Cultural attitudes and unemployment benefit take up: Evidence from the Swiss Language border

Andrea Hofer, Michael Baltensberger
Department of Economics, University of Zurich

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Abstract

Does stigma prevent individuals from applying to unemployment benefits even if they are eligible? We exploit the cultural divide at the Swiss language border which separates German from French speaking municipalities to show that cultural values are an important determinant for unemployment take up. French-speakers–who hold cultural values associated with lower stigma towards unemployment benefit take up– are consistently more likely to apply for unemployment benefits within the first six months after job loss. This result holds also for workers who live on different sides of the language border but who were employed at the same firm before job loss.

1 Introduction

Unemployment benefits are meant to allow individuals to smooth consumption across time despite income losses. While they are important throughout the business cycle, they tend to be especially important during crisis times to stabilize the overall economy (McKay and Reis, 2021). However, in order for benefits to deliver their full potential, they need to be taken up by individuals in need. As previous literature has shown, this is by no means always the case. Estimates for the US demonstrate that only about half of all workers who lose their job apply for unemployment benefits (Vroman, 2009, Lachowska et al., 2021). More generally, the seemingly puzzling fact that a significant share of eligible people forgoes benefits has been documented in the context of various social programs across many countries, including Switzerland (Currie, 2004, Hümbelin, 2019).[1] The literature mainly provides three reasons for why take

[1]Hernanz et al. (2004) review evidence for different programs across seven North American and European countries. They find that take up rates for social assistance benefits range between 40 and 80% and take up of unemployment insurance benefits are between 60 and 80%. A more recent meta-study

up of social benefits remains low: high transaction costs, lack of information, and stigma. While there is ample evidence that the first and the second reasons matter, there is only scant evidence on the importance of stigma. Currie (2004) even posited that it "may be impossible to devise a definitive test of the "stigma hypothesis"" (p. 27). Since then, a handful of studies have addressed the importance of cultural attitudes in the uptake of welfare (Baumberg, 2016) or disability insurance benefits (Furtado et al., 2022).

We contribute to this literature by estimating the importance of cultural attitudes on a different social program, namely unemployment insurance. We further study the importance of attitudes for unemployment benefit take up during both a boom and a bust. Unemployment insurance has long been argued to have an important stabilizing function for the economy during downturns (McKay and Reis, 2021). Hence, if take up of unemployment benefits is low due to stigma concerns, this may hamper the stabilizing impact of social insurance on the overall economy, especially during downturns. We further hypothesize that stigma may matter more during a downturn since the composition of workers who are laid off during a recession may be different from the composition during a boom. A review of case studies by Eurofound (2015) points out that different groups of people fail to take up the same social benefits for different reasons. Therefore, we conjecture that workers who are laid off during a recession are more susceptible to stigma or social norms concerns. We study the importance of social norms on unemployment take up by exploiting the language border in Switzerland, which separates French speaking from German speaking municipalities located in the same canton (the Swiss equivalent of a US state). These municipalities share the same institutional and policy setting but have been shown to differ in their culture and attitudes regarding many topics, including attitudes toward work (Eugster et al., 2011, Steinhauer, 2018).

In particular, attitudes towards work have been shown to be less stringent in the French speaking part. French speakers have continuously voted much more in favor of referenda,[2] that were aimed at lowering work hours per week in Switzerland or increasing the number of days of holidays per year. They are furthermore much less likely to agree with the statement, "I would enjoy having a paid job even if I did not need the money." (Eugster et al., 2011). These results suggest that attitudes towards taking up unemployment benefits may also differ at the language border, with stigma towards take up being plausibly lower in the French speaking part than in the German speaking part. On the other hand, transaction costs for uptake do not vary at the language border

covering 16 Member States of the European Union finds that in each of them at least one type of benefit has a take up rate below 60% (Eurofound, 2015).

[2]As a direct democracy Switzerland regularly holds referenda where the people are asked to vote on various different law changes etc. People typically vote three times a year, where each time, a number of different referenda are put to a vote. The referenda are either on federal, cantonal or municipal level.

because unemployment insurance is regulated at the national level. The rules, administrative setting, and the procedure for application are hence the same on either side of the language border.

While we do not have direct evidence on information costs, i.e., on how well-informed people are about unemployment benefits and their eligibility status, and whether information costs differ on either side of the language border, we provide several pieces of evidence indicating that information costs are not important drivers for differential benefit take up at the language border.

First, studies have shown that the lack of information is not an important barrier in take up of unemployment benefits. Vroman (2009) reports that only 5% of all unemployed in the US Current Population Survey are unaware of unemployment insurance or how to file an application.

Second, unemployment insurance benefits have been the subject of two national referenda in Switzerland over our time period of interest. This means that every individual in our sample (since we focus on Swiss workers) has been sent a booklet informing them about the Swiss unemployment insurance system twice over our study period.

And lastly, we show results for workers who worked at the same firm before they lost their job. Since these workers were colleagues before losing their job, they likely exchange information about both job opportunities as well as unemployment benefit insurance with each other and consequently face the same information costs.

Hence, our setting lets us tease out the effect of stigma on unemployment benefit take up, independent of transaction costs or information costs. We focus our analysis on the mid-1980s until the late-1990s to cover both a period with relatively low unemployment rates (1986-1990, pre-crisis period) and a period with a large increase in unemployment rates (1991-1996, crisis period). As shown in Figure 1, the overall unemployment rate in Switzerland was less than 1% throughout the first period, and it more than quadrupled in the early 1990s during the Swiss real estate crisis. In this period, the unemployment rate reached levels not seen since the Great Depression.

We demonstrate that the business cycle is an important driver in whether cultural attitudes matter for take up: we find no difference in unemployment benefit take up across the language border for the pre-crisis period but a very significant difference during the crisis. Unemployment benefit take up is much larger in the French speaking part, with French speakers 1.3 p.p. more likely to receive unemployment benefits for at least one month in the six months post job loss. This difference persists when including firm fixed effects such that we only compare workers employed in the same firm before job loss who live on different sides of the language border. We argue that this difference is explained by cultural attitudes, which differ starkly at the language border and rule out other explanations. As argued above, we rule

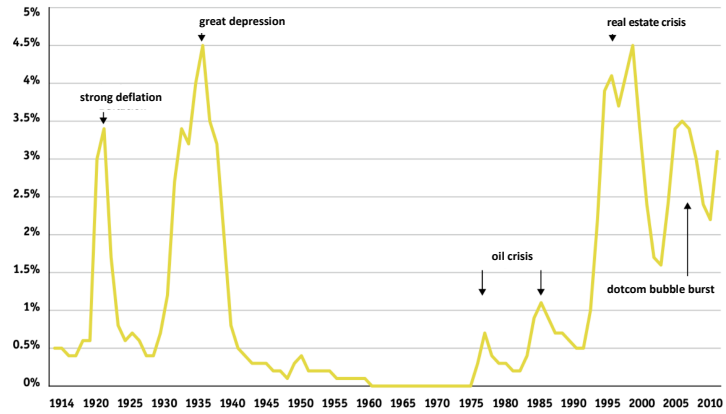


Figure 1: Evolution of the Swiss unemployment rate since 1914
Source: Historische Statistik der Schweiz (1996), Degen (2009), BFS, Sheldon / Die Volkswirtschaft

out differences in transaction and information costs as competing explanations. Further, we can also exclude a differential composition of the workforce as we control for education, two-digit occupation, and industry fixed effects in all our specifications. We can further rule out that French speaking workers were hit harder by the crisis as we find French and German speaking workers to be equally likely to lose their jobs during the crisis. Finally, we also reason that differential wealth or support from family and friends cannot drive our results. In the following, we first summarise the relevant literature. We then proceed with a detailed description of the Swiss setting, followed by an overview of the data sources used. In the next section, we discuss our empirical strategy and present results. Finally, we conclude.

2 Literature

Our paper contributes to the literature on incomplete take up of social benefits by demonstrating the importance of culture and social norms for the uptake of unemployment benefits in Switzerland. Incomplete take up rates of social benefits have been documented for various social programs and insurances and across many countries, as summarized by Currie (2004), Hernanz et al. (2004) and Eurofound (2015). In this regard, Switzerland is no exception. Lucas et al. (2021) document incomplete take up for social assistance programs and for health care benefits in Switzerland. Hümbelin (2019) uses individual tax data and estimates that the take up rate of social assistance in the canton of Bern is 75%.

The literature presents different reasons for low social benefit uptake. Currie (2004) identifies three explanations generally offered in the literature: trans-

action costs, lack of information, and stigma. We discuss evidence on these three explanations below.

Transaction costs reflect the monetary, time, and effort costs that applicants incur when applying for social benefits. If these costs outweigh the benefits, people will not apply. Deshpande and Li (2019) find that the closing of disability insurance field offices, which assisted with application filing, substantially reduced the number of applicants and recipients in the areas surrounding closed field offices. They argue that this effect is mainly driven by longer travel times and longer waiting times at field offices. In contrast, Ebenstein and Stange (2010) found no effect on unemployment insurance uptake when a phone- and internet-based system was introduced to claim unemployment insurance, which arguably reduced travel and time costs substantially. Conversely, as benefit generosity increases, benefits start to exceed transaction costs for some people, and consequently, take up rates should increase. This hypothesis is supported by evidence from McCall (1995) and Anderson and Meyer (1997). These studies find that both, unemployment benefit level and duration, have positive effects on uptake.

The second explanation is based on studies that demonstrated people's lack of information about social programs or their eligibility for these programs. Studies like Daponte et al. (1999) or Finkelstein and Notowidigdo (2021) find that simply informing people about their eligibility for SNAP (food stamps) increased take up significantly. The relevance of information barriers strongly depends on the specific program in question. Currie (2004) speculates that lack of information is in particular an issue of smaller, less prominent social programs, and Eurofound (2015) reports large variation in the extent to which possible recipients were aware of social programs.[3]

The third explanation for low take up is stigma or "social barriers". Moffitt (1983) builds welfare stigma into an economic model of rational utility maximization. In line with findings from the sociological literature, he argues that the decision to forgo social program benefits is utility-maximizing if disutility from stigma associated with program take up is large enough. Calibrations of this model's parameters in Moffitt (1983) and Fraker and Moffitt (1988) indicate that stigma is a relevant factor in reducing the uptake of Aid to Families with Dependent Children and Food Stamps in the US.

[3]There are important interactions between transaction costs and lack of information. Firstly, scholars have argued that, because people hold incomplete information, what matters for uptake are not factual costs and benefits but perceived costs and benefits. This is demonstrated by a rather counterintuitive finding in Hertel-Fernandez and Wenger (2013). The authors run a survey experiment and find that workers who received additional information about eligibility, benefit generosity, or the application process for unemployment insurance reported lower intentions of applying for these benefits. It seems that workers were too optimistic about generosity and availability of UI benefits and the revelation of low benefits and a complicated application process discouraged them. Secondly, as potential recipients are uncertain about their eligibility status, they will discount expected benefits and possibly decide that applying is too much of a hassle for such an uncertain outcome.

