Votes, Economic Growth, and Attitudes Toward Immigration in Switzerland

Dominique M. Gross* School of Public Policy, Simon Fraser University and Nicolas Schmitt, Department of Economics, Simon Fraser University

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Abstract

Between 1970 and 2013, Swiss voters consistently rejected more controls on immigration and, in 2000, supported the proposal to have free mobility with the European Union. Yet in 2014, Swiss voters accepted an initiative to control immigration. Instead of survey data, often the only available source of information, this paper uses votes about immigration issues at the municipal level to understand voters' attitudes toward immigration. Using a standard empirical model with demographic, economic and cultural factors to capture turnout and the share of yes-votes to immigration questions, we show that Swiss voters did not suddenly accept immigration control because their attitude toward foreigners changed but because of underlying reasons that were already present in 2000, namely a concern about cross-border workers and negative externalities from economic and population growth. The appropriate policy response is to address these issues directly rather than with policies aimed at controlling immigration.

JEL classification : J11, J61, J68, Q51, P16.

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1. Introduction

Opinions on immigration have become more negative in many countries in recent years. In Europe, the 2012-2014 Gallup survey showed that 52% of residents wanted a decrease in immigration and only 8% wanted a rise (Esipova et al., 2015). Technically individual positions on immigrations in Western Europe (and North America) come mainly from surveys. It has been shown however that surveys are not very reliable to ascertain people's view on immigration. An alternative is to consider votes in which case Switzerland is an important case to consider, as Swiss citizens voted on several occasions on objects directly linked to immigration. In 2014, Swiss voters became more negative on immigration issues as they accepted an initiative to limit immigration; this was the first time such initiative was accepted and was contrary to all earlier votes. This paper investigates why they did so. We essentially show that Swiss voters have not changed their position about the role of immigration for economic activities and well-being, but have become more sensitive to the negative externalities associated with higher economic and population growth.

For most countries, the only way to learn about people view on immigrants is through surveys but the literature points to limitations with this approach. For instance, Kerr and Kerr (2015) show that, in many recent papers, immigrants in European countries stimulate GDP growth and have very little impacts on labour markets or on public finances. However, people's opinions about these economic impacts of immigration are very different. In a meta analysis, Hainmueller and Hopkins (2014) also conclude that there is no consistency between economic realities and people's opinions on immigrants' economic impacts. Other considerations include the fact that surveyed people may have weak information and know that their opinions will not affect policy (Miguet, 2008) and there is no consideration for the opinions of the whole population (OECD, 2010). Yet, the empirical approach

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¹ For example, Scheve and Slaughter (2001) find that low-skill workers prefer restricted immigration in the US and, Hainmueller and Hiscox (2010) find that all residents prefer high-skill immigrants with a stronger preference by high-skill ones. Yet, it is well-educated natives who are mostly replaced by immigrants (Ottaviano and Peri, 2012).

typically used to test immigrants' economic and cultural benefits and costs is, by itself, sound. Our analysis adopts first the same approach but based on vote data, not survey data, to ascertain whether economic and cultural motives have influenced voters about immigration issues.

In a second step, we add factors linked to quality of life. There are indications that they matter. Although Switzerland is not a member of the European Union (EU), it has free mobility of workers with the EU since 2002. As a result, the number of immigrants increased significantly and generated growth in GDP per worker (Boubtane et al. 2016). Ten years later (July 2012), a European survey showed that 81.7% of those surveyed in Switzerland were satisfied with the present state of the economy, 57.8% believed that immigration was good for the country's economy, and 57.3% supported the idea that immigrants enriched the country's cultural life (ESS, 2012). However, only 36.6% believed that immigrants made the country a better place to live (ESS, 2012).² This suggests that people realized that by increasing the size of the population, immigration had also negative impacts. Indeed, in 2011, twothird in a national survey (OFS, 2012) supported the view that the extension of settlement and urban areas was (rather and very) 'dangerous' for human beings and for the environment. Moreover, 74% supported the view that the environmental quality in their residential area influenced (rather and very) strongly their quality of life. Thus, it is important to investigate what determined Swiss voters' sudden negative positions³ on immigration policy, as economic, cultural and quality of life aspects may have played an important role.

Thus, instead of survey data, this paper uses the shares of yes-votes on proposals to restrict immigration measured at the municipal level, along with turnout rates.⁴ The standard opinion model on immigration is first taken into account with demographic, economic and cultural aspects influencing the yes-votes, and then the influence of variables related to quality of life are considered. Tests are also done

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² The answers to these questions were from 0, "extremely dissatisfied", to 10, "extremely satisfied". The shares are based on answers 6 to 10 (ESS, 2012).

³ In the text, the word *position* is for votes and *opinion*, for surveys.

⁴ Municipal data are shown to have greater explanatory power than individual data (Matsusaka and Palda, 1999; p.442).

with respect to different economic areas in the country. The last step is to understand what factors have changed over the 14 years separating the votes approving the free movement of workers in 2000 and the votes limiting immigration in 2014. The results show that overall the individual characteristics of yesvoters and some other traditional determinants did not change significantly in these two votes. In particular Swiss voters' attitude toward foreign residents has not changed and did not have an influence on the result of the votes. However cross-border workers as well as several aspects linked to quality of life did influence the yes-votes. But these factors were already prevalent in 2000 and what did change over time is only the relative influence of some variables, not fundamental attitudes.

After the 2014-vote, the Federal Government indicated that it would restrict immigration (Confédération Suisse, Conseil Fédéral. 2019). Today, there is still a debate whether it has fulfilled its constitutional obligations. Whatever the case may be, it is likely that Swiss voters will have to vote on other proposals to limit immigration in the future. What our analysis shows is that one of the main tasks of the federal authorities is to find policies that mitigate the negative externalities from population growth. This would go a long way to avoid political parties from using immigration as a scapegoat.

The paper is organised as follows: Section 2 describes immigration and its role on the Swiss economy in the past decades, and Section 3 reviews the relevant literature on immigration. Section 4 provides information about the 2014 initiative, and Sections 5 introduces the model. Section 6 then tests the standard opinion model, while the results with the variables capturing externalities on the quality life and economic areas are found in Section 7. Section 8 compares the 2000 and 2014 votes, and Section 9 concludes.

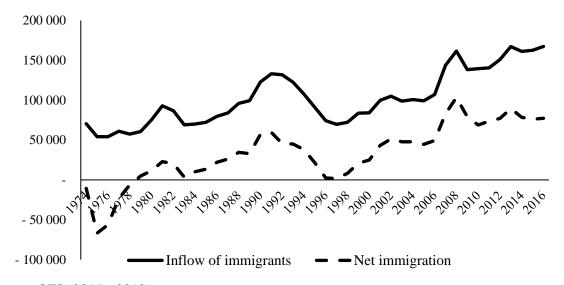
2. Immigration in Switzerland: facts

In general, immigrants have been attracted to OECD countries because they provide better economic conditions. The impact has been higher GDP as shown by Boubtane et al. (2013) for the

period 1987 to 2009. The impact of high-skill immigrants is especially important and Switzerland has been particularly successful in attracting them. In fact, recent immigrants to Switzerland had twice as much human capital as residents (Boubtane et al., 2016) but this has not always been the case.

In Switzerland, immigration has always played the role of filling labor shortages⁵ but, early on, the focus was only on low-skill workers. From 1950 to 1970, the share of permanent foreign residents (i.e., people who have resided for at least one year without interruption) rose from 6.1% to 15.9%. In 1970, following public pressures, the government introduced some quotas and the share was still 16.5% in 1990 (OFS, 2015a). In 1992, Swiss voters rejected joining the European Economic Area (FDFA, 2016) but close cooperation with the EU started in 1994. It is around that time that the Federal Government accepted high-skill immigrants in addition to low-skill ones. In May 2000, the Swiss voters approved an agreement about free mobility of people with the EU which became effective in June 2002.

Before 2002, immigration inflows were very cyclical, and the net immigration could be zero or even negative (Figure 1).



Source: OFS (2015a, 2018).

Figure 1: Immigration to Switzerland.

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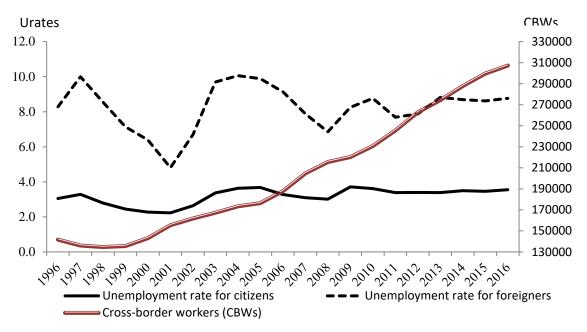
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⁵ Gross (2006, 2012) and, SECO (2014) are for details about past policies.

But with the free mobility with the EU, the profile of the net immigration changed becoming positive even during recessions (2003, 2008). Indeed, net immigration was on average 27,537 during the period 1992-2002, and it jumped to 69,521 during the period 2002-13. In 2013, the share of permanent foreign residents reached 23.8% with 1,937,447 people (OFS, 2015a). Types and skills of foreign residents also changed substantially. Regarding types, "Employment has been the principal engine for immigration since the introduction of free mobility. The share of active people among immigrants has moved from 15% in 1992 to 48% in 2013" (SECO, 2014; p. 28). Regarding skills, the share of actively-occupied immigrants with tertiary education who arrived before 1991 was 16%. It jumped to 34% for those arriving between 1991 and 2002, and to 56% for those arriving between 2002 and 2013 (SECO, 2014, Figure 4.8).

An important additional group of foreign workers are the cross-border workers (hereafter CBWs) who work in Switzerland but reside in border countries. Legal constraints on them also became weaker with the EU agreement. Whereas they were traditionally constrained to work in Switzerland within an area not more distant than 40 kilometers from the border, they could work anywhere in the country from 2007. In addition, from being required to return home every day, they needed to do so every week-end (SECO, 2014). The number of CBWs increased quite strongly from 187,727 in 2006, to 274,303 in 2013 at an average annual growth rate of 5.0% (Figure 2). For this group too, recessions such as the 2008-crisis did not lead to a decline of the CBWs.

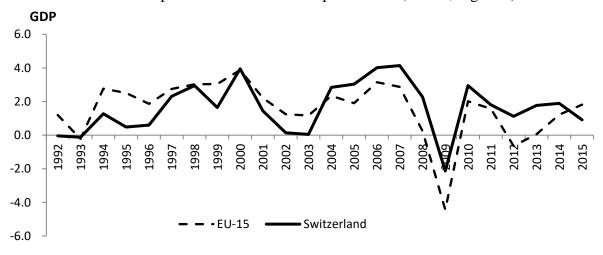
Generally, unemployment rates in Switzerland over the period 2003 to 2013 have always been much lower than in EU-15 with an average of 4.2% versus 8.7% (OECD, 2016). But foreign residents had a much higher unemployment rate than citizens (8.6% vs 3.4%, OFS, 2018) with a significantly higher variability (Figure 2).



Source: OFS (2015a, 2018).

Figure 2: Cross-Border Workers and Unemployment Rate.

Increases in types and skills of foreign workers made the GDP growth rate in Switzerland rise faster than in the most developed countries of the European Union (EU-15; Figure 3).



Source: OECD (2016, 2018).

Figure 3: GDP Growth.

From 2003 to 2013, the average annual growth rate was 2.35% compared to 1.55% during the period 1992-2002. Moreover, even though population grew faster (1.05% from 0.59%), the GDP per capita kept rising and also grew faster than in the previous period (1.30% per year versus 0.96%). So, clearly,

standards of living rose during the 10 years prior to the 2014-vote that accepted restricting immigration. Why did Swiss voters make that choice?

3. Positions on immigration in Switzerland

We first review the literature on people's attitudes with respect to immigration in Switzerland coming from both surveys and votes.

3.1. Opinions from surveys

An issue with surveys is that, by definition, they deal with a small sample of the population, which is not representative of the whole population (Hainmueller and Hopkins, 2014). The information that people have is thus critically important and, on this score, surveys in Switzerland might be more informative than elsewhere precisely because Swiss citizens often vote on issues and, as a result, may on average be better informed than elsewhere. Interestingly, for the few studies that include Switzerland, the results are quite different than for most countries. For instance, using 2002-survey data, Card et al. (2012) test two main types of concerns about immigration in 21 countries: economic impacts (with changes in wages, taxes, social benefits) and "compositional amenities" (religions, languages, cultural life, social tension, customs/traditions). Despite Switzerland having the second highest share of immigrants in the sample of countries, overall opinions about immigrants were the most positive. In particular, economic concerns had no significant impact on Swiss opinions and only some on concerns about compositional effects (Table 10 on Card et al., 2012). Hatton (2014) has a similar conclusion in a macroeconomic context. He shows that, due to a much smaller recession from the 2008-crisis, there was almost a zero impact on public opinion in Switzerland. Also, unlike for other European countries, the more educated the workers, the more positive the attitude about immigration (Table A.1; Hatton, 2014).

There are a few papers only about Switzerland using data from surveys done at voting times. Using municipality votes and participations for the 1988- and 2000-initiatives on immigration controls,⁶ Miguet (2008) shows a significant difference between pre-vote survey opinions and actual votes, an effect attributed to a difference in the ability to affect policy (i.e., "hypothetical bias"). Moreover, living in an area with a high share of immigrants had no influence on voting choices and, university-educated citizens rejected the immigration restrictions proposed by the two initiatives.

Concentrating on the 2000-initiative on immigration control, Krishnakumar and Mueller (2012) also evaluate the potential gap between general attitudes on immigration and votes. The estimated model of voting with participation is tested with a post-vote survey. Findings are largely different between general attitude (43% in favour of immigration restrictions) and the outcome of the vote (26%), showing that the participation decision has an important influence. In addition, for the post-vote opinions, education is found to be important for positive attitudes toward immigration, but only by people in the labor force. Opinions from post-vote surveys may be more suitable than from general surveys but the results are still based on a small sample size. For the 2000-initiative, the post-vote survey sample had 1,024 observations with 71.7% rejecting the initiative while, in the total vote, it was 63.8%. Clearly, whenever possible, attitudes toward immigration are best assessed with votes.

3.2. Votes on immigration

Brunner and Kuhn (2018) use municipality data for 27 different votes on immigration from 1970 to 2010 to evaluate the effect of immigrants on peoples' decisions. The main findings are that the growing shares of immigrants in the population did not affect the votes but immigrants with vastly different cultures (i.e., from countries with previously communist regimes or with different religions) did. Thus, over time, the large numbers of permanent economic foreign residents with growing skills

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⁶ The December 1988 initiative wanted to limit immigration inflows to 2/3 in addition to limiting seasonal workers and CBWs. The September 2000 initiative wanted to limit the share of foreigners to 18% of the population (Miguet, 2008).

were not taken negatively and this is consistent with the evidence that immigrants have not affected wages, as they were imperfect substitutes with Swiss workers (Gerfin and Kaiser, 2010; Sheldon, 2000).⁷

Between 2000 and the 2014-initiative, citizens had to vote three times on modifications of the immigration policy. In 1999, the Federal Government signed the Agreement on the Free Movement of Persons (AFMP) with the EU and the decided federal act was submitted to popular votes in May 2000 (SEM, 2016); it was accepted with a score of 67.2% (Table 1).

	Date	Name	Turnout	Yes							
	Date	Name	rate	rate							
	Federal Acts since 2000										
1.	2000, May 21st	For approval of sector, including free movement of workers, bilateral agreements with EU.	48.3	67.2							
2.	2005, Sep. 25 th	For extension of bilateral agreement about free movement of workers to new EU member States and revisions of some accompanying measures.	54.4	56.0							
3.	2009, Feb. 8 th	51.6	59.6								
	Initiatives since 2000										
1.	2000, Sep. 24 th	"To regulate immigration"	45.3	36.2							
2.	2014, Feb. 9 th	"Against mass immigration"	56.6	50.3							
		Previous Initiatives									
1.	1970, June 7 th	"Against foreign ascendancy"	74.7	46.0							
2.	1974, Oct. 20 th	"Against foreign overpopulation of Switzerland"	70.3	34.2							
3.	1977, Mar. 13 th	"For the protection of Switzerland"	45.2	33.8							
4.	1981, Apr. 5 th	"To 'stand by' in favour of a new policy toward foreigners"	39.9	16.2							
5.	1988, Dec. 4 th	"To limit immigration"	52.8	32.7							

Source: OFS (2015a).

Table 1: Votes on immigration issues.

This new immigration policy became effective on June 1st, 2002 with EU-15 and within five years, there was free movement also with the European Free Trade Agreement (EFTA) member states.⁸ In

⁷ Beerli and Peri (2015) analyze the potential impact of recent liberalization in labor movements and find no effect on natives' and earlier immigrants' wages.

⁸ In June 2005, the Schengen agreement eliminating border controls was submitted to EFTA countries, Iceland, Liechtenstein, Norway, and Switzerland which accepted it by a popular vote (54.6%; OFS, 2015c).

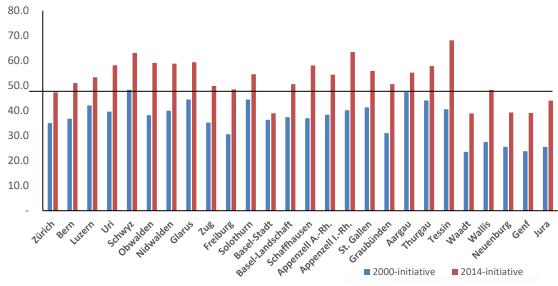
September 2005, the expansion to ten new EU-countries was accepted by 56% of the votes and, in February 2009, the confirmed renewal of the AFMP and its expansion to two new EU-members, Romania and Bulgaria, were accepted by 59.6% of the votes. Thus, during the first decade of the 21st century, Swiss voters systematically supported the policy of free movements with EU/EFTA even if, over time, approvals to extend it to more countries decreased slightly. Similarly all five popular initiatives wanting to limit immigration prior to 2000 have all been strongly rejected since the average share of votes in favour of these limitations was 32.6%. The 2014-initiative is thus the only one to have been accepted to date.

4. The 2014-initiative

To be successful, an initiative must be accepted in a majority of 'cantons' (hereafter states) among the 20 full and 6 semi-ones, in addition to get an overall majority of votes. On February 9th, 2014, the initiative "*Against massive immigration*" was accepted by 50.3% of the voters and received a majority in 12 states and 5 semi-ones (OFS, 2015c). ¹⁰ It forced the Swiss government to limit annual inflows and to introduce constraints on the free movement of workers with the EU. As Figure 4 shows, the share of yes-votes rose significantly in all states with respect to the rejected previous initiative on immigration in 2000.

⁹ The 10 new members for EU-27 in 2004 were Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia and in 2007 Romania and Bulgaria.

¹⁰ This includes 29,811 voting citizens living abroad (a 41.4% participation); the yes-vote rates for this group was 31.7%. The estimations only include domestic yes-vote data with a yes-votes of 50.5%. (OFS, 2015d).



Source: OFS (2014, 2000).

Figure 4: Yes-votes in states for 2000 and 2014 initiatives.

Out of a total of 2,342 municipalities, a majority of yes-votes occurred in 68.2% of them (1,597 municipalities). But there were large variations in yes-vote rates across municipalities as the highest was 93.6% and the lowest, 19% (OFS, 2015a). Such differences matched some municipal characteristics (Table 2). The yes majority occurred in areas with lower population density (308 versus 580 per squared kilometer) as the six largest municipalities (Zurich, Geneva, Basel, Lausanne, Bern, Winterthur) rejected the initiative with yes votes ranging between 27.7% and 41.3%. The share of permanent foreign residents matters too. Here too, the share of permanent foreign residents varied between 0% (in 11 municipalities) and 60.9% (Leysin with 4,096 inhabitants), and the average share of foreign residents is lower (13.9%) in the municipalities with a majority of yes votes than the average over all municipalities (18.5%). Regarding their source countries, slightly more than three quarters of foreign residents were from EU-27 and 115 municipalities had only EU-citizens. Municipalities with a majority of yes had a lower share of EU-citizens (average 74.8% versus 80.2%). Finally, the average share of CBWs in employment was lower in municipalities with a yes-majority (3.8% versus an overall average of 5.2%)

although the variation of the CBW employment rate is significantly higher in municipalities with a yes vote majority than in the others (between 0% and 72.0% versus 0% and 53.4% on yes minorities).

	Majority of yes (1,597 municipalities)			Minority of yes (745 municipalities)		
	Mean	Max.	Min.	Mean	Max.	Min.
Population density (people per 1km²)	308	8,382	1	580	12,025	1
Shares of foreign residents in population (%)	13.8	54.4	0	18.5	60.9	0
Shares of EU-27 citizens among total foreign residents (%)	74.8	100.0	0	80.2	100.0	0
Shares of cross-border workers in employment (%)	3.8	72.0	0	5.2	53.4	0

Table 2: Municipalities' characteristics in 2013 for majority and minority yes votes.

Thus, the municipalities approving the initiative to control immigration were smaller, and had less foreign population and CBWs.

5. Model specification

To investigate the reasons for the outcome of the 2014 vote, we consider a general model with the two-equations: one about the decision to participate to the vote through the turnout rates ($Turnout_j$), and the other about the decision to vote for the restriction on immigration through the yes-vote rates ($Yesvote_j$) in municipalities (j):

$$Turnout_{j} = \alpha_{0} + \sum_{l} \alpha_{l} X_{l,j} + \sum_{m} \alpha_{m} Z_{m,j} + \mu_{j}, \qquad (1)$$

$$Yesvote_{j} = \beta_{0} + \gamma Turnout_{j} + \sum_{l} \beta_{l} X_{l,j} + \sum_{n} \beta_{n} V_{n,j} + \varepsilon_{j}.$$
 (2)

Through *Turnout*, there is an interaction between the two equations. The common factors for the two decision processes are denoted $X_{l,j}$, and the specific ones by $V_{n,j}$, and $Z_{m,j}$.

Turnout is necessary because there is no reason to believe that voters and non-voters have the same position (Martins and Veiga, 2014; Hansford and Gomez, 2010).¹¹ In Switzerland, there is some

¹¹ Swiss citizens are automatically registered to vote in the municipality where they reside at age 18 (Confédération Suisse, 2014).

evidence that turnout has an impact on the popular votes, but it is relatively small and thus could affect only close voting outcomes (Lutz, 2006 from Lutz and Marsh, 2007). With respect to the 2000-initiative limiting immigrants, it has been found that an increase in participation could indeed generate a slight increase in the yes-votes but this effect was not strong enough to change the outcome (Krishnakumar and Mueller, 2012). We include a *Turnout* equation as the potential bias about participation should be taken into account, especially as the national turnout rate was significantly higher in 2014 than in 2000 (56.6% vs 45.3%; Table 1), and, given how close the outcome was, this bias could have had an impact.

All variables in the turnout equation (1) are the most important ones identified by Geys (2006)'s meta-analysis. In particular, population density (LPopdens_i) captures the smaller social pressure to vote in cities rather than in small towns or villages, and the share of foreign-born Swiss citizens (Bornabroad_i), which is likely to have the opposite effect on participation to votes on immigration.¹² Both variables are common with the *Yesvote* equation (2) and thus belong to $X_{t,j}$. The specific variables, $Z_{m,i}$, to equation (1) include a past turnout rate. We take participation from the previous immigration vote (Turnout2009_i) (re-confirming in 2009 the EU/EFTA free movement of workers with two additional countries, Romania and Bulgaria) to capture votes coming from habit-formation (Geys, 2006). The dominant national language at city level (French, Langfrenchi, Italian Langitaliani and Romansh, Langromanshi; German used as reference) captures the different cultural backgrounds among citizens. Since the party 'Democratic Union of the Centre' is the main proponent of the initiative, we used its municipal performance (share of the votes) at the federal level during the most recent elections for the National Council in 2011 (UDC_i). Participation to a vote is influenced by other votes taking place at the same time. In 11 states, there were up to three additional issues to the 2014-vote on immigration (Institut du Fédéralisme, undated); this is taken into account with the dummy variable *Issuescant*_k. Finally, there is also a dummy (Schaff) for Schaffhausen, the only canton with compulsory voting.

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¹² The definitions of all the variables and their descriptive statistics are in Appendix A - Table A.1.

Factors included in the *Yesvote* equation (2) come from opinion models and are variables capturing demographic, economic and cultural characteristics of municipalities. Among demographic factors, two already have been mentioned as they are also in equation (1): the population density ($Lpopdens_j$) differentiating urban versus rural areas (Green et al. 2011), and the share of foreign-born citizens in the population ($Bornabroad_j$) capturing potential level of openness to different cultures. Both are expected to lower the yes-vote rates. Two additional factors, specific to equation (1), are the share of women ($Women_j$) and of older people ($Pop65^+_j$). Women are expected to be less anti-immigration than men and older people to be more than younger ones (Hatton, 2014; Miguet, 2008; Krishnakumar and Müller, 2012). The share of older people in municipalities is highly variable (maximum 75%; minimum 5.7%), not surprisingly less so for women (maximum 59.3%; minimum of 36.4%). Educational level is taken into account by two shares capturing two different types of advanced training: superior professional education ($Educsupprof_k$), and tertiary university education ($EducUniv_k$). Highly skilled individuals tend to be complement to foreign workers and to vote for fewer immigrations restrictions (Miguet, 2008) but this may not be the same for these two groups.

For the economic characteristics, the municipal unemployment rate ($Urate_j$) controls the state of the labor market, as higher rates should be associated with a desire for more immigration control. Another variable is the percentage in social program by total users in municipalities ($Socialhelp_j$). In 2013, the share of foreign residents among users was quite large (min. 36.8% and max. 54.3%; OFS, 2015a). One can expect that the higher this share is, the higher the incentive to restrict immigration. Due to general economic motivations by permanent foreign residents and competition for jobs, their density by shares in municipal populations ($Foreigners_j$) is used. Finally, for cultural characteristics and similar to Brunner and Kuhn (2014), the share of people with non-traditional religions (i.e., neither Protestant nor Roman Catholic; $Religion_k$) is used. When they rise, these last four variables are expected to induce more support for the yes-votes.

Available data for $Educsupprof_k$, $EducUniv_k$ and $Religion_k$ are at the canton level (k=1 to 26) only. This is not expected to be an issue as people are likely to consider larger regions than just their municipalities for these factors (Dancygier and Donnelly, 2013).

Hence, the empirical model is,

$$Turnout_{j} = \alpha_{0} + \delta Turnout2009_{j} + \alpha_{1} Lpopdens_{j} + \alpha_{2} LBornbroad_{j} + \alpha_{3} Langfrench_{j} + \alpha_{4} Langitalian_{j} + \alpha_{5} Langromansh_{j} + \alpha_{6} UDC_{j} + \alpha_{7} Issuecant_{k} + \alpha_{8} Schaff + u_{j}, \quad (3)$$

$$Yesvote_{j} = \beta_{0} + \gamma Turnout_{j} + \beta_{1}Lpopdens_{j} + \beta_{2}LBornbroad_{j} + \beta_{3}Women_{j} + \beta_{4}Pop65_{j}^{+} + \beta_{5}Educsupprof_{k} + \beta_{6}Eductert_{k} + \beta_{7}Urate_{j} + \beta_{8}Socialhelp_{j} + \beta_{9}Foreigners_{j} + \beta_{10}Religion_{k} + \sum_{k}\beta_{i}V_{k,j} + \varepsilon_{j} . \tag{4}$$

In (4), $\sum \beta_i V_{k,i}$ represents additional factors affecting the quality of life. Initially, the *Yesvote*^j equation is estimated without these variables and thus as a standard opinion approach.

6. Results with the standard opinion model

The base case estimation of equations (1) and (2) is provided in Table 3, col. 1, where the estimation process is 3SLS. We chose 3SLS rather than 2SLS because, with the endogenous turnout, the latter has non-zero covariance on the equations' error terms ($cov(\varepsilon_i,\mu_i)$ =3.642). Before analyzing the results, we do some robustness tests with respect to two points coming from the literature. The first one is that the variable *Foreigners* is sometime considered as endogenous with respect to a vote on immigration (Brunner and Kuhn, 2014). Table 3, col. 2 shows the results when a separate equation for Foreigners is added to (1) and (2) (see the equation at the bottom of Table 3). There are no big variations with respect to the base case. *Foreigners* can thus be considered as exogenous and it is based on the end of the year prior to the February 2014-vote. The second test is to consider two instruments for endogenous turnout rates. One, suggested by Kirchgässner and Schulz (2005), is to use the share of intended yes-votes in a survey done one week before voting day to capture the fact that some people may believe that their participation to the vote may affect the outcome. However this data is only

available for the three main linguistic regions (in French, German and Italian). The other one is the cost to participate captured by rainfalls per canton during voting days (Hansford and Gomez, 2010). The estimated results (Col. 3) are not significantly different with respect to the base case (Col. 1) but as the correlation among errors within vote equation is bigger (-0.136 vs -0.040), the base case is preferred. From now on, all estimations are 3SLS as specified in Table 3, Col.1.

	1.	2.	3.	4.	5.	6.	7	•
	3SLS	Endogenou s Foreigners ¹	Alternative Instrument	EU foreigners	CBWs a	CBWs b	States below 50% on yes as before	Changes: States to more of 50%
			Ye	es-vote rates				
C_1	71.38***	71.38***	71.95***	72.09***	70.22***	70.20***	67.69***	=
	(7.0)	(7.0)	(7.0)	(7.0)	(6.8)	(6.8)	(6.44)	
Turnouti	-0.337***	-0.337***	-0.345***	-0.342***	-0.317***	-0.315***	-0.173***	-
v	(0.05)	(0.05)	(0.05)	(0.05)	(0.04)	(0.04)	(0.04)	
$LPopdens_j$	-0.845***	-0.845***	-0.841***	-0.900***	-0.656***	-0.654***	-0.650**	-0.315
	(0.21)	(0.21)	(0.21)	(0.22)	(0.21)	(0.21)	(0.32)	(0.39)
$Bornabroad_j$	-0.232***	-0.232***	-0.231***	-0.221***	-0.701***	-0.710***	-0.495***	-0.458***
	(0.09)	(0.09)	(0.09)	(0.09)	(0.10)	(0.10)	(0.13)	(0.18)
Womenj	-0.413***	-0.413***	-0.415***	-0.408***	-0.455***	-0.457***	-0.899***	0.577***
	(0.12)	(0.12)	(0.12)	(0.12)	(0.12)	(0.12)	(0.12)	(0.10)
$Pop65^+_j$	0.146***	0.146***	0.146***	0.145***	0.114**	0.115**	0.173**	-0.474***
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.07)	(0.095)
Educsupprof _k	2.975***	2.975***	2.970***	2.943***	3.092***	3.102***	4.593***	-3.67***
	(0.18)	(0.18)	(0.18)	(0.18)	(0.18)	(0.18)	(0.38)	(0.42)
$EducUniv_k$	-0.375***	-0.375***	-0.373***	-0.360***	-0.304***	-0.298***	0.771***	0.907***
	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.24)	(0.29)
$Urate_j$	1.144***	1.145***	1.146***	1.173***	0.817***	0.814***	0.410*	0.519
	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)	(0.25)	(0.41)
$Socialhelp_j$	-0.441***	-0.440***	-0.449***	-0.500***	-0.224	-0.220	-	-
	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)		
Foreigners _j	-0.099***	-0.100***	-0.100***		-0.017	-0.023	-0.009	0.076
	(0.04)	(0.04)	(0.04)	_	(0.04)	(0.04)	(0.05)	(0.07)
$Religion_k$	-0.575***	-0.575***	-0.573***	-0.584***	-0.512***	-0.525***	-2.326***	2.448***
	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.36)	(0.37)
$EU for eign_j$	_	-	_	-0.138***	_	_	-	-
	-		-	(0.05)	_	_		
NonEUforeig	_	-	_	-0.024	_	_	-	-
n_j	-		-	(0.07)	_	_		
CBWorkersj	_	-	_	_	0.331***	0.328***	0.015	0.279***
	-		_	_	(0.03)	(0.03)	(0.04)	(0.06)
DumBorder*	_	-	_	_	_	0.011	-	-
CBWorkersj						(0.03)		
Adj R ²	0.302	0.302	0.302	0.302	0.344	0.344	0.4	
n	2342	2342	2342	2342	2342	2342	23	42

	Turnout										
<i>C</i> ₂	24.25***	24.26***	24.29***	24.30***	24.21***	24.21***	23.77***				
	(0.81)	(0.81)	(0.81)	(0.81)	(0.81)	(0.81)	(0.81)				
Turnout	0.682***	0.682***	0.681***	0.681***	0.682***	0.682***	0.683***				
2009_{j}	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)				
LPopdens _j	-0.257***	-0.257***	-0.257***	-0.258***	-0.249***	-0.249***	-0.245***				
	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)				
Bornabroad _j	-0.083***	-0.083***	-0.083***	-0.083***	-0.086***	-0.086***	-0.087***				
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)				
Langfrenchj	-0.105	-0.106	-0.104	-0.107	-0.093	-0.094	-0.135				
	(0.23)	(0.23)	(0.23)	(0.23)	(0.23)	(0.23)	(0.24)				
Langitalian _j	-4.236***	-4.240***	-4.269***	-4.284***	-4.108***	-4.103***	-3.51***				
	(0.44)	(0.44)	(0.44)	(0.44)	(0.44)	(0.44)	(0.44)				
Langromans	-2.082***	-2.078***	-2.062***	-2.064***	-2.068***	-2.071***	-2.43***				
h_j	(0.74)	(0.74)	(0.74)	(0.74)	(0.74)	(0.74)	(0.74)				
UDC_j	0.006	0.006	0.006	0.006	0.007	0.007	0.017**				
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)				
Schaffh	2.170**	2.171**	2.153**	2.145**	2.267***	2.268***	2.525***				
	(0.89)	(0.89)	(0.89)	(0.89)	(0.89)	(0.89)	(0.89)				
Issuescant _k	0.587***	0.586***	0.583***	0.583***	0.585***	0.585***	0.662***				
	(0.14)	(0.14)	(0.14)	(0.14)	(0.14)	(0.14)	(0.14)				
Adj. R ²	0.605	0.605	0.605	0.605	0.605	0.605	0.606				
n	2342	2342	2342	2342	2342	2342	2342				

 $^{1/}$ Foreigners_j = 18.83**** - $0.043LPopdens_j$ + $1.549***Bornabroad_j$ - $0.136**Women_j$ - $0.300***Pop65^+_j$ - $0.032Educsupprof_k$ - $0.511***EducUniv_k$ + $1.448***Urate_j$ - $0.065Religion_k$ + $0.476***Socialhelp_j$ (Adj.R²=0.714). S.E. in parentheses; ***, **, * significant at 1%, 5% and 10%.

Table 3: Standard positions for immigration votes.

For the results on *Turnout* in col. 1, the role of past participation to a similar vote (*Turnout2009*) has a large and positive effect on the participation to the 2014-vote. Other positive factors on participation are additional cantonal issues (*Issuescant*) and, of course, compulsory voting in Schaffhausen. Population density (*LPopdens*) and citizens' heterogeneity (*Bornabroad*) however have negative effects on turnout. Also citizens in municipalities with two minority-national languages (Italian and Romansh) had lower incentives to participate (-4.236; -2.082) than citizens in German or French ones, the latter being not significantly different from German-speaking municipalities. The importance of the UDC party, the proponent of the initiative, had no significant effect on *Turnout* suggesting that participation to this vote was broad-based. Since the *Turnout* results are similar for all additional specifications of the yes-vote equation, the main object of interest, they are not further discussed (see Appendix B for turnout results associated with other Tables).

Turning to the yes-vote rates, one percent additional turnout rate had a negative impact (-0.337%), which implies that the initiative could have been rejected with higher participation. With identical behaviors across municipalities, a minimum of 58.6% rate would have been necessary. It is unlikely that it could have happened as turnout was not only already quite high (56.6%), but also the highest among all initiatives about immigration since the late 1970s (Table 1). Moreover, across all 120 federal votes since 2000, the highest turnout was 58.4% (OFS, 2015b).

As expected, higher population density (-0.845), citizens born abroad (-0.232), and women (-0.413) were forces against the initiative. A higher share of older people (0.146) however has the opposite effect. Interestingly, the two types of high education had different impacts on votes. Those trained in superior professional schools (2.975) strongly contributed to the yes-votes, while those with tertiary university education had the opposite effect (-0.375). Technically Swiss people must have some work experience before doing the required professional education (OFS, 2015e). Immigrants may not have such training and may be considered as not equally qualified as compared to locally-trained workers. Tertiary university education on the other hand is more internationally similar. The voters with this type of education may consider immigrants less as competing substitutes and more as highly qualified workers with whom to work.

The positive effect of unemployment rate confirms that voters consider that demand-driven immigration needs to be restricted in economic downturns (1.144). This was the practice, as the correlation between changes in immigration inflows and the unemployment rates was -0.631 from 2003 to 2013 (OFS, 2018). A potential increase in tax liabilities due to a rise in the share of people getting social support programs did not stimulate the yes-votes. One reason may be that, since the free mobility with the EU, foreigners coming to look for jobs must have sufficient financial resources and

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¹³ The shares of older people are with respect to the total population, not the Swiss citizens only as this data is not available. Citizens' impact may be slightly different as their shares are higher at the national level (20.7% of citizens versus 15.6% of total).

health/accident insurance to get a residence permit (SEM, 2016). So, it is only after having been part of the workforce that they may qualify for social programs. Regarding the shares of permanent foreign residents, voters considered them positively as a higher share of them decreased slightly the yes-votes (-0.099). There is a similar effect for cultural characteristics such as religious diversity: the existence of more religious diversity induced voters to decrease the share of yes-votes (-0.575). By origins, most immigrants were from EU-27 (65.7%) and a higher share of them (EUforeign_i) induced voters to decrease the share of yes-votes (-0.138), while other foreign residents (NonEUforeign_i) had no impact (Col. 4). However, foreign workers who do not live in Switzerland (CBWorkers_i) stimulated the yes-vote rates (0.331; Col. 5). This is interesting because, before 2007, when CBWs could work only in border regions, there is evidence they raised unemployment in these areas (Schenker and Straub, 2011). As they could work in the whole country by 2014, a test shows that they stimulated the yes-votes equally everywhere (Col. 6). The inclusion of the CBWs per municipalities does not change the relevance and significance of the independent variables except for two of them: Socialhelp and Foreigners, both becoming insignificant. Regarding the first one, the data are only available for all permanent residents and not just for foreign ones. 14 The second one underlines the fact that the CBWs and Foreigners do not have the same impact on the votes. Among foreign workers, CBWs are the unique group clearly influencing votes in favour of a tighter control of immigration.

An important result is that the role of CBWs in this vote has been significant. One way to further illustrate this is to split the states in two groups: those which had less than 50% of yes votes both in 2014 and in the similar vote in 2000 (9 of them; see Figure 4), and those (17 of them) which shifted from less than 50% in 2000 to more than 50% of yes votes in 2014. Two results stand out (see Table 3, Col. 7): as for our previous results, *Foreigners* does not contribute to explain the yes-votes in either group.

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¹⁴ Shares of people receiving social help have a low correlation with CBWs (0.058). As the model with CBWs is much more appropriate, *Socialhelp* is not kept in other regressions. *Foreigners* and *CBWs* have a correlation of 0.31.

However, *CBWs* increases the share of yes-votes in a significant way for the states that shifted their votes but not for the states that did not.¹⁵

Overall, among all the factors used in the standard opinion model, most contribute to decrease the yes-votes and only a few characteristics contribute to the yes-votes (older population, more professional education, higher unemployment rate, and more CBWs). Since, as mentioned in the Introduction, a survey showed that only a relatively small share of the population believe the immigrants make the country a better place to live, we now investigate the role of quality of life on the yes-votes.

7. Quality of life and different economic areas

Free mobility increased substantially the total population in Switzerland. During the 2003-13 period, the total population grew at an annual rate of 1.05% and the average annual growth of foreign residents was 2.91% against 0.59% for the total population and 1.88% for the foreign residents during the previous decade. This raises two issues. Did this faster increase in population density generate negative externalities on quality of life that influenced the 2014-vote? In addition, because immigration is mainly worked related and economic activities are different across regions and municipalities, did these differences matter?

7.1. Effects on quality of life.

Quality of life variables are included in the *Yesvote* equation (4) though the term $\sum \beta_i V_{k,i}$. Several factors associated with the impact of higher population growth on the quality of life are considered; they are housing availability, vehicle density, and natural environment.

First, for housing availability, does the relative shortage at the municipality level, whether for rental or for sales, influence the share of yes-votes? We consider two variables: the vacancy rate in 2013

¹⁵ Note however that the results are less stable for a few other variables. This is because we are forcing a split at the state level, not at the municipal level.

for rental or sale ($Housevac_j$), and the average monthly rentals across states ($Rental_k$). None of these factors did influence the yes-votes (Table 4, col 1 and 2). So, either voters may have considered housing shortages as temporary, or these shortages have been so long lasting that they did not associate them with recent population growth.

	1.	2.	3.	4.
	Housing vacancies	Net rental	Commuting time	Natural areas ^{1/}
c	69.43***	54.50***	35.92***	35.89***
	(6.8)	(20.8)	(6.9)	(6.8)
Turnoutj	-0.282***	-0.284***	-0.268***	-0.267***
	(0.04)	(0.04)	(0.04)	(0.04)
LPopdensj	-0.730***	-0.721***	-1.506***	-1.032***
	(0.20)	(0.20)	(0.20)	(0.24)
Bornabroad _j	-0.693***	-0.696***	-0.622***	-0.655***
	(0.10)	(0.10)	(0.09)	(0.09)
$Women_j$	-0.465***	-0.454***	-0.282***	-0.321***
	(0.12)	(0.12)	(0.11)	(0.11)
$Pop65^+_j$	0.110**	0.109**	0.045	0.006
	(0.05)	(0.05)	(0.05)	(0.05)
Educsupprof _k	3.099***	3.011***	1.949***	1.908***
	(0.18)	(0.22)	(0.19)	(0.19)
$EducUniv_k$	-0.333***	-0.357***	-0.849***	-0.783***
	(0.08)	(0.10)	(0.08)	(0.09)
<i>Urate_j</i>	0.726***	0.754***	0.840***	0.706***
	(0.21)	(0.21)	(0.20)	(0.20)
Foreigners _j	-0.017	-0.024	-0.029	-0.038
	(0.04)	(0.04)	(0.04)	(0.04)
$CBWorkers_j$	0.336***	0.339***	0.308***	0.308***
	(0.03)	(0.03)	(0.03)	(0.03)
Religionk	-0.516***	-0.511***	-0.540***	-0.483***
	(0.10)	(0.10)	(0.10)	(0.10)
Quality of life				
<i>Housevac_j</i>	-0.174			
-	(0.14)	-	-	-
$LRental_k$		2.204		
	-	(2.99)	-	-
$ToWorktime_k$			0.289***	0.296***
	-	-	(0.05)	(0.05)
$LVehperkm_k$			9.731***	9.267***
_	-	-	(0.69)	(0.70)
Nat.Area _j				0.045***
v	-	-	-	(0.01)
Adj R ²	0.345	0.345	0.400	0.404
n	2342	2342	2342	2342

^{1/}In this full estimation including *Socialhelp_j*, this variable is not significant (-0.152; S.E. -0.958) so it is not included. Note: Results for turnout are in Appendix B, Table B.1.. S.E. in parentheses; ***, **, * significant at 1%, 5%, 10%.

Table 4: Immigration votes and quality of life.

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 $^{^{16}}$ The average vacancy rate was 1.15% and 469 municipalities (19.9%) had no vacancy. The average monthly rentals across states ranged between SFr 918 and SFr 1,796.

The second factor is vehicle density as the population growth, as well as significantly more CBWs, may bring both longer commuting time and more noise. One variable to capture commuting time is the share of active residents per state spending more than 30 minutes to go to work or training (*ToWorktime_k*). In some state, this share is as high as 45%. ¹⁷ The noise generated by vehicles is known to have a negative impact on residents' well-being (Urban and Máca, 2013). In 2015, 24% of the population considered that traffic noise was (*extremely and rather*) disturbing at home (OFS, 2016). The variable associated with noise is the log of the number of motor vehicles owned by residents per kilometer of existing roads per state (*LVehperkm_k*). Both factors stimulated the yes-votes (Column 3).

The third factor is the natural environment as a survey indicated that a high share of the population considered it as having a strong influence on their quality of life. This is because Switzerland is a small country with 26.1% of "unproductive areas" leading to a higher concentration of people and firms in specific areas. We define natural environment at the municipal level as the share of non-productive areas plus the share of forests not used for agricultural purposes (*Nat.Area_i*). The shares varied between 0% and 97.5% with a mean of 39.9% (Appendix A, Table A.1.). There are two potential impacts: voters in municipalities with a larger natural area may be induced to vote yes in order to protect it. But one cannot exclude the opposite effect as some voters may consider that some of this natural area should be given up to expand economic activities. The result shows that the former is more valid than the latter as a larger share of natural area contributes to increase the yes-votes (0.045 in Column 4).

The results with the three additional variables related to quality of life (commuting time, traffic noise and natural areas) work in the same direction by increasing the share of the yes-votes and by improving the overall results.

7.2. Yes-vote and economic area

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¹⁷ CBWs are not directly taken into account in this measure; they are unlikely to create a bias in the estimation, as the correlation between the two variables is very small (-0.148).

¹⁸ From "Land use nomenclature", unproductive areas are lakes, rivers, and unproductive lands (OFS, 2013, LU Nomenclature).

Other than the unemployment rate at the municipal level, the analysis so far does not include economic characteristics of different areas where voters live. Not surprisingly a higher unemployment rate contributed to a higher share of yes-votes. But it does not say whether different types of economic areas matter to influence the attitude and therefore the votes to limit immigration. In that regard, the fact that *Foreigners* and *CBWs* provide very different indications (as the first variable is generally not significant and the second one is; see Table 4) could depend on specific economic areas. For this reason it is useful to investigate whether the role of *Foreigners* and *CBWs*, as well as the role of the quality of life variables differ when they are associated with different economic areas.

Three different economic areas are considered (see Table 5): the first one is with respect to municipalities with strong economic activities defined by a high density of firms (municipalities with more than 100 firms per 1,000 inhabitants; Col. 1). The second one is based on the relative strength at the municipal level of one activity among three standard economic sectors (primary, secondary, tertiary, as defined in OFS (2008); Col. 2). The third one is based on standard of living measured by the net revenue per inhabitant (municipalities above the national average of SFr 36,000 per capita; Col. 3).

Consider *Foreigners* and *CBWorkers* for the different economic areas.²⁰ When its sign is significant, *Foreigners* has a negative sign implying that a higher municipal share induces a rejection of the limitation on immigration. This is re-enforced in municipalities with a higher density of firms and, interestingly, in municipalities with more firms in the primary sector. In all other cases, the share of foreign residents has no significant impact on the yes-votes. This contrasts with *CBWorkers*: on average, a higher municipal share of CBWs induces more yes-votes. This is re-enforced in municipalities with a

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¹⁹ A municipality with high primary (tertiary) sector is defined as one with more than 30% (respectively 75%) of firms belonging to that sector.

²⁰ Means and S.D on specific factors in each case can be found in Appendix A, Table A.2.

high density of firms and in those with a high share of firms operating in tertiary sector. The only exception is the case of municipalities with a high share of firms in the primary sector.²¹

	1.	2	•	3.
	Firm density ^{a/}	Economic	sectors ^{b/}	Revenues ^{c/}
c	41.44***	33.79)***	27.66***
	(6.8)	(6.	5)	(67)
Turnoutj	-0.300***	-0.25	8***	-0.154***
	(0.04)	0.0)	04)	(0.04)
LPopdens _j	-1.047***	-0.49	1**	-0.591***
- •	(0.26)	(0.2	26)	(0.24)
$Bornabroad_j$	-0.648***	-0.512	2***	-0.428***
•	(0.09)	(0.0))9)	(0.09)
Womenj	-0.362***	-0.38	1***	-0.370***
•	(0.11)	(0.1	10)	(0.11)
$Pop65^{+}_{j}$	0.045	0.08		-0.063
1 ,	(0.05)	(0.0))5)	(0.05)
Educsupprof _k	1.912***	1.914	1 ***	2.004***
== =	(0.18)	(0.1	18)	(0.19)
$EducUniv_k$	-0.753***	-0.719	9***	-0.654***
	(0.08)	0.0)	08)	(0.08)
Uratej	0.576***	0.449		0.341*
•	(0.20)	(0.1	19)	(0.20)
Foreigners _j	0.019	0.0		-0.075**
3	(0.04)	(0.0)	(0.04)	
CBWorkersj	0.245***	0.208		(0.04) 0.258***
,	(0.03)	(0.0)		(0.03)
Religionk	-0.489***	-0.373	8***	-0.452***
3	(0.10)	(0.0))9)	(0.10)
Quality of life	· · ·	Ì		Ì
ToWorktime _k	0.126**	0.10)9*	0.289***
-	(0.06)	(0.0)		(0.05)
$LVehperkm_k$	9.501***	7.864	9.055***	
	(0.70)	(0.7		(0.73)
Nat.Area _j	0.067***		0.116***	
	(0.01)	(0.0)		0.046*** (0.01)
	High firm density	Intense Primary	Intense Tertiary	High revenue
Dum* Foreigners _j	-0.157***	-0.300***	0.037	-0.004
Dum Torcigners	(0.05)	(0.08)	(0.05)	(0.05)
Dum* CBWorkers _i	0.234***	-0.373***	0.208***	0.072
Dum CDMUINCISJ	(0.05)	(0.09)	(0.05)	(0.05)
Dum* ToWorktimek	0.474***	0.350***	-0.424***	-0.500***
Dunt 101101Killitek	(0.09)	(0.08)	(0.10)	(0.12)
Dum* LVehperkm _k	-1.850***	-0.125	1.440*	1.537*
Бит Буспрегині к	(0.70)	(0.67)	(0.79)	(0.85)
Dum* Nat.Area _i	-0.082***	-0.045**	-0.027	0.032
Dит : Nat.Areaj				(0.032
Adj R ²	(0.02)	` /	(0.02) (0.02)	
•	0.423			0.440
n f D 1	2,342	2,3		2,342
n for Dum=1	527	678	524	565

^{a/} High firm density captures municipalities with more than 100 firms per 1000 residents. ^{b/} Intense Tertiary is for more than 75% of firms in services (national average is 76.3%); and Intense Primary is for more than 30% of firms in agriculture (national average is 22%). ^{c/} High revenue net per inhabitant is above Fr36,000 with national level at Fr35,866. Results for turnout are in Table B.2;. S.E. in parentheses; ***, **, * significant at 1%, 5% and 10%.

Table 5: Externalities and immigrants by economic area.

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²¹ However, since only 0.6% of CBWs worked in the primary sector in 2013 (OFS, 2014-2016), it is not a critical result.

In the previous section, we argued that three quality of life variables help explaining the yesvotes. When breaking down this effect through three economic areas, this result is still generally true suggesting that the quality of life effects are relatively broad based. This is the case because either these effects are not significant with respect to specific economic areas or, when they are, they are either going in the same direction or not strong enough to change the sign of the effect. There are two exceptions: the share of residents with a high commuting time did not contribute to increase the yesvotes in municipalities with a high share of firms in tertiary sectors, or with higher revenues. The same is true for the impact of natural environment in municipalities with a high density of firms although the net effect is very small. In this case, natural area contributed to make the residents more neutral rather than stimulating the yes-votes, probably because residents had some natural area everywhere (the minimum is 1.75%), and many municipalities with a high density of firms are also tourist areas in the Alps (44.2% of them have more than 50% of their surfaces as natural areas).

It is noteworthy that, in some cases, the effect through specific economic areas is re-enforced. A particularly strong case is the impact of commuting time which is substantially longer in areas dense with firms (+0.474 from 0.126), probably as many workers do not live in cities with a high density of firms thereby increasing traffic in these municipalities. Indeed, in 27.2% of municipalities with high-economic activities, the share of employment in population aged 15-64 is more than 100% with a maximum of 598.4% (OFS, 2015a, and 2015b). Similarly, noise from vehicle intensity stimulated strongly the yes-votes in dense tertiary and in high revenues areas (+1.44 from 7.864 in the first case, and +1.537 from 9.055 in the second one). This is because the population density is significantly higher in these municipalities (1,119 versus 80 people per km²).

Overall these results confirm that CBWs had a significantly more important influence than attitude about immigration in general and that voters had concerns about the impact of population

growth on their quality of life. The net and last step is to ascertain how these forces changed between 2000 and 2014 to trigger a different national policy about immigration in 2014.

8. Intertemporal changes in attitudes

To compare with the 2014-vote, we consider the vote to limit immigration in September 2000 ("To regulate immigration"). This vote had a small turnout rate (45.3%) and a small domestic yes-vote rate at 36.2% (Table 1) as compared to the 2014-vote. Figure 4 illustrates the differences per states between the two votes and the across-the-board increase of the yes-votes in 2014. In five states, this difference is more than 20% and, the share of yes-votes, instead of being below 50% in all states as in 2000, found a majority in 17 of them. However the wide increase in the support to control immigration from 2000 to 2014 is not uniform, since very small in some states (like Basel-Stadt) and massive in others (like Tessin).

To test intertemporal changes in positions to control of immigration, we amend our model in the following way:

$$Turnout_{j,t} = \alpha_0 + \theta Time + \sum_{l} \alpha_{l} X_{l,j,t} + \sum_{m} \alpha_{m} Z_{m,j,t} + \sum_{l} \alpha_{l} (Time * X_{l,j,t}) + \sum_{m} \alpha_{m} (Time * Z_{m,j,t}) + \mu_{j},$$

$$Yesvote_{j,t} = \beta_0 + \rho Time + \gamma_0 Turnout_{j,t} + \sum_{l} \beta_{l} X_{l,j,t} + \sum_{n} \beta_{n} V_{n,j,t} + \gamma_1 (Time * Turnout_{j,t}) + \sum_{l} \beta_{l} (Time * X_{l,j,t}) + \sum_{n} \beta_{n} (Time * V_{n,j,t}) + \varepsilon_{j}$$

$$(5)$$

In each equation, *Time* is a 2014-dummy to capture potential changes on factor impacts with respect to 2000. The variables are the same as in previous specifications.

Several variables related to population characteristics are different in 2000 and in 2014 (Table 6, Col. 1). Contributing to decrease the yes-votes is population density (changing by -1.523 from +0.488) even though the vast majority of municipalities had more residents. Older people also contributed to decrease control of immigration by becoming more neutral with respect to 2000 (changing by -0.125).

from 0.134). Finally, women and foreign culture through religion did not matter in 2000 but contributed to decrease the yes-vote rates in 2014. In the opposite direction, people with university education significantly lowered their support for immigration control in 2014 with respect to 2000, whereas those with a professional training were equally supportive to such control in 2014 as in 2000. Although, overall, those with university education are still opposed to immigration control, it suggests a significant change in their attitude between the period just before the implementation of free mobility with the EU and a decade later. This can be because, as argued in Section 2, immigration had largely switched toward high-educated people.

Interestingly, *Foreigners* does not contribute to explain the yes-vote whether in 2000 or in 2014, but CBWs does, and even more so in 2014 than in 2000. Among the factors capturing quality of life, commuting time (*ToWorktimek*), traffic noise through the density of vehicles (*LVehperkm*), and the natural environment (*Nat.Area*) also contribute to explain the yes-votes in 2000, sometimes more strongly so than in 2014. This might be surprising given for instance the significant increase of commuting time (the share of people with high commuting time increased from 26.8% to 45.1% between the two periods) and of the density of vehicles on the roads (the mean of *LVehperkm* rose by 21% in 14 years). This may come from the fact that many people decided to use public transit as it also increased by 33.9% (OFS, 2015a, Table ST.6.1), and new vehicles became less noisy due to more efficient engines and to a higher share of electric cars (5,188 in 2000 to 18,453 in 2014; OFS, 2018). Still, the interesting conclusion coming from this comparison is that quality of life as well as CBWs mattered in 2000 like in 2014 but the share of foreign residents did not. This indicates that the results found for the yes-vote of 2014 are not specific to that vote.

	1.			2.	
	2000-Initiative vs (both yes-v		2014-Initiativ	l Act with EU vs e (no-vote vs yes- e rates)	
	Effects in 2000	Changes for 2014	Effects in 2000	Changes for 2014	
C.	-15.69**	50.51***	-6.70	46.94***	
C_1	(5.61)	(8.53)	(6.61)	(9.95)	
Turnoutj	-0.255***	+0.006	-0.210***	-0.108**	
1 urnouij	(0.04)	(0.05)	(0.04)	(0.05)	
LPopdensj	0.488**	-1.523***	-4.132***	+3.092***	
Li opaens _j	(0.25)	(0.34)	(0.29)	(0.40)	
Bornabroad _i	-0.772***	+0.100	-0.126	-0.523***	
Bornabroau _j	(0.10)	(0.13)	(0.12)	(0.16)	
Womenj	-0.022	-0.299**	0.055	-0.389**	
womenj	(0.10)	(0.15)	(0.12)	(0.17)	
<i>Pop65</i> ⁺ <i>j</i>	0.134***	-0.125*	0.252***	-0.250***	
T opos j	(0.05)	(0.07)	(0.06)	(0.08)	
Educsuppro	2.196***	-0.268	0.906***	+0.971**	
f_k	(0.28)	(0.33)	(0.33)	(0.39)	
$EducUniv_k$	-2.822***	+2.047***	-3.465***	+2.674***	
Eauconivk	(0.11)	(0.14)	(0.13)	(0.16)	
77	1.030***	-0.333	0.640*	+0.084	
Uratej	(0.30)	(0.36)	(0.35)	(0.42)	
E	-0.004	-0.041	-0.073	+0.022	
Foreigners _j	(0.04)	(0.06)	(0.05)	(0.06)	
CDWankana	0.212***	+0.093**	0.286***	+0.016	
CBWorkers _j	(0.03)	(0.04)	(0.04)	(0.05)	
DumBorder	0.068**	-0.051	0.161***	-0.148***	
*	(0.03)	(0.04)	(0.04)	(0.05)	
Foreignersj					
Religionk	0.010	-0.414**	-0.857***	+0.382	
	(0.18)	(0.21)	(0.21)	(0.24)	
<i>Housevac_j</i>	0.191**	-0.249*	-0.177*	0.129	
	(0.08)	(0.15)	(0.10)	(0.17)	
ToWorktime	0.330***	-0.023	0.154	+0.132	
k	(0.07)	(0.09)	(0.09)	(0.10)	
$LVehperkm_k$	13.084***	-3.860***	20.961***	-11.643***	
2. ouperionek	(0.78)	(1.03)	(0.92)	(1.21)	
Nat.Area _i	0.028**	+0.017	0.030**	+0.013	
	(0.01)	(0.02)	(0.02)	(0.02)	
Adj R ²	0.67	74	0.596		
n	4,62	24	4	,624	
<u> </u>					

Note: For the 2000 and 2014 initiatives, the set of municipalities is not the same as some of them merged or changed names. Votes are available for 2342 municipalities in 2014 and for 2282 in 2000.

Effects are coefficients for each 2000-vote and *Changes* are differences with 2014-votes. The joint model is yes-vote with turnout rates; results for turnout are in Appendix B, Table B.2..

S.E. in parentheses; ***, **, * significant at 1%, 5% and 10%.

Table 6: Intertemporal changes - votes on immigration.

One might object that the vote of September 2000 is not particularly relevant because it is shortly after the vote to approve the free mobility with the EU. Swiss voters simply confirmed that vote and it is why the participation was relatively low. Indeed the May 2000 vote about the Federal Act on the agreement with the EU, with it higher turnout (48.3%; see Table 1) and 67.2% acceptance share, can be considered as the most significant vote of the two. The problem however is that this vote was a package-vote covering seven agreements with the EU, one of which being the free mobility of workers with the EU. Although free mobility was the most important agreements (the others being air and overland transport, agriculture, abolition of technical trade barriers, public procurements, and research; FDFA, 2016), it is likely that some voters made their decision based on overall considerations and by weighting them with free mobility. With this caveat, Table 6, Col. 2 shows the results based on this vote (with the shares of votes rejecting the Federal Act) as the reference vote.

Except for two factors, the role of women and of people over 65 years old, the results for this vote in 2000 are quite similar to those in 2014. This can be seen in two ways: the changes for 2014 in Table 6 are either going in the same direction and, when they do not, the changes are generally not strong enough to reverse the sign of the effects, or by comparing directly the results with Table 4, Col. 4. This indicates that the conclusions made in the previous Sections are still valid. In particular, people with professional training contributed to oppose free mobility in 2000 and to further limit immigration in 2014, people with university education supported free mobility in 2000 but this support had significantly eroded by 2014, voters were not influenced by the share of foreign residents in 2000 and in 2014, but were influenced by CBWs already in 2000. Finally aspects of quality of life mattered in 2000 often as strongly as they did in 2014 such as the role of natural areas and commuting time, or even more so than in 2014 such as with traffic density and thus noise.

In summary, externalities on the quality of life from population growth have played an important role already in 2000. And, over time, it is not the case that Swiss voters changed their attitude with

respect to foreign residents and to immigration in general. The only exception is with respect to CBWs which somewhat hardened over time. If there is no strong change in attitudes, it is still the case that the combination of factors makes the 2000 results different from the 2014 ones and thus modified the average attitude of voters. One way to capture this change is from simulations with average data. If attitudes from the September 2000-initiative had not changed, the 2014-initiative with its higher turnout, would have been rejected with 31.15% yes-votes. Alternatively, the 2014-voting attitudes would have accepted the 2000-initiative with 56.08% of the yes-votes. So, clearly, in 2014, the average attitudes had changed sufficiently to switch the traditional support for immigration.

9. Conclusion

Switzerland is a unique case to find out people's attitudes through votes, as they are relatively frequent even on a subject as narrow as immigration policies. These votes are useful tools because they bring a national debate about the pros and cons of adopting a particular proposal whether the Federal government is mandated to ask citizens, or whether an initiative has collected enough signatures to be subject to a popular vote. Although not everyone participates to these votes there is little doubt that those who participate tend to be well informed through media, the political party they affiliate with, or through associations actively engaged in a campaign. There is also no doubt that the policy implications of these votes are important. The 2000-vote on the free-mobility with the EU has probably been one of the most consequential votes over the last twenty years. There is little doubt that free mobility has transformed Switzerland from a slow growth country, even by European standards, to a much more economically dynamic country by attracting highly educated foreign workers both as permanent residents and as CBWs. Yet, in February 2014, the 7th initiative to control immigration was accepted by a small majority of voters. For the first time in decades, the position on immigration changed forcing the Federal

government to implement immigration restrictions. It is thus important to analyze this vote and to compare it with previous ones on immigration issues.

There is not a single group that can be identified as having made a difference in this vote but several characteristics have played a role. For instance older people who wanted more immigration controls in 2000 became more neutral in 2014 whereas women who were neutral in 2000 came more against immigration control in 2014. Also residents' cultural characteristics, which did not matter in the past, contributed to reject the 2014-initiative, probably because most immigrant workers were coming from EU countries. However residents' educational characteristics mattered a great deal. Those with a professional training contributed to vote in favour of immigration restrictions in 2000 like in 2014, but those with a university education, who opposed immigration restrictions in 2000, continued to do so in 2014 but much less strongly. Although it is the case that unemployment rates, which increased a bit during the 2000s, did not contribute to support the yes-votes and there is evidence that free mobility did have a positive impact on natives' wages and employment especially in border regions (see Beerli et al., 2020), there were still some concerns with the labour market and the competition created by free mobility of workers. Overall it is only a few decreases in the support of immigration that generated the very small win for the 2014-initiative to control immigration.

The fact that the most recent initiative about immigration was rejected in October 2020 shows well the trade off faced by Swiss voters between the benefits and the costs of free mobility, between the benefits for the country as a whole and concerns often more at the individual level. When there is uncertainty about the economic future as in 2020 (and a threat that the re-introduction of immigration controls would jeopardize other economic arrangements with the EU), there is a reluctance to rock the boat and economic pragmatism prevails. When this uncertainty is less present as in 2014, other concerns whether linked to labour markets or with externalities associated with economic growth more strongly influence the votes. But an important conclusion from this paper is that the underlying concerns have

essentially remained the same in 2000 and in 2014. They have never been linked to a negative attitude with respect to foreign workers in general, but concerns about CBWs were already present in 2000. This is also the case regarding concerns about quality of life such as with high commuting time to work, noise from vehicle intensity, and shrinking of natural environment. This suggests that the best policies to address these concerns will not be policies that directly restrict immigration, since the heart of the issue is not about foreign workers and residents, but about specific aspects such are CBWs and negative externalities associated with population and economic growth. In other words, the best policies that might suppress the political expediency of repeatedly proposing initiatives aimed at restricting immigration are policies that directly address the economics of CBWs and the sustainability of economic growth. Since CBWs are an integral part of the institutional agreement with the EU, the most likely policies going forward are those decreasing their attractiveness, whether through investments in education and professional training especially in border regions, or even by raising their relative cost with respect to alternative modes of production (for example by favouring automation and AI; forces that are already shaping the future of work; Frey and Osborne, 2017). Similarly there are urban, regional and environmental policies on transportation, zoning and the preservation of natural areas that can help making immigration policies being less hijacked by politics, more sustainable, and more broadly accepted than they already are.

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Bibliography

- Beerli, A.; J. Ruffner; M. Siegenthaler and G. Peri, 2020. *The Abolition of Immigration Restrictions and the Performance of Firms and Workers: Evidence from Switzerland*, NBER Working Paper 25302. Cambridge, MA.
- Beerli, A. and G. Peri, 2015. *The Labor Market Effects of Opening Border: New Evidence from Switzerland.* NBER Working Paper 21319. Cambridge, MA.
- Boubtane, E., J.-C., Dumont and, C. Rault, 2016. Immigration and Economic Growth in the OECD Countries 1986-2006. *Oxford Economic Paper*. 1-21. doi: 10.1093/oep/gpw001.
- Boubtane, E., D. Coulibaly and, C. Rault, 2013. Immigration, Growth, and Unemployment: Panel VAR Evidence from OECD Countries. *Review of Labour Economics and Industrial Relations*. 27, 4. 399-420.
- Brunner, B. and A. Kuhn, 2018. Immigration, Cultural Distance and Natives' Attitudes towards Immigrants: Evidence from Swiss Voting Results. KYKLOS. 71, 1. 28–58.
- Card, D., C. Dustman and, I. Preston, 2012. Immigration, Wages and Compositional Amenities. *Journal of European Economic Association*. 10.21. 78-119.
- Confédération Suisse, CH-CH. 2014. *Who is entitled to vote?* The Swiss Authorities on Line. https://www.ch.ch/en/voting-rights/ Accessed, August 5th.
- Confédération Suisse, Conseil Fédéral. 2019. *Change in immigration system: Yes to popular initiative aimed at stopping mass immigration*. Department FDJP. State Secretariat for Migration. https://www.sem.admin.ch/sem/fr/home/aktuell/news/2014/ref_2014-02-09.html Accessed, June 30th.
- Dancygier, R.M. and, M.J. Donnelly, 2013. Sectoral Economies, Economic Contexