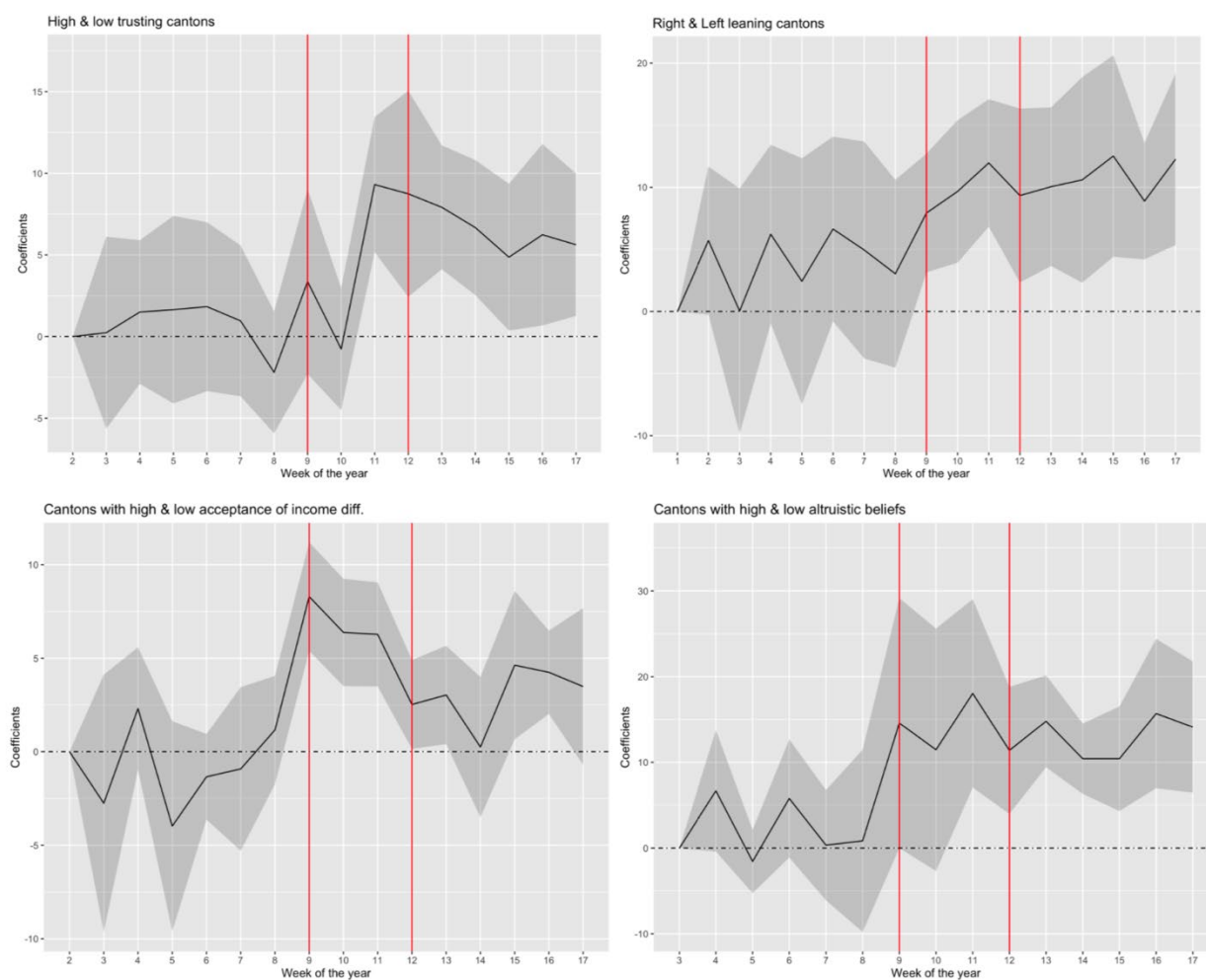


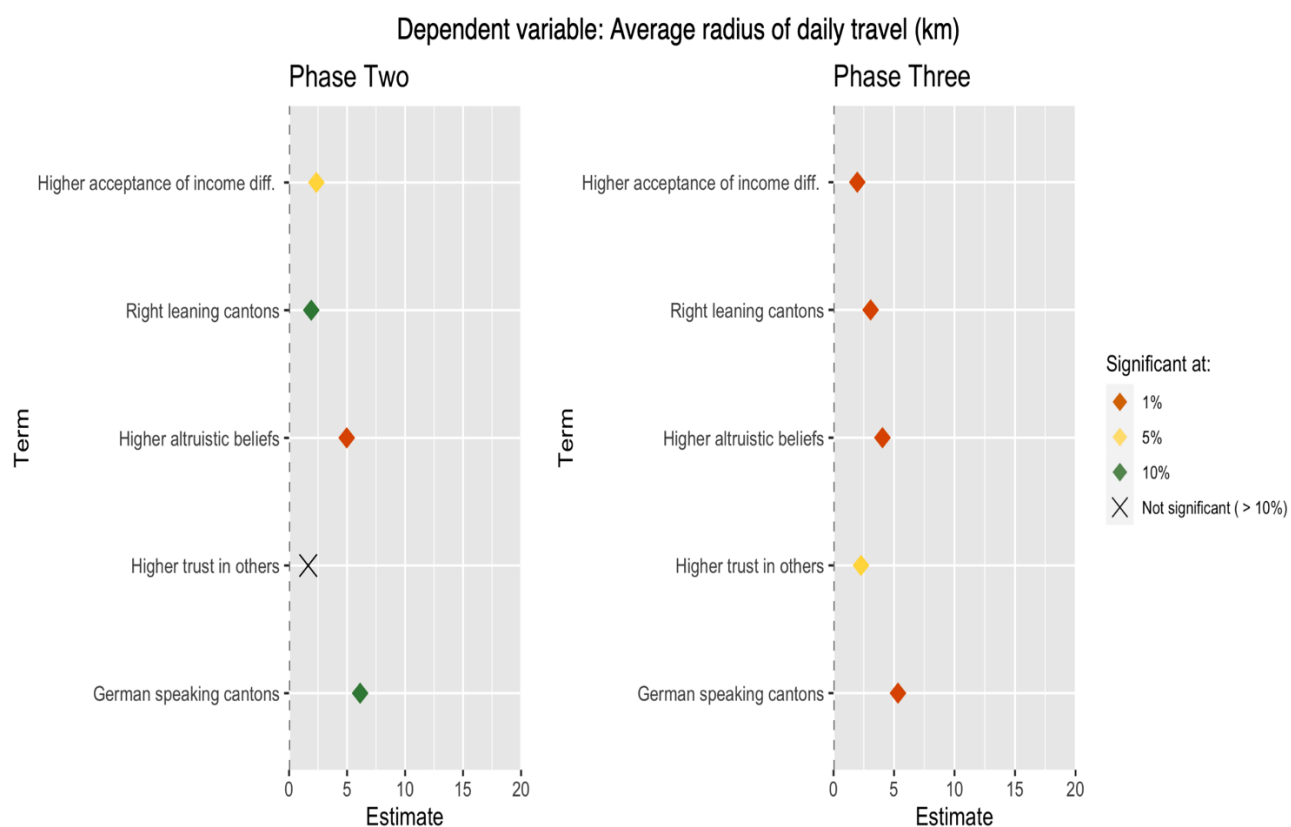
Figure A.1. Evolution of total COVID-19 cases reported.



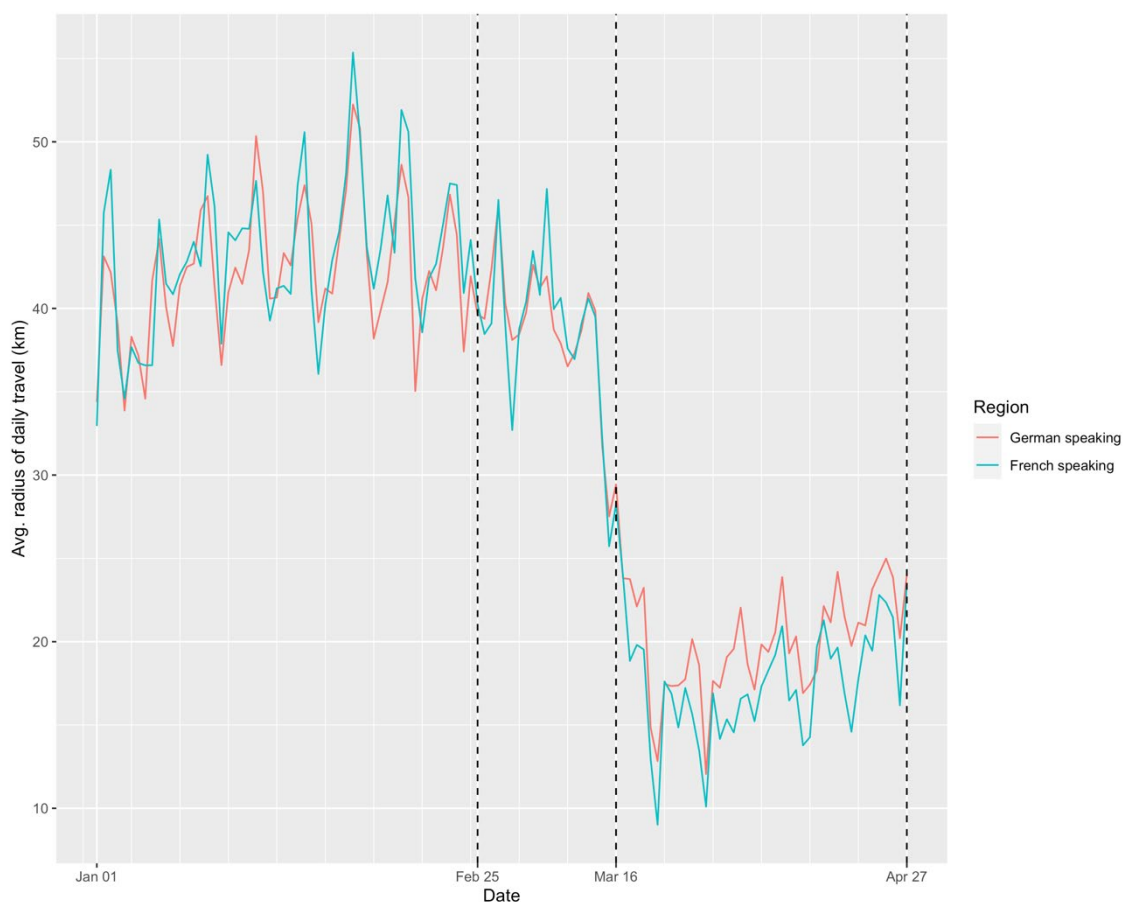
**Figure A.2. Difference in mobility. The dashed lines are the period means.**



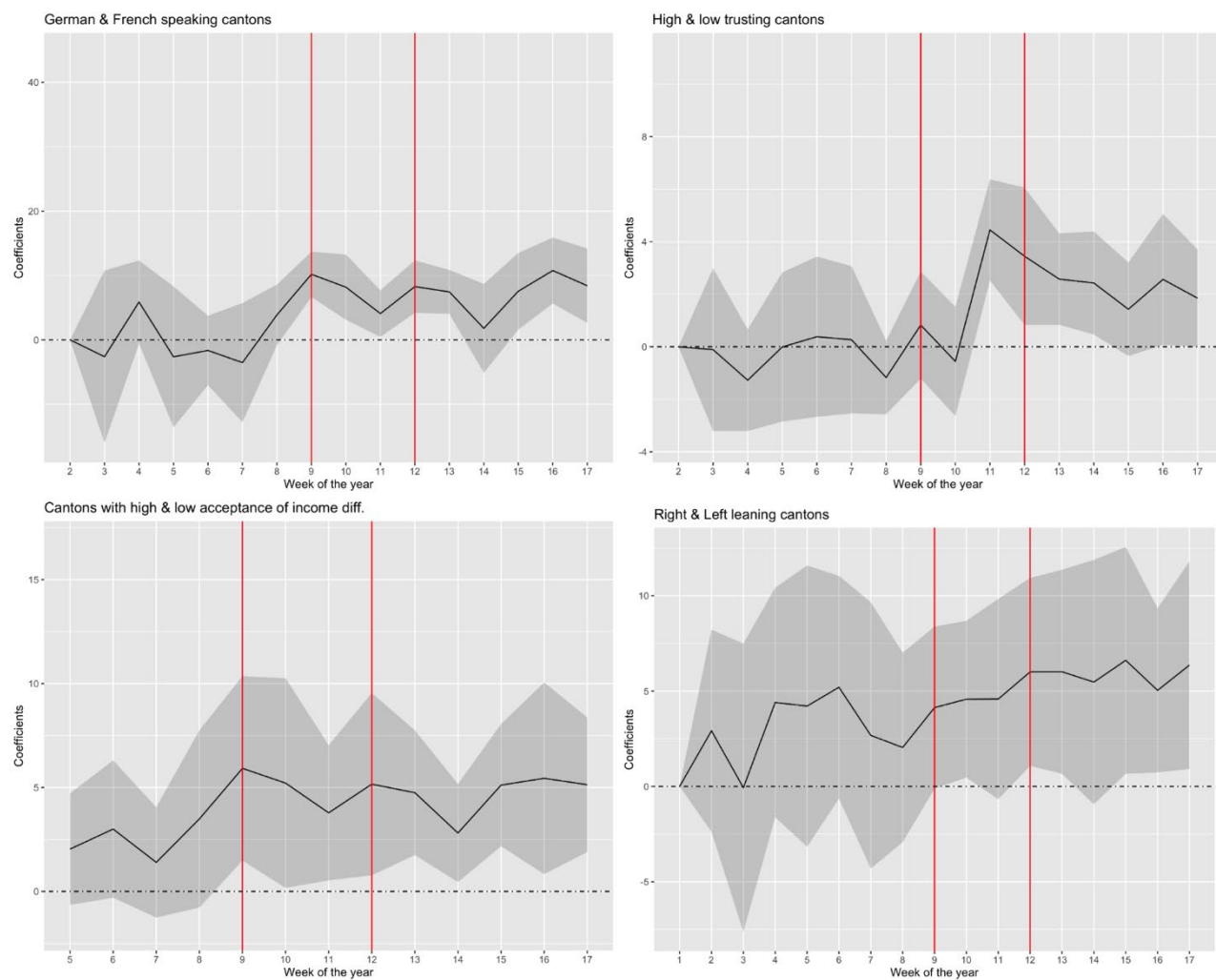
**Figure A.3. Average difference in weekly mobility (Average distance travelled daily). Week 9: 24 February - 1 March. Week 12: 16 March - 22 March. Date of outbreak: 25 February and implementation of federal measures: 16 March**



**Figure A.4. Economic, Demographic, Geographic and COVID -19 Controls. Daily and Canton FE. Standard errors are wild bootstrapped and clustered at canton level**



**Figure A.5. Daily mobility (average radius of daily travel) across the linguistic regions**



**Figure A.6. Average difference in weekly mobility (Average radius of daily travel). Week 9: 24 February - 1 March. Week 12: 16 March - 22 March. Date of outbreak: 25 February and implementation of federal measures: 16 March**



**Table A1.** Summary statistics

|  | N     | Mean       | St. Dev.   | Min        | Median     | Max         |
|--|-------|------------|------------|------------|------------|-------------|
| Avg. distance travelled (km)                         | 2,457 | 33.181     | 16.348     | 0.049      | 32.663     | 131.405     |
| Daily total reported cases                           | 2,457 | 242.025    | 776.836    | 0          | 0          | 5,222       |
| Daily total fatalities                               | 2,457 | 8.555      | 35.690     | 0          | 0          | 373         |
| Avg. monthly temperature (°C)                        | 2,457 | 4.397      | 4.291      | −2.260     | 5.460      | 11.790      |
| Urban population (%)                                 | 2,457 | 76.352     | 25.070     | 0          | 85         | 100         |
| Hospital beds per 1000 inhabitants                   | 2,457 | 4.148      | 2.251      | 1.300      | 3.800      | 11.100      |
| Graduation rate in higher education institutions     | 2,457 | 27.290     | 4.148      | 19.900     | 26.500     | 34.300      |
| Foreign nationals (%)                                | 2,457 | 23.043     | 7.455      | 11.300     | 24.100     | 40.000      |
| Population density                                   | 2,457 | 611.386    | 1,124.819  | 34.500     | 275.000    | 5,271.100   |
| Tourism (in 1000)                                    | 2,457 | 544.143    | 761.769    | 65         | 208        | 3,299       |
| Share of people aged 65 and over (%)                 | 2,457 | 18.881     | 1.583      | 16.400     | 19.000     | 21.900      |
| GDP per capita in Swiss francs                       | 2,457 | 79,695.330 | 31,751.090 | 52,468     | 68,102     | 185,826     |
| Area in $km^2$                                       | 2,457 | 881.790    | 743.746    | 36.980     | 790.370    | 3,212.210   |
| Trust toward others                                  | 2,457 | 6.346      | 0.407      | 5.610      | 6.404      | 7.179       |
| Trust in institutions                                | 2,457 | 6.315      | 0.250      | 5.885      | 6.278      | 6.873       |
| Frequency of interpersonal relations                 | 2,457 | 0.685      | 0.102      | 0.500      | 0.684      | 0.870       |
| Altruistic beliefs                                   | 2,457 | 6.926      | 0.851      | 5.632      | 6.981      | 9.000       |
| Avg. time watching, reading or listening to news     | 2,457 | 151.838    | 126.889    | 47.143     | 87.145     | 530.000     |
| Left - right scale                                   | 2,457 | 6.249      | 0.570      | 5.393      | 6.133      | 7.700       |
| Share of agreement for statement on income diff. (%) | 2,457 | 51.654     | 13.860     | 16.667     | 50.000     | 81.250      |
| Household disposable income                          | 2,457 | 78,897.670 | 10,175.900 | 62,001.800 | 78,291.820 | 102,216.800 |

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