Stigma can arise from norms and attitudes towards the state, but also from benefit conditionality, the application procedure, pride or lack of trust in institutions (Eurofound, 2015). Therefore, stigma and transaction costs are often intertwined. Filling out detailed application questionnaires asking about very personal information or waiting in queue for a long time increases the feeling of being stigmatized (Currie, 2004). The challenge therefore lies in disentangling stigma from other types of transaction costs. For this reason, Currie's review (2004) concludes that it may well be impossible to devise a definitive test of the stigma hypothesis.

Nevertheless, evidence from experiments and surveys indicates an important role for stigma. Friedrichsen et al. (2018) run a laboratory experiment and find that social image concerns affect an individuals' decision to take up social transfers. When take up of social benefits was observable, individuals decided to forgo substantial earnings. This effect was strongest when observers could draw conclusions about an individual's ability from observing its take up decision. In a nationally representative survey in the UK, one quarter of respondents say that stigma might make them less likely to claim benefits, and 23% of past claimants say that any type of shame prevented them from claiming benefits (Baumberg, 2016). Interviewing families in financial difficulties in the Swiss canton of Geneva, Lucas et al. (2019) found that people, and particularly women, who did not take up social benefits explained it with their strong preference for independence from others, be it individuals or institutions.

Hümbelin (2019) uses register data and finds a take up rate of 75% for social assistance benefits in the Swiss canton of Bern. Importantly, Bern is a bilingual canton, and the author finds substantial differences in take up rates of social assistance between the French and the German speaking parts of Bern. The median municipality in the German speaking region had a take up rate of 55%. The take up rate in the median French speaking municipality was 84%. While this is a comparison of unconditional medians, it hints at consistent differences in take up rates across the language border.

So far, very few papers have attempted to effectively disentangle stigma from transaction costs in a structural or reduced-form analysis of eligible individuals' behavior. A paper close to ours is Furtado et al. (2022). The authors analyze how work norms affect the take up of Social Security Disability Insurance (SSDI). Their identification strategy is similar to Fernandez and Fogli (2009) in that they exploit the diverse cultural backgrounds of immigrants in the US. They find that SSDI take up rates are higher among "immigrants from countries where people place less importance on work." Another similarity to our paper is that they focus on a period of worsening economic conditions.

We contribute to the literature on the effect of culture on social benefit uptake by exploiting a language border within a constant institutional environment. The relevance of the Swiss language border for attitudes towards

work and social insurance has been demonstrated by Eugster et al. (2011). The authors analyze surveys and voting outcomes and find that the non-German speaking parts of Switzerland believe less that hard work pays off and prefer higher levels of social insurance and redistribution than the rest of the country. In a follow-up paper, Eugster et al. (2017) then show that these cultural differences help to explain regional differences in unemployment duration. They find that job seekers on the French speaking side search on average for seven more weeks than their peers on the German speaking side. In contrast to our paper, Eugster et al. (2017) do not look at unemployment insurance uptake as their data only covers individuals who have applied for unemployment benefits. Furthermore, they focus on a different time period which does not allow them to look at differential effects between bust and boom periods.

In other contexts, the Swiss language border has repeatedly been used to causally identify the effect of cultural differences on various outcomes. Egger and Lassmann (2015) look at the effect of a common native language on the strength of international trade flows, Gentili et al. (2017) analyze entrance to nursing homes and health conditions among the elderly, and Eugster and Parchet (2019) show that tax competition reduces culture-related tax differentials along the language border.[4]

3 Background

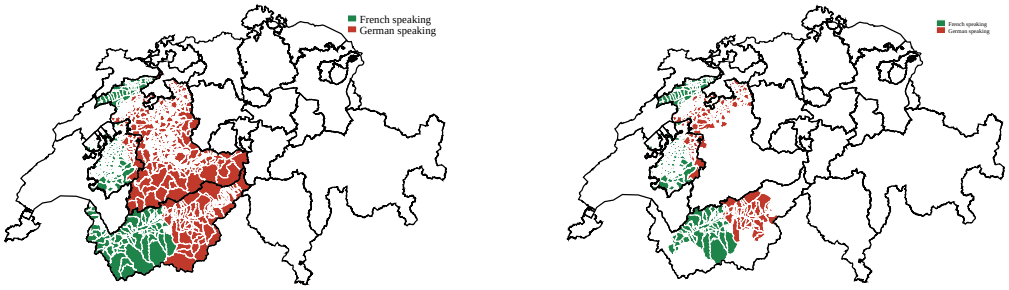
3.1 The Swiss language border

Switzerland today has four official languages where German is spoken by the large majority (75%), followed by French (20%), Italian (4%), and Romansh (1%). Historically, Switzerland became multilingual with the conquest of the German speaking reeves of French speaking territory. While German was first imposed on the conquered territories, French remained the dominant language and was accepted as an equal language to German at the end of the 18th century (Büchi, 2001).

The majority of Swiss cantons speak just one of the four languages. Three cantons however - Valais, Fribourg, and Berne– are bilingual, speaking both French and German, and one canton (Graubünden) is trilingual, speaking German, Italian, and Romansh. We focus our analysis on the three bilingual cantons as the shares of French and German speakers in those are more balanced. We follow Eugster et al. (2017) and classify municipalities as either French speaking or German speaking according to the language spoken by a

[4]More generally, our paper relates to a broad literature on social norms, specifically social image concern, and economic outcomes. The literature on social norms in economics is reviewed by Young (2015); an interdisciplinary review of the social norms literature can be found in Legros and Cislaghi (2020). A relevant paper in the context of Switzerland is Funk (2010). The author exploits the introduction of postal voting in Switzerland to demonstrate how social norms explains the paradox of voting.

Figure 2: Swiss municipalities within bilingual cantons



Notes: The left hand side map shows municipalities with a majority of German speakers as reported in the 2000 census in red and municipalities with a majority of French speakers in green. The right-hand side figure restricts the sample to those municipalities which are no more than 50 km driving distance from the language border. Source: Swiss Census 2000, Federal Statistical Office (FSO), Neuchâtel, and Swissboundaries3d geo data, Swiss Federal Office of Topography.

majority of adult residents as reported in the 2000 Census. This generates a language border that separates municipalities within the same canton. This language border allows us to compare the behavior of people living within the same canton and hence the same institutional and policy environment but who speak different languages.

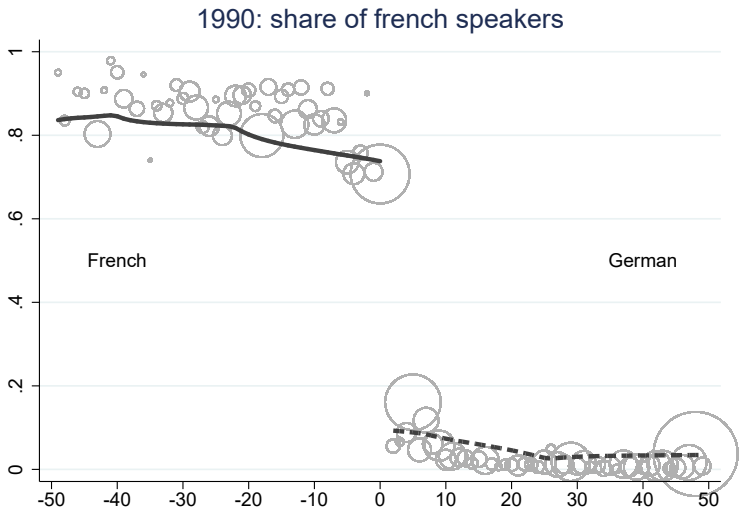
As we show below, speaking different languages is strongly linked to holding different cultural attitudes. By comparing individuals across the language border, we are thus contrasting individuals who face the same institutions and policies but a different cultural environment.

Figure 2 shows the three bilingual cantons within Switzerland in color, with French speaking municipalities shaded in green, and German speaking municipalities shaded in red. The cantonal borders are drawn in black. The map shows that the language border separates municipalities that lie within the same canton.

Since the language border runs North-South, it is not linked to any geographical barriers such as mountains that run East-West. We also follow Eugster et al. (2017) in our definition of the measure of distance to the language border. The distance to the language border is computed as the driving distance to the nearest other-speaking municipality in kilometers[5]. A "language border municipality" is a majority French speaking municipality whose nearest neighbor (the municipality which is the shortest distance away) is German speaking. Distance to the language border is then defined as the distance between a specific municipality and the closest "language border municipality". Distance is negative if a municipality is French speaking and positive if

[5]This measure is constructed using search.ch (a website similar to google maps) which shows the driving distance by car between two points in kilometers. The distance between municipalities is computed from municipality midpoints which are usually the economic/political center of the municipality

Figure 3: Share adults who speak French as their mother tongue in the 1990 Census



Notes: Share of adults who speak French, by distance to language border. Negative distance = French language speaking municipalities; positive distance = German language speaking municipalities. These figures report the share of adults who report to speak French as their first language, averaged at municipality level and in 1 km distance bins (population weighted). Lines are kernel-weighted local polynomial regression results. Source: Data from Federal Statistical Office (FSO), Neuchâtel.

it is German speaking. Figure 3 plots the share of adults who report speaking French as their first language by municipality-distance from the language border. We see that the border we identify does indeed separate municipalities fairly well by main language spoken in the municipality.

While the language border divides sharply by majority language spoken, it is importantly not a divider for many other outcomes. The institutional and legal setting is identical on either side of the language border since the municipalities belong to the same canton.

Further, due to the federal political system of Switzerland, each canton has considerable discretion in many aspects of political decision making, such as education. While educational institutions and policies hence differ across cantons, they do not differ within. Consequently, either side of the language border faces the same set of education policies, and Eugster et al. (2017) show that this is reflected in equal outcomes across the language border for various measures of education quality such as PISA scores.

In contrast, labor legislation and unemployment benefit rules are set at the national level and do not differ at the language border either. The details of the Swiss unemployment insurance system are described in section 3.2.

Since Swiss municipalities set their own tax multipliers, one might expect that cultural differences at the language border also translate into different

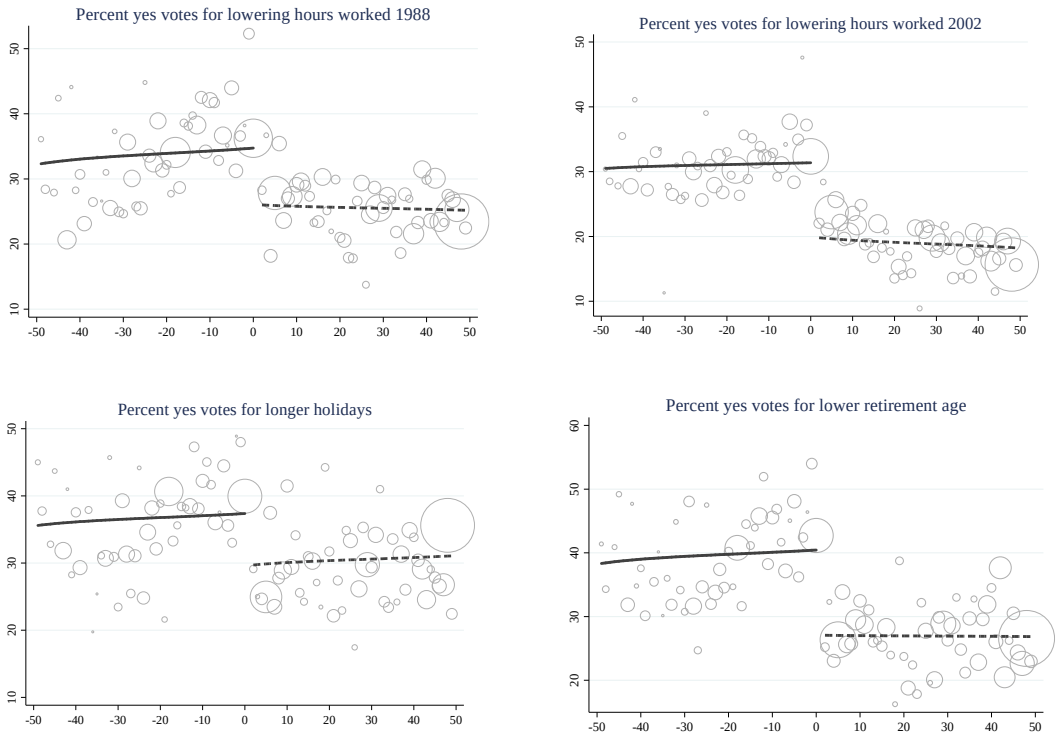
tax multipliers. However, Eugster and Parchet (2019) demonstrate that due to tax competition, there is no discontinuity in the tax rate gradient at the language border.
A potential substitute for unemployment benefits may be provided by insurance within the family or among friends. If family ties or social networks are stronger in the German speaking part, this may explain why unemployment benefit applications rise less in the German speaking part. Eugster et al. (2017) show that while individuals in the German speaking part tend to have more weak ties, such as friends and colleagues, family ties are stronger among French speakers.

In contrast, it has been shown that attitudes vary considerably between the German and French speaking parts. For example, the International Social Survey Program (ISSP) asks questions related to work attitudes, such as, "I would enjoy having a paid job even if I did not need the money". Answers differ considerably by language spoken, with the German speaking part supporting this statement with 77-78% while only around 45-46% of French speakers agree (compare Table 1). Interestingly, the difference in attitudes between French and German speakers is considerably lower in the 2005 wave, which falls into a boom period, while 1997 is still a recession year. Hence, the survey already hints that the economic environment may play an important role in determining the importance of culture on unemployment benefit take up.

Through the Swiss political system of direct democracy, we can further use vote outcomes of referenda as measures of attitudes. We use two referenda on the reduction of hours worked per week (one in 1988 and one in 2002), a referendum which wanted to increase the number of weeks of holidays per year in 1985, and a referendum which aimed to lower retirement age in 1988. Figure 4 shows that French voters consistently vote much more in favor of work-time reduction policies than German speaking municipalities.

We conclude that many important characteristics such as taxes, education systems, institutions, and unemployment insurance rules do not differ at the language border. Attitudes towards work, however, show quite distinct patterns, with the French speaking consistently exhibiting attitudes more in line with less stigma on unemployment benefit uptake. This setting is therefore useful to study whether cultural attitudes and stigma are important determinants of unemployment benefit uptake for eligible individuals.

Figure 4: Vote outcomes across the language border



Notes: Voting results on four referenda measured in percent yes votes, by distance to language border. Negative distance = French language speaking municipalities; positive distance = German language speaking municipalities. These figures report percentage of yes votes in national referenda or voter initiatives, averaged at municipality level and in 1 km distance bins (population weighted). Lines are kernel-weighted local polynomial regression results. Source: Data from Federal Statistical Office (FSO), Neuchâtel.

Table 1: Work attitudes across the language border

	year	N	French	German	Difference
Share agree/strongly agree	1997	478	0.457	0.77	-0.312***
			(0.039)	(0.024)	(0.046)
Share agree/strongly agree	1997	2014	0.464	0.783	-0.319***
			(0.020)	(0.011)	(0.023)
Share agree/strongly agree	2005	1024	0.613	0.789	-0.176***
			(0.026)	(0.016)	(0.031)

Notes: Share agree/strongly agree is the share of individuals who answered the question "I would enjoy having a paid job even if I did not need the money" with either strongly agree or agree. Individuals who did not answer the question are excluded. In 1997, the main language spoken is reported for each individual. In the first line, we use language spoken and classify individuals into french or german speaking based on that variable. The first line restricts the sample to the three bilingual cantons used in the rest of the paper. The second line does not restrict the sample but still uses language spoken to classify individuals into French or German speaking. The last line shows data from the 2005 wave of the ISSP which did not ask about language spoken anymore. We hence classify individuals into French or German speaking based on their canton of residence. We classify the three bilingual cantons in the following way: Fribourg and Wallis as French speaking since they are majority French speaking and Bern as German speaking. Source: ISSP 1997 and 2005

3.2 Unemployment benefits in Switzerland

We summarise the evolution of the Swiss unemployment insurance for our time period of interest as described by Steiger (2007) in the three paragraphs below.

3.2.1 A brief history of the Swiss unemployment insurance

Unlike many other European countries, the Swiss Unemployment benefit system was long only voluntary. Only in 1977, the unemployment insurance became compulsory for employees and employers and available also to self-employed workers. The law change in 1977 further regulated that employers and employees share the contributions to the insurance equally and that the insurance was also responsible for providing assistance in finding new employment. In 1984, the law was amended further to include active labor market programs as a service provided by the unemployment insurance. The following amendment became effective in 1989 and introduced the insurance compensation for reduced-hours work as well as a compensation for bad weather.

Due to the economic crisis and its resulting spike in unemployment in the 1990s, the compensation payment rules were adjusted in 1993. With this change, the benefit entitlement period was extended, but the replacement rate

for single persons with high income was lowered. The next reform followed in 1996. This reform changed the application process for benefits quite significantly: while applications had to be done at one's municipality of residence until 1996, starting in 1996 and 1997, regional unemployment offices were created. These regional offices took over the application procedure previously handled by local municipalities and introduced more comprehensive support for unemployed workers in finding a new job. The reform gave each region time until 1997 to introduce these regional offices. In our sample, most regions only opened their office in 1997. Since this reform may have potentially affected transaction costs differentially across the language border[6] we always include robustness estimates in our appendix, which exclude the year 1996 from our analysis. We find that results do not change significantly.

3.2.2 Unemployment benefits and eligibility between 1986-1997

During our time of interest, unemployment benefits were granted if the worker had been employed for at least six months during the past two years before becoming unemployed. The benefits are paid in daily allowances, with 21.7 daily allowances paid in an average month. Until 1992, replacement rates were 80% for married workers or workers with dependents and 70% for single workers without dependents. The replacement rate was reduced by 5% after receiving 85 daily allowances for workers younger than 55 and by another 5% after 170 daily allowances for all workers.

Starting in 1993, replacement rates were increased to 80% for everyone, and the age cutoff for the duration-based reduction after 85 daily allowances was reduced to workers younger than 45. However, due to the severity of the crisis, some adjustments were made still in 1993, and the replacement rate was reduced again to 70% for workers without dependents whose daily allowance exceeded 130 Swiss Franks (CHF). The next reform of the Swiss unemployment insurance happened in 1996/1997. This reform reduced benefits paid by 3% for workers without dependents and with a daily allowance of more than 130 CHF, and by 1% for all others. This decrease lasted only for 11 months however and was reversed to the previous levels in November 1997.

The maximum payment duration varied by contribution time and age, with an overall maximum of 300 daily allowances starting in 1992. The maximum duration was prolonged to 400 days in 1993 for workers with at least 18 months of contributions or for older workers with at least six months of contributions. In 1997, it was further extended to 520 days, corresponding to two calendar years.

[6] If for example the regional offices are much closer to French speaking municipalities on average, this could lead to higher application rates in the French speaking municipalities after 1996 because the regional office is closer than in the German speaking part.

3.2.3 Unemployment benefit application process

Until 1996/97, an unemployed worker had to claim benefits at the employment office of their municipality of residence. The unemployed worker was required to visit the office twice a week to collect a stamp in order to be eligible for benefits. To collect the stamp, the worker had to show proof of adequate efforts to find a job. The municipal employment office was responsible for checking work efforts and, in theory, for assistance in searching for jobs. However, especially small municipalities lacked adequate personnel to perform assistance, and as a consequence, regional employment offices were introduced with the reform in 1996/97.

The reform required all regions to switch from municipal level offices to regional offices by the end of 1997. The goal of those regional offices was to improve assistance provided to job seekers. In practice, the introduction of these offices may have affected unemployment benefit uptake in two ways, in opposing directions: one the one hand, the employment office is now further away (unless you happen to live in the municipality chosen for the regional office) and this increased the transaction costs incurred when applying. On the other hand, with the employment offices being further away, applying for unemployment benefits becomes less observable to your environment, which might reduce stigma concerns. If the new employment offices are significantly closer or further away from our sample of workers on either side of the language border, this reform may introduce potential problems in our analysis[7]. Therefore, we include robustness tests that exclude the year 1996 from our analysis in the appendix. Our results do not change significantly. Since all the other reforms affected the French and German speaking parts equally, we do not control for any effects that the reforms may have had.

4 Data

Our main source of data is the Swiss Social Security data which contains information on the universe of all individuals employed or receiving unemployment benefits in Switzerland between 1981-2016. The data set is structured by spells; hence for each individual and job, there is one entry containing information on the start month and end month of that spell in a given year as well as the total income earned during that time. Since these spells report both wage employment and unemployment, we know the exact month someone leaves a company and the exact month someone starts receiving unemployment benefits. This data set can be linked to the Swiss Census in 1990 and 2000, which gives us information on an individual's gender, date of birth,

[7] If for example, the new regional offices are on average closer to the French speaking municipalities, this may drive the French speaking municipalities to apply more often due to lower transaction costs and not due to stigma

current residency, highest level of education, marital status, number and year of birth of children, occupation and industry (if employed in 1990 or 2000). It is further possible to link couples both in 1990 and 2000, allowing us to also study within household responses to an unemployment shock.

Each wage employment spell in the social security records also includes a firm identifier. We therefore observe whether an individual worked at the same firm for two consecutive months, whether he applied for unemployment benefits in a given month or whether there is neither an employment nor an unemployment spell. This allows us to identify worker movements between different employers, between employment and unemployment, and whether unemployed workers receive unemployment insurance benefits or not. In the last case, however, we do not observe if an individual is unemployed and actively looking for a job, just without applying for unemployment benefits, or whether the individual has left the labor market and is not looking for a job. For this reason, we restrict our sample in two ways. First, we only include Swiss men between 25-55 because this group is most likely to be continuously attached to the labor force. We exclude foreign nationals as they might forgo benefits because they believe that receiving benefits will lower their chances of becoming Swiss citizens at a later point. Second, we exclude men who do not have a spell at all for more than 12 consecutive months, which again should ensure that we only focus on men with a relatively strong attachment to the labor market. We then interpret a transition from an employment spell to neither an employment nor unemployment spell as searching for a new job.

4.1 Variable construction

We define someone as receiving unemployment benefits if there is an unemployment spell registered for that individual in a given month, independent of the presence of other spells. We classify an individual as non-employed (but searching for a job) if there is neither a wage employment, a self-employment or an unemployment spell. We drop an individual from the sample in a given month if, instead of any of the above spells, he has a spell indicating being in the military, receiving welfare or disability insurance. We also drop workers living in either Biel or Fribourg from our analysis since both cities are bilingual themselves and are hence neither purely German nor purely French speaking.

Firm identifiers: In the Swiss Social Security data, each wage employment spell reports a firm identifier. These firm identifiers are specific to a single plant of a firm in a given year. Hence, if two people have the same firm identifier in the same year, we know that they work at the same firm. However, firm identifiers sometimes change randomly from one year to the next such that the same firm is denoted by different identifiers in year 1991 and 1992 for example. We create a firm crosswalk that links employer identifiers across years. The crosswalk is constructed as follows: If we find that more than

60% of all employees assigned to a firm identifier in one year are assigned to a different firm identifier in the following year, we conclude that the two firm identifiers correspond to the same firm. We apply this rule to all firms with more than 10 employees.

Mass layoff: We loosely follow Halla et al. (2020) in our definition of mass layoffs but adjust it to better fit our data limitations and sample. We rely on our newly constructed firm identifiers and define a mass layoff if, from one year to the next, a firm decreases its workforce by 30% or more. This is analogous to Halla et al. (2020) for firms up to 20 employees. Contrarily to Halla et al. (2020) we use the cutoff of 30% also for larger firms. For this project, we define being let go in a mass layoff if an individual either moves to unemployment, has no entry in the Social Security data for the next month or changes firm at the same time as the firm is defined as having a mass layoff.

Firm closure: We define a firm closure if a firm identifier disappears from one month to the next and does not appear again for at least one year. This makes sure that we do not report firms that operate only seasonally as firm closures. We apply this definition after assigning new firm identifiers based on the above procedure. Given that the above procedure is only applied to firms with more than ten employees, we are bound to overestimate the number of firm closures in our sample since we are not able to detect if a small firm remains open but receives a new firm identifier. For this reason, we focus on a sample of firms that closed at the end of any month but December. Since firm identifiers only change randomly from one year to the next but not within year, this procedure ensures that we do not wrongfully declare a firm closure if the firm only changed firm identifier. This approach is rather conservative and warrants further investigation and robustness in the future.

UI eligibility: Since we are interested in unemployment benefit take up, we need to proxy for eligibility for unemployment benefits. For this reason, we focus on workers who have worked for at least six months in the previous two years and who lose their job in either a mass layoff or a firm closure. This ensures that we study only workers who are eligible for unemployment benefits. For the rest of the paper, job loss hence refers to being let go in either a mass layoff event or a firm closure event. Further, we run all regressions on a sample of individuals who have been employed for at least six months in the past two years.

5 Empirical strategy

We study the effect of attitudes on the probability of receiving unemployment benefits after a job loss event at the language border in Switzerland. Our empirical strategy closely follows the one in Eugster et al. (2017). We denote the driving distance in kilometers from municipality c to the language border with

$distance_c$. Distance to the border is zero for municipalities that are located exactly on the border. These are majority French speaking municipalities whose nearest neighbor is majority German speaking. The variable $distance_c$ is negative for French speaking municipalities and positive for German speaking municipalities. (Hence, $distance_c > 0$ identifies a German speaking municipality and $distance_c \leq 0$ a French speaking municipality.) As Eugster et al. (2017) point out, for our identification design to work we need two assumptions to hold: the first is that the cultural determinants of y need to vary discontinuously at the language border. The second requires that all unobserved compositional differences on the individual and on the municipality level are continuous at the language border.

Note that the identification strategy is very similar to a spatial regression discontinuity design (RDD), but not identical. The key difference is that in our case, distance to border can be manipulated by individuals. While this makes point identification of cultural determinants of unemployment benefit reception outcomes impossible, we can nonetheless use a regression similar to a spatial RDD to approximate the order of magnitude of cultural attitudes. For this, we require that unobserved composition and group level effects vary at a lower order of magnitude at the language border than cultural attitudes. We run the following linear regression:

$$\begin{aligned} y_{ickt} = \pi_0 + \pi_1 french_c + \pi_2 distance_c + \pi_3 french_c distance_c \\ + \alpha X_i + \beta Z_c + \gamma_k + \mu_t + \nu_{ic} \end{aligned} \tag{1}$$

where y_{ickt} is our individual level outcome of interest. Usually this will be a dummy which measures if individual i living in municipality c (which is part of canton k) who lost his job at time t will receive unemployment benefits in at least one of the consecutive six months and zero otherwise. $distance_c$ is the distance to the language border and $french_c$ is a dummy equal to one if municipality c is French speaking. $distance_c$ and $french_c distance_c$ capture a two-sided linear trend between the outcome variable y and distance to the language border. We only include individuals who live within 50 km of the language border. X_i are individual level controls. We always include age, age squared, religion, and marital status controls as well as fixed effects for three education levels, two-digit occupation categories and industry[8] fixed effects. These fixed effects will absorb potentially different work force compositions left and right of the language border. We further always include canton fixed effects (γ_k) to absorb differences in cantonal policies, which may potentially affect unemployment benefit receipt. Lastly, we always include year fixed

[8]We follow Beerli et al. (2021) in classifying industry information given in the census 1990 into the following 7 categories: hightech, medium hightech, medium lowtech, lowtech, construction, knowledge intensive and not knowledge intensive

effects (μ_t) to account for different labor market environments depending on the year in which individual i loses his job. We also add municipality-level controls (Z_c). These include the share of adults with a university degree in the 1990 census, the share of the population in working age and the log of population in 1990. ν_{ic} is an error term that is possibly correlated within municipalities. We cluster standard errors on municipality level.

6 Results

To study the effects of culture on unemployment benefit take up depending on the business cycle, we divide our sample period into two: the first period, 1986-1990, is characterized by low overall unemployment (pre-crisis period). The second period, 1991-1996, experienced a real estate crisis that hit Switzerland in the early 1990s and led to a spike in the unemployment rate comparable to the one during the Great Depression (compare Figure 1, crisis period).

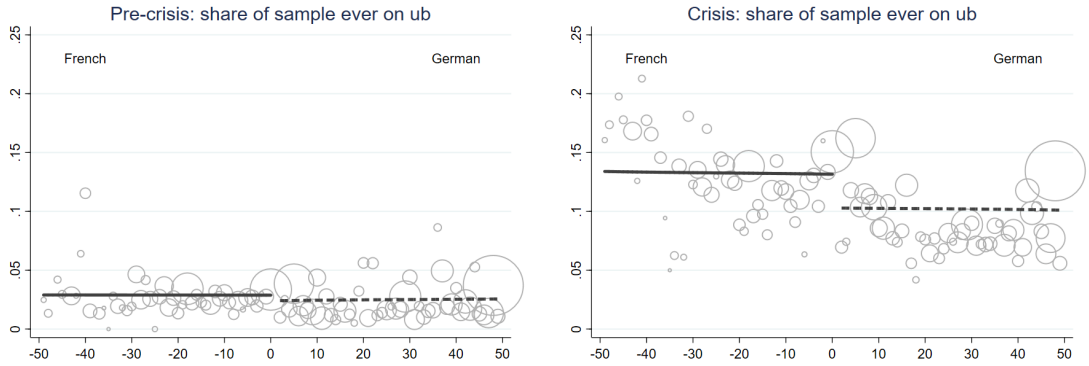
In a first step, we analyze graphically whether the share of individuals who *ever* applied for unemployment benefits in the pre-crisis or the crisis period differs at the language border. Figure 5 plots the share of men who received unemployment benefits for at least one month either in the pre-crisis period 1986-1990 or in the crisis period from 1991-1996, by distance from the language border. The bubbles indicate 1 km averages where the size of the bubble reflects the number of people who live at this 1 km distance bin from the language border. The lines are kernel-weighted local polynomial regression results. It is important to note that this does not yet include any canton fixed effects or individual controls.

Figure 5 shows two of our main facts: first, the share of men ever receiving benefits increased drastically during the crisis. Second, the increase was much more pronounced on the French speaking side of the language border. Overall, there is no discernible effect of the language border on unemployment benefit uptake pre-crisis; but a substantial difference during the crisis period.

Since Figure 5 does not yet condition on job loss, we next plot the share of men who ever applied for unemployment benefits conditional on having been let go in a mass layoff or firm closure event. Figure 6 plots the share of men who ever take up unemployment benefits over the sample period if they experienced a job loss in either the pre-crisis or the crisis period. First, we note that while the share of men who ever take up benefits is higher in this plot than in Figure 5, the increase is not that large. Although all men in Figure 6 lost their job, only 10-20% end up receiving unemployment benefits. As we will show later, this is explained by the fact that a large share of men finds new employment immediately. One reason for this might be that Switzerland has relatively strict laws on mass layoffs, including giving employees early notice.

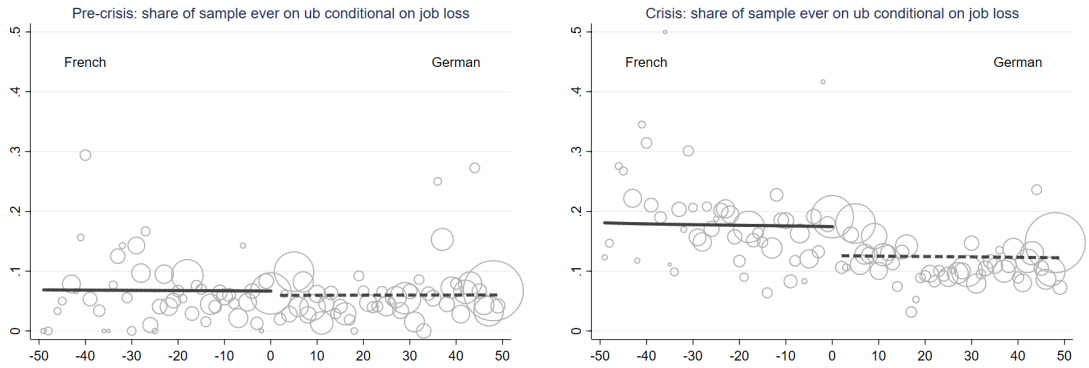
Second, we note that the difference in the share of men who receive unem-

Figure 5: Share of men receiving unemployment benefits for at least one month, pre-crisis (LHS) and crisis period (RHS)



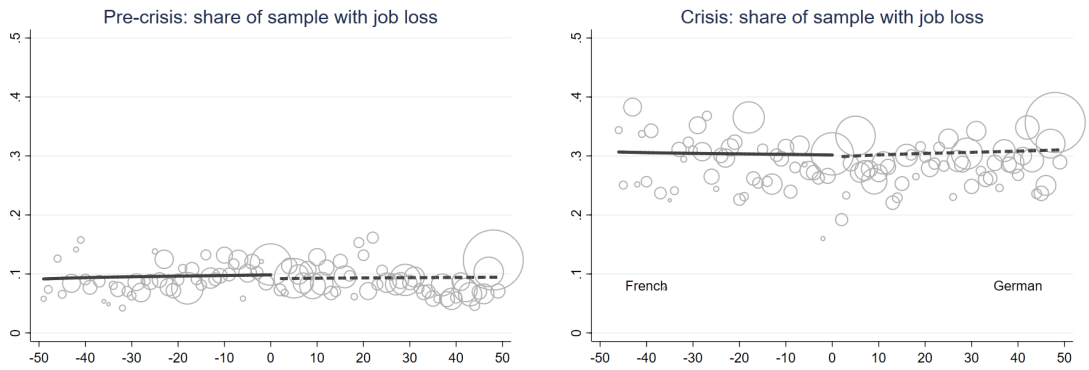
Notes: Share men ever receiving unemployment benefits during the indicated period, by distance to language border. Negative distance = French language speaking municipalities; positive distance = German language speaking municipalities. This figure reports the share of men receiving benefits over the period, averaged at municipality level and in 1 km distance bins (population weighted). Lines are kernel-weighted local polynomial regression results. Does not yet condition on job loss and does not include canton fixed effects or other controls.

Figure 6: Share of men receiving unemployment benefits for at least one month conditional on having lost their job, pre-crisis and during the crisis



Notes: Share men taking up unemployment benefit conditional on experiencing a job loss event during the indicated period, by distance to language border. Negative distance = French language speaking municipalities; positive distance = German language speaking municipalities. This figure reports the share of men taking up unemployment benefits conditional on experiencing a job loss event over the period, averaged at municipality level and in 1 km distance bins (population weighted). Lines are kernel-weighted local polynomial regression results. Does not include canton fixed effects or other controls.

Figure 7: Share of men who lost their job at least once during a given period in a mass layoff or firm closure event, pre-crisis and during the crisis



Notes: Share men who lost their job at least once during a given period in a mass layoff or firm closure event, by distance to language border. Negative distance = French language speaking municipalities; positive distance = German language speaking municipalities. This figure reports the share of men who lost their job at least once during a given period in a mass layoff or firm closure event, averaged at municipality level and in 1 km distance bins (population weighted). Lines are kernel-weighted local polynomial regression results. Does not include canton fixed effects or other controls.

ployment benefits remains higher on the French speaking side of the language border during the crisis period. This suggests that French speaking men being more likely to lose their job is not a driver of the difference observed in Figure 5. We confirm this in Figure 7 by showing that the share of men who experienced at least one job loss event is not higher in the French speaking part than in the German speaking part neither during the pre-crisis nor during the crisis period.

This visual analysis suggests that French speaking workers are more likely to receive unemployment benefits during the crisis period, even though French and German speakers are equally likely to lose their job in a mass layoff or firm closure, both in the pre-crisis and crisis period.

These figures do not yet contain any fixed effects nor controls. We therefore proceed by estimating the parameters of the regression model detailed in 1. Table 2 and Table 3 present results from regressing french and dist on unemployment benefit take up after experiencing a job loss by period. The outcome variable of interest is a dummy equal to one if a worker who lost his job has received unemployment benefits in at least one month of the six months post job loss and 0 if not. The coefficient for *french* reports the overall effect of living in the French speaking part on unemployment benefits uptake. The coefficient on *distance* shows whether unemployment benefit uptake on the German speaking side diminishes or increases with distance from the language border. The sum of the coefficients for *distance* and *distance * french* reports whether benefit uptake on the French speaking side diminishes or increases

with distance from the language border.

Table 2 reports coefficient estimates from a sample of workers who lost their job in the pre-crisis period. In column (1) we report the results for a regression which includes only canton and year fixed additional to our education, two-digit occupation, and industry fixed effects which are always included. In column (2) we add controls for municipality characteristics. These controls include the share of individuals with a tertiary degree as reported in the Census 1990, the share of individuals who are in working age in 1990 and log population in 1990. The last column (3) adds month fixed effects for the month when job loss happened. This should absorb potential seasonality effects. The coefficient for *french* is insignificant throughout, indicating that in the pre-crisis period, there is indeed no difference between the French and German speaking parts in benefit take up. The coefficient for distance is small but positive. Since we rescale the distance by dividing kilometer values by 10, a coefficient of 0.005 means that for every 10 km that an individual lives further away from the border on the German side, the probability of taking up benefits in the six months post job loss increases by 0.5 p.p.

If we analyze the crisis period (compare Table 3), we find that the probability of unemployment benefit take up in the six months after job loss is significantly higher in the French speaking part compared to the German speaking part with estimates ranging from 1.3-1.9 p.p. Since the average probability to take up unemployment benefits in the six months after job loss is 4.61% over the whole sample and the crisis period, this corresponds to a sizeable increase of 28%. The coefficients for distance are zero on either side, indicating that the effect is uniform across the language border and neither increases nor decreases with distance from the border. It is important to note again that these regressions include – next to canton and year fixed effects – also fixed effects for education, for two-digit occupation codes, and for industry, hence our estimates for *french* do not pick up differences in industry, education or occupation choices between the French speaking and the German speaking part.

We next present evidence on the probability of losing one's job in a mass layoff or firm closure. We run the same specification as detailed in equation 1 with a dummy for job loss as an outcome. The dummy is equal to 1 if an individual was let go in a job loss or mass layoff event in a given month and year and 0 otherwise. We present again results for the two periods: pre-crisis and crisis. Table 4 shows the results for the pre-crisis period. We find that the coefficient for *french* is zero throughout; hence workers are equally likely to lose their job on either side of the language border. Table 5 shows the results for the crisis period. For the crisis period, the estimates for the coefficients on distance are statistically significant but economically insignificant. The coefficient on *distance* in column (3) is -0.000054, which can be interpreted as

Table 2: Pre-crisis probability to take up unemployment benefits in the six months post job loss

	(1)	(2)	(3)
french	-0.000	0.004	0.004
	(0.007)	(0.008)	(0.008)
distance (in km/10)	0.004**	0.005**	0.005**
	(0.002)	(0.002)	(0.002)
distance * french	-0.004	-0.003	-0.003
	(0.004)	(0.004)	(0.004)
constant	0.085**	0.153***	0.143***
	(0.037)	(0.046)	(0.048)
Obs.	11961	11961	11961
adj. R2	0.0303	0.0319	0.0336
Year f.e.	√	√	√
Canton f.e.	√	√	√
Education f.e.	√	√	√
Two-digit occupation f.e.	√	√	√
Industry f.e.	√	√	√
Municipality characteristics		√	√
Month f.e.			√

Notes: Robust standard errors in parentheses, clustered on municipality level. French 1.= majority in worker's municipality of residence speaks a French. Distance = road distance to language border. All regressions are limited to workers living in municipalities within 50 km of the language border. Fixed effects always include canton, year, two-digit occupation classification in 1990, industry FE and education FE, month FE added in last column. Individual controls: age, age squared, religion and family background. Municipality characteristics: share highly educated in the municipality, share working age, and (log) population. ***p<0.01, **p < 0.05, *p < 0.1. Source: Data from Swiss Social Security records 1986–2001; Swiss Census 2000, Swiss Census 1990.

Table 3: Crisis take up of unemployment benefits

	(1)	(2)	(3)
french	0.019***	0.016***	0.013***
	(0.005)	(0.005)	(0.005)
distance (in km/10)	-0.000	-0.002	-0.001
	(0.001)	(0.001)	(0.001)
distance * french	-0.002	-0.001	-0.001
	(0.002)	(0.002)	(0.002)
constant	0.021	0.004	0.007
	(0.029)	(0.034)	(0.032)
Obs.	39579	39579	39579
adj. R2	0.0612	0.0613	0.103
Year f.e.	√	√	√
Canton f.e.	√	√	√
Education f.e.	√	√	√
Two-digit occupation f.e.	√	√	√
Industry f.e.	√	√	√
Municipality characteristics		√	√
Month f.e.			√

Notes: Robust standard errors in parentheses, clustered on municipality level. French 1.= majority in worker's municipality of residence speaks a French. Distance = road distance to language border. All regressions are limited to workers living in municipalities within 50 km of the language border. Fixed effects always include canton, year, two-digit occupation classification in 1990, industry FE and education FE, month FE added in last column. Individual controls: age, age squared, religion and family background. Municipality characteristics: share highly educated in the municipality, share working age, and (log) population. ***p<0.01, **p < 0.05, *p < 0.1. Source: Data from Swiss Social Security records 1986–2001; Swiss Census 2000, Swiss Census 1990.

a decrease in the probability of losing one's job of 0.0054 p.p. for each 10 km further away from the border on the German speaking side. This corresponds to an additional decrease in the probability to lose ones job of 0.01% for every 10 km further away from the language border.

So far, we have shown that even though workers in the French speaking part are equally likely to lose their job in a mass layoff or a firm closure, French speaking workers are considerably more likely to receive unemployment benefits in the six months post job loss. Since we control for education, two-digit occupation, and industry fixed effects, this effect is not driven by differences in occupation or industry, nor education levels across the border. However, while cultural attitudes may explain the difference in unemployment take up rates, we cannot yet rule out that labor market conditions are at least partially driving the effect. While we know that both sides of the language border seem to be hit equally by the crisis (as job loss does not differ at the language border), it is possible that the German speaking part recovers faster. If this was the case, then German speaking workers may find it easier to obtain a new job and they therefore have to rely less on unemployment benefits.

We can address this concern in two ways. First, we can introduce firm fixed effects in our analysis such that we focus only on workers who worked in the same firm prior to job loss and who were both let go at the same time but who live in different cultural environments. If a firm is located on the German speaking side, and it lets go a share or all of its employees, it seems plausible that both German and French speaking workers should face very similar labor market opportunities as they previously worked at the same firm[9].

A further advantage of including firm fixed effects is that we can plausibly argue that differential information about eligibility for unemployment benefits as well as application procedures are unlikely to drive the effect. Since these workers were colleagues before losing their job, they are subject to the same information about unemployment benefits that is communicated by the firm. Furthermore, workers most likely share information about both new job opportunities as well as availability of unemployment benefits with each other. Including firm fixed effects therefore allows us to test for the effects of cultural attitudes since only cultural attitudes vary at the language border, but information and transaction costs are equal. A second test for differential labor market opportunities would be to study whether there is differential job creation across the language border. Unfortunately, we do at the moment not have data neither on vacancies nor on firms creation to test this directly[10].

We hence first introduce firm fixed effects in equation 1 to only compare workers who worked in the same firm but who live on different sides of the

[9]For example, workers who worked on the other side of the language border are likely to speak both languages quite well and should hence face similar labor market opportunities.

[10]We are currently applying for data which will allow us to supplement our analysis with a comparison of growth rates of vacancies, firms and jobs across the language border.

Table 4: Pre-crisis monthly probability of losing ones job in either a mass layoff or a firm closure

	(1)	(2)	(3)
french	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)
distance (in km/10)	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)
distance * french	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)
constant	0.001***	0.002**	0.002**
	(0.000)	(0.001)	(0.001)
Obs.	6833436	6833436	6833436
adj. R2	0.000944	0.000950	0.00864
Year f.e.	√	√	√
Canton f.e.	√	√	√
Education f.e.	√	√	√
Two-digit occupation f.e.	√	√	√
Industry f.e.	√	√	√
Municipality characteristics		√	√
Month f.e.			√

Notes: Robust standard errors in parentheses, clustered on municipality level. French 1.= majority in worker's municipality of residence speaks a French. Distance = road distance to language border. All regressions are limited to workers living in municipalities within 50 km of the language border. Fixed effects always include canton, year, two-digit occupation classification in 1990, industry FE and education FE, month FE added in last column. Individual controls: age, age squared, religion and family background. Municipality characteristics: share highly educated in the municipality, share working age, and (log) population. ***p<0.01, **p < 0.05, *p < 0.1. Source: Data from Swiss Social Security records 1986–2001; Swiss Census 2000, Swiss Census 1990.

Table 5: Crisis monthly probability of losing ones job in either a mass layoff or a firm closure

	(1)	(2)	(3)
french	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)
distance (in km/10)	-0.000	-0.000*	-0.000*
	(0.000)	(0.000)	(0.000)
distance * french	-0.000	-0.000**	-0.000**
	(0.000)	(0.000)	(0.000)
constant	0.008***	0.007***	0.007***
	(0.001)	(0.001)	(0.001)
Obs.	6361434	9120120	9120120
adj. R2	0.00626	0.00404	0.0369
Year f.e.	√	√	√
Canton f.e.	√	√	√
Education f.e.	√	√	√
Two-digit occupation f.e.	√	√	√
Industry f.e.	√	√	√
Municipality characteristics		√	√
Month f.e.			√

Notes: Robust standard errors in parentheses, clustered on municipality level. French 1.= majority in worker's municipality of residence speaks a French. Distance = road distance to language border. All regressions are limited to workers living in municipalities within 50 km of the language border. Fixed effects always include canton, year, two-digit occupation classification in 1990, industry FE and education FE, month FE added in last column. Individual controls: age, age squared, religion and family background. Municipality characteristics: share highly educated in the municipality, share working age, and (log) population. ***p<0.01, **p < 0.05, *p < 0.1. Source: Data from Swiss Social Security records 1986–2001; Swiss Census 2000, Swiss Census 1990.

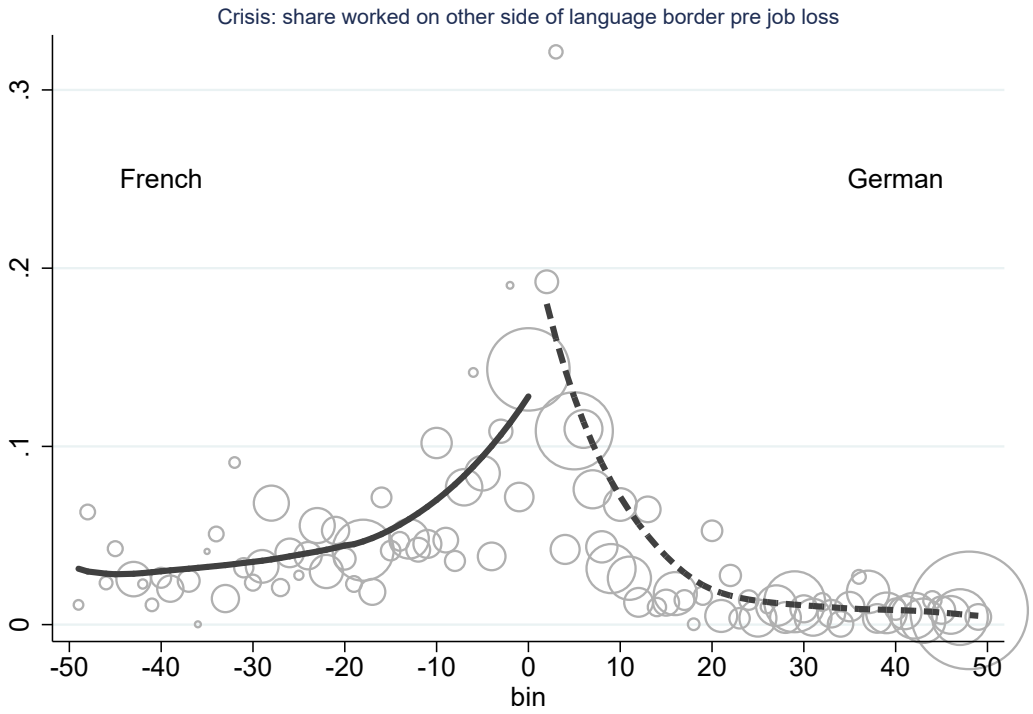
language border. To ensure that our sample is large enough to perform this regression, we need to know that the labor markets around the language border are somewhat integrated. If French speaking workers only work in firms on the French speaking side and German speaking workers only work on the German speaking side, then our firm fixed effects regression will not work. We therefore define a firm as being located on the French speaking side if the majority of its workers are French speaking and vice versa for a German firm. We then plot the share of workers who live on the French speaking side but work in a firm that we have classified as a firm on the German speaking side. The results are presented in Figure 8.

The figure shows that, especially close to the border, labor markets are relatively integrated with up to 20% of workers employed on the other side of the language border. We hence proceed with including firm fixed effects for the crisis period.

We present results with firm fixed effects for the crisis period in Table 6. While including firm fixed effects decreases the coefficients, they are still sizeable and highly significant. The effect of living on the French side on the probability of receiving unemployment benefits in the six months post job loss still amounts to an increase of 0.7-0.9 p.p.compared to a worker living in the German speaking part. This corresponds to French speaking workers being 15% more likely to receive unemployment benefits in the six months post job loss than German speaking workers who worked at the same firm. The coefficients for distance are significant but very close to zero. For example, coefficients for *distance * french* show that for every 10 km a worker lives further away from the border on the French side, the effect decreases by 0.2 p.p. (the effect is negative because *distance* is negative on the French speaking side). As our identification requires a relatively large share of individuals working on the other side of the language border, and since this share decreases sharply 10 km away from the language border, we attribute this negative effect of *distance * french* to a lack of variation further away from the border. As a robustness test, we restrict our analysis to municipalities that lie within 10 km of the language border (compare table 13 in the appendix). We find that the effect becomes larger (1.1 p.p increase for living in the French part), but it is less precisely estimated, likely due to the smaller sample size.

Holding information and transaction costs constant through firm fixed effects, we find that living on the French speaking side of the language border implies a 15% higher probability of receiving unemployment benefits in the first six months after job loss.

Figure 8: Share of workers who are employed on the other side of the language border



Notes: The figure plots the share of workers who work in a firm located on the other side of the language border compared to their place of residence. A firm is defined as a firm on the French speaking side if the majority of its employees report to be French speaking in the 1990 census and equally for a firm on the German speaking side. The figure then plots the share of workers living in a given municipality at distance x from the border who work in a firm located on the other side of the language border. Negative distance = French language speaking municipalities; positive distance = German language speaking municipalities. The figure plots the share of men working on the other side of the language border, averaged at municipality level and in 1 km distance bins from the language border (population weighted). Lines are locally weighted regression estimates. Does not include canton fixed effects or other controls.

Table 6: Crisis: probability of taking up of unemployment benefits in the six months post job loss, with firm f.e.

	(1)	(2)	(3)
french	0.009***	0.007***	0.008***
	(0.003)	(0.003)	(0.003)
distance (in km/10)	0.001	0.000	0.000
	(0.001)	(0.001)	(0.001)
distance * french	0.002	0.002**	0.002**
	(0.001)	(0.001)	(0.001)
constant	0.037	0.038	0.037
	(0.024)	(0.027)	(0.027)
Obs.	34564	34564	34564
adj. R2	0.534	0.534	0.536
Year f.e.	√	√	√
Canton f.e.	√	√	√
Education f.e.	√	√	√
Two-digit occupation f.e.	√	√	√
Industry f.e.	√	√	√
Municipality characteristics		√	√
Month f.e.			√

Notes: Robust standard errors in parentheses, clustered on municipality level. French 1.= majority in worker's municipality of residence speaks a French. Distance = road distance to language border. All regressions are limited to workers living in municipalities within 50 km of the language border. Outcome: dummy = 1 if received unemployment benefits for at least one month in the six months post job loss. Fixed effects always include canton, year, two-digit occupation classification in 1990, industry FE and education FE, month FE added in last column. Individual controls: age, age squared, religion and family background. Municipality characteristics: share highly educated in the municipality, share working age, and (log) population. ***p<0.01, **p < 0.05, *p < 0.1. Source: Data from Swiss Social Security records 1986–2001; Swiss Census 2000, Swiss Census 1990.

6.1 Alternative explanations

6.1.1 Accumulated wealth as insurance

Another reason why German speaking workers are less likely to receive unemployment benefits might be that they have higher savings and are therefore better able to self-insure when they lose their job. While we do not have data on wealth, we can credibly exclude this explanation by exploring what workers do right after losing their job. If German speaking workers are more likely to spend time outside the labor market (i.e., neither employed nor receiving unemployment benefits, we denote this here as non-employed) right after they lose their job, this may indicate that they use personal savings instead of unemployment benefits to bridge the time until they find a new job. While this would still be consistent with the hypothesis that cultural attitudes prevent workers from applying for unemployment benefits in the German speaking part, we do not find German speaking workers to be more likely to be non-employed one month after job loss.

Table 7 shows that German speaking workers are less likely to be in non-employment one month after losing their job compared to French speaking workers. The effect becomes smaller as we move away from the language border. German speaking workers are also more likely to be wage employed again, but the effect again disappears for municipalities further away from the border. These results also rule out that due to stronger family or friendship ties in the German speaking part, German speaking workers are better able to bridge periods with no income without resorting to applying for unemployment benefits. That this is not a main driver is in line with results from Eugster et al. (2017) who show that while German speakers do indeed have more *weak ties* such as neighbors or friends, French speakers tend to have more *strong ties*, meaning family ties. Hence, it is unlikely that German speakers would be better able to rely on family or friends to bridge a period of unemployment, as opposed to French speakers.

Rather than wealth or family or friendship ties being important, the results in Table 7 point to German speakers putting more effort into finding a job immediately, potentially to avoid applying for unemployment benefits. German speaking workers may therefore be more likely to accept a job that pays less than their previous job. We test this by comparing a worker's first monthly salary earned in the first job post job loss with the last salary received before losing the last job. We create a dummy equal to 1 if the worker accepts a job with a lower real monthly wage than at his previous job and 0 if the real wage of the new job is larger or equal to the previous wage. We report results for this outcome in Table 8. While the coefficient for *french* is negative but insignificant for our standard specification, it becomes larger and significant if we include firm fixed effects. Living on the French speaking side of the

Table 7: Crisis: employment status one month after job loss

	unemployed	non-employed	self-employed	wage-employed
french	0.005	0.010*	0.012	-0.011*
	(0.004)	(0.006)	(0.020)	(0.006)
distance (in km)	-0.000	-0.0003***	0.000	0.0003**
	(0.000)	(0.000)	(0.000)	(0.000)
distance * french	-0.000	0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.001)	(0.000)
constant	0.024	0.166***	-0.054	0.819***
	(0.026)	(0.037)	(0.074)	(0.044)
Obs.	39583	39583	39583	39583
adj. R2	0.0767	0.0945	0.118	0.147
Year f.e.	√	√	√	√
Canton f.e.	√	√	√	√
Education f.e.	√	√	√	√
Two-digit occupation f.e.	√	√	√	√
Industry f.e.	√	√	√	√
Municipality characteristics	√	√	√	√
Month f.e.	√	√	√	√

Notes: Robust standard errors in parentheses, clustered on municipality level. French 1.= majority in worker's municipality of residence speaks a French. Distance = road distance to language border. All regressions are limited to workers living in municipalities within 50 km of the language border. Outcome: dummy = 1 if employment status unemployed (1), non-employed (2), self employed (3) or wage employed (4), in all cases the dummy is equal 0 if employment status is not equal to 1. Fixed effects always include canton, year, two-digit occupation classification in 1990, industry FE and education FE and month FE. Individual controls: age, age squared, religion and family background. Municipality characteristics: share highly educated in the municipality, share working age, and (log) population. ***p<0.01, **p < 0.05, *p < 0.1. Source: Data from Swiss Social Security records 1986–2001; Swiss Census 2000, Swiss Census 1990.

language border is associated with a 4.6 p.p lower probability of accepting a lower wage after losing a job. The overall probability of accepting a job with lower real wage is 36.21% – an increase of 4.6 p.p hence corresponds to a 12% increase over the mean.

Table 8: Crisis: probability to accepting a job with lower real monthly wage after job loss

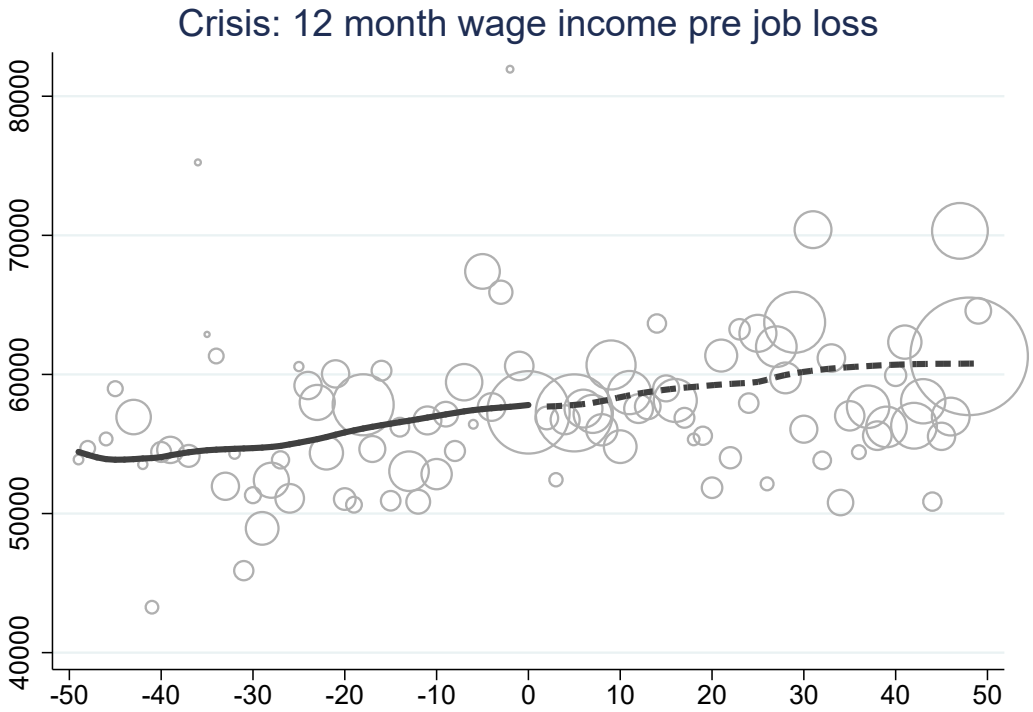
	(1)	(2)
french	-0.013	-0.046∗ ∗ ∗
	(0.011)	(0.014)
distance (in km/10)	0.003	-0.003
	(0.003)	(0.003)
distance * french	-0.020∗ ∗ ∗	-0.009∗
	(0.004)	(0.005)
constant	0.366∗ ∗ ∗	0.296∗ ∗ ∗
	(0.085)	(0.092)
Obs.	37242	33516
adj. R2	0.0422	0.190
Year f.e.	√	√
Canton f.e.	√	√
Education f.e.	√	√
Two-digit occupation f.e.	√	√
Industry f.e.	√	√
Municipality characteristics	√	√
Month f.e.	√	√
Firm f.e.		√

Notes: Robust standard errors in parentheses, clustered on municipality level. French 1.= majority in worker's municipality of residence speaks a French. Distance = road distance to language border. All regressions are limited to workers living in municipalities within 50 km of the language border. Outcome: dummy = 1 if first real monthly wage post job loss is lower than previous real monthly wage. Fixed effects always include canton, year, two-digit occupation classification in 1990, industry FE and education FE and month FE. Individual controls: age, age squared, religion and family background. Municipality characteristics: share highly educated in the municipality, share working age, and (log) population. ***p<0.01, **p < 0.05, *p < 0.1. Source: Data from Swiss Social Security records 1986–2001; Swiss Census 2000, Swiss Census 1990.

6.1.2 Higher starting wage

Another explanation for why workers in the French speaking part are more likely to apply for unemployment benefits may be that they earned more prior to job loss, and firms are unwilling or unable to pay those higher wages. We check if there are differences in wage levels at the language border. In Figure 9, we plot the log real yearly wage earned in the 12 months prior to job loss. We see that there is no wage difference at the language border and wages tend to be slightly higher for the German speaking workers further away from the language border.

Figure 9: Real wage income in the 12 months prior to job loss



Notes: Plots the log real yearly wage income in the 12 months prior to job loss, by distance to language border. Negative distance = French language speaking municipalities; positive distance = German language speaking municipalities. Log real 12 months wage income is averaged at municipality level and in 1 km distance bins (population weighted). Lines are kernel-weighted local polynomial regression results. Does not include canton fixed effects or other controls.

6.1.3 Discrimination in the labor market

Another explanation for our findings could be discrimination in the labor market. If firms prefer to hire German speakers over French speakers, this may explain why French speakers need to rely more extensively on unemployment benefits. However, two of our results from above speak against this hypothesis. The first are our results on the probability of losing one's job during the crisis. If employers did discriminate against French speaking workers, one would expect French speaking employees to be more likely to lose their job during the crisis. But as we show in Table 5, French speakers are equally likely to lose their job compared to German speakers during the crisis period. Second, if discrimination against French workers was prevalent in the labor market, it would likely cause wages for French workers to be lower. However, we find that wages prior to job loss do not differ at the language border. Further, German speaking workers are actually more likely to be paid less in their first job post job loss compared to their previous wage (compare Table 8).

7 Conclusion

We study whether cultural attitudes influence the likelihood of a worker to receive unemployment benefits after a job loss. We leverage the language border in Switzerland, which separates municipalities that are located within the same canton into different cultural regions. We first show that individuals who live on the French speaking side of the language border hold attitudes that are more in line with lower work hours and more holidays than individuals who live on the German speaking side of the language border. Contrary to these cultural differences, institutions do not vary at the border; both sides face the same rules, procedures, and transaction costs when applying for unemployment benefits. We build a sample of workers who are most likely eligible for unemployment benefits and strongly attached to the work force, to study differences in unemployment benefit take up rates between the French and the German speaking side of the language border. In our preferred specification, we compare workers who were employed by the same firm prior to job loss but who live on different sides of the language border. For such workers, transaction, as well as information costs for applying for unemployment benefits are arguably the same. However, they differ in the cultural attitudes which their place of residence holds. We find that culture matters for unemployment benefit uptake, but only in periods of economic crises. During the crisis period, workers living on the French speaking side of the language border were at least 15% more likely to receive unemployment benefits in the six months post job loss than employees who live on the German speaking side. During good times, the difference disappears. These findings suggest that cultural attitudes are relevant for unemployment benefit uptake, at least during times

of economic distress. Future research should investigate the broader macroeconomic consequences of the detrimental effects of stigma on unemployment benefit uptake.

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A Robustness

We run several robustness tests for our main results. We first exclude the city of Bern to ensure that our results are not driven by this large city. In a second step, we further exclude two smaller cities, namely Köniz and La Chaux-de-Fonds. Third, we provide estimates excluding the year 1996, since some regional unemployment centers had already opened in 1996 and shifted transaction costs potentially unequally across the language border. We first show our robustness results for the probability to lose ones job in either a mass layoff or a firm closure in table 9. As in our main results reported in the text, the coefficient for "french" remains zero and insignificant for all our robustness regressions.

We next show our robustness estimates for the probability of receiving unemployment benefits for at least one month in the six months post job loss. Table 10 reports estimates for the pre-crisis period. We again first exclude the city of Bern (column (1)), then we additionally exclude Köniz and La Chaux-de-Fonds (column (2)). In column (3) we limit our analysis to firms with more than 10 employees. The rational for excluding smaller firms is that our firm crosswalk does not capture firms with fewer than 10 employees. Interestingly, the coefficients for *french* are now larger, albeit still insignificant, and the coefficient for distance from the language border (for the German side) is negative and significant. The overall conclusion remains unchanged. For the pre-crisis period, there are no differences in the probability to receive unemployment benefits in the six months post job loss across the French and German speaking parts.

In table 11 we show the same robustness results but for the crisis period. While we observe smaller coefficients then the ones reported in the main text, the results are still consistent with French speaking workers being more likely to receive unemployment benefits in the six month post job loss, compared to German speaking workers.

For our main results we also provide estimates from a probit regression and a Firth logit regression which adjusts for the small number of ones in our dependent variable[11]. The results are shown in Table 12. The table reports marginal effects and we see that the magnitudes are very similar to the magnitudes obtained with a linear probability model.

[11]However, we do not believe this to be a large problem in our sample since the bias is related to a small *absolute* number of zeros. This could be a problem in a data set with a total of 4000 observations of which only 160 are 1 and the rest 0. In a data set with 40'000 observations of which roughly 1'600 are 1 (as is our case), the bias should be negligible (Firth, 1993). This is reflected in how close our estimates are for the probit and Firth logit estimations. We further do not use a zero-inflated probit estimation as proposed for example by Harris and Zhao (2007) since in our case the data generating process does not feature two "types" of zeros, i.e. we do not have a distinction of zeros between it being impossible to apply for unemployment benefits for some people (since we only study individuals who are eligible) and just not applying even though it would be possible.

Table 9: Robustness job loss regressions, up to date

	pre-crisis no bern	crisis no bern	pre-crisis no cities	crisis no cities	crisis no 1996	pre-crisis firm size > 10	crisis firm size > 10
french	-0.000	0.000	-0.000	-0.000	0.000	0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
distance	-0.000***	-0.000**	-0.000***	-0.000*	-0.000*	-0.000	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
distance * french	0.000***	-0.000	0.000***	-0.000*	-0.000	0.000**	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
constant	0.004***	0.004***	0.004***	0.004***	0.004***	0.003***	0.005***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Obs.	6862596	9065448	5414748	7120620	8619396	5642260	7423393
adj. R2	0.00669	0.0324	0.00646	0.0303	0.0364	0.0147	0.0565
Year f.e.	√	√	√	√	√	√	√
Canton f.e.	√	√	√	√	√	√	√
Education f.e.	√	√	√	√	√	√	√
Two-digit occ. f.e.	√	√	√	√	√	√	√
Industry f.e.	√	√	√	√	√	√	√
Municipality characteristics	√	√	√	√	√	√	√
Month f.e.	√	√	√	√	√	√	√

Notes: Robust standard errors in parentheses, clustered on municipality level. French 1.= majority in worker's municipality of residence speaks a French. Distance = road distance to language border. All regressions are limited to workers living in municipalities within 50 km of the language border. Fixed effects always include canton, year, two-digit occupation classification in 1990, education FE and month FE. Individual controls: age and family background. Municipality characteristics: share highly educated in the municipality, share working age, and (log) population. ***p<0.01, **p < 0.05, *p < 0.1. Source: Data from Swiss Social Security records 1986–2001; Swiss Census 2000, Swiss Census 1990.

Table 10: Robustness unemployed in at least one month in the six months post job loss, pre-crisis period

	no Bern	no cities	firm size > 10
french	0.005	0.008	0.006
	(0.007)	(0.008)	(0.008)
distance (in km/10)	0.006**	0.004*	0.005*
	(0.002)	(0.003)	(0.003)
distance * french	-0.004	-0.003	-0.003
	(0.004)	(0.004)	(0.005)
constant	0.108**	0.083*	0.130**
	(0.047)	(0.049)	(0.052)
Obs.	9902	8402	9160
adj. R2	0.0410	0.0324	0.0445
Year f.e.	√	√	√
Canton f.e.	√	√	√
Education f.e.	√	√	√
Two-digit occupation f.e.	√	√	√
Industry f.e.	√	√	√
Municipality characteristics	√	√	√
Month f.e.	√	√	√

Notes: Robust standard errors in parentheses, clustered on municipality level. French 1.= majority in worker's municipality of residence speaks a French. Distance = road distance to language border. All regressions are limited to workers living in municipalities within 50 km of the language border. Fixed effects always include canton, year, two-digit occupation classification in 1990, industry and education FE and month FE. Individual controls: age, age squared, religion and family background. Municipality characteristics: share highly educated in the municipality, share working age, and (log) population. ***p<0.01, **p < 0.05, *p < 0.1. Source: Data from Swiss Social Security records 1986–2001; Swiss Census 2000, Swiss Census 1990.

Table 11: Robustness unemployed in at least one month in the six months post job loss, crisis period

	no Bern	no cities	firm size > 10	no 1996
french	0.012**	0.011**	0.009*	0.012**
	(0.005)	(0.006)	(0.005)	(0.005)
distance (in km/10)	-0.002**	-0.003**	-0.001	-0.002*
	(0.001)	(0.001)	(0.001)	(0.001)
distance * french	0.000	-0.000	-0.001	-0.001
	(0.002)	(0.002)	(0.002)	(0.002)
constant	0.014	0.017	0.057**	-0.008
	(0.037)	(0.041)	(0.028)	(0.034)
Obs.	33785	28130	34921	33965
adj. R2	0.106	0.105	0.116	0.104
Year f.e.	√	√	√	√
Canton f.e.	√	√	√	√
Education f.e.	√	√	√	√
Two-digit occupation f.e.	√	√	√	√
Industry f.e.	√	√	√	√
Municipality characteristics	√	√	√	√
Month f.e.	√	√	√	√

Notes: Robust standard errors in parentheses, clustered on municipality level. French 1.= majority in worker's municipality of residence speaks a French. Distance = road distance to language border. All regressions are limited to workers living in municipalities within 50 km of the language border. Fixed effects always include canton, year, two-digit occupation classification in 1990, industry and education FE and month FE. Individual controls: age, age squared, religion and family background. Municipality characteristics: share highly educated in the municipality, share working age, and (log) population. ***p<0.01, **p < 0.05, *p < 0.1. Source: Data from Swiss Social Security records 1986–2001; Swiss Census 2000, Swiss Census 1990.

Table 12: Probit and Firth logit: unemployed in at least one month in the six months post job loss, crisis period

	lin prob OLS	probit	Firth logit
french	0.013***	0.014***	0.014***
	(0.005)	(0.005)	(0.005)
distance (in km/10)	-0.001	-0.0009	-0.001
	(0.001)	(0.001)	(0.001)
distance * french	-0.001	0.0004	0.0006
	(0.002)	(0.002)	(0.0016)
Obs. 39'579	39'579	39579	
Year dummies	√	√	√
Canton dummies	√	√	√
Education dummies	√	√	√
Two-digit occupation dummies	√	√	√
Industry dummies	√	√	√
Month dummies	√	√	√

Notes: Robust standard errors in parentheses, clustered on municipality level for probit regression. French 1.= majority in worker's municipality of residence speaks a French. Distance = road distance to language border. All regressions are limited to workers living in municipalities within 50 km of the language border. Fixed effects always include canton, year, two-digit occupation classification in 1990, industry and education FE and month FE. Individual controls: age, age squared, religion and family background. Municipality characteristics: share highly educated in the municipality, share working age, and (log) population. ***p<0.01, **p < 0.05, *p < 0.1. Source: Data from Swiss Social Security records 1986–2001; Swiss Census 2000, Swiss Census 1990.

Table 13: Robustness unemployed in at least one month in the six months post job loss, including firm fixed effects, crisis period

	no Bern	no cities	firm size > 10	no 1996	dist < |10km|
french	0.008∗ ∗ ∗	0.006∗∗	0.007∗ ∗ ∗	0.003	0.012∗
	(0.003)	(0.003)	(0.003)	(0.003)	(0.007)
distance (in km/10)	-0.000	-0.001	0.000	-0.000	0.006
	(0.001)	(0.001)	(0.001)	(0.001)	(0.008)
distance * french	0.003∗∗	0.002∗	0.002∗	0.002	0.002
	(0.001)	(0.001)	(0.001)	(0.001)	(0.010)
constant	0.023	0.024	0.034	0.047∗	-0.028
	(0.024)	(0.026)	(0.025)	(0.026)	(0.044)
Obs.	29329	24101	33605	29765	6200
adj. R2	0.551	0.543	0.519	0.541	0.588
Year f.e.	√	√	√	√	√
Canton f.e.	√	√	√	√	√
Education f.e.	√	√	√	√	√
Two-digit occ. f.e.	√	√	√	√	√
Industry f.e.	√	√	√	√	√
Municipality char.	√	√	√	√	√
Month f.e.	√	√	√	√	√

Notes: Robust standard errors in parentheses, clustered on municipality level. French 1.= majority in worker's municipality of residence speaks a French. Distance = road distance to language border. All regressions are limited to workers living in municipalities within 50 km of the language border. Fixed effects always include canton, year, two-digit occupation classification in 1990, industry and education FE and month FE. Individual controls: age, age squared, religion and family background. Municipality characteristics: share highly educated in the municipality, share working age, and (log) population. ***p<0.01, **p < 0.05, *p < 0.1. Source: Data from Swiss Social Security records 1986–2001; Swiss Census 2000, Swiss Census 1990.

Lastly, we present our robustness table also for the regressions including firm fixed effects. Table 13 shows that our coefficients do not change significantly in columns (1)-(3). Excluding the year 1996 however reduces the coefficient for *french* significantly. Further investigation as to whether regional unemployment centers were constructed in 1996 in the region close to the border are necessary to assess whether this lower effect is driven by differences in transaction costs. We further limit our sample to within 10 km of the language border as this is the region with the largest amount of cross-border commuters. In this column, the effect of culture becomes larger but less precisely estimated, possibly due to a large reduction in the number of observations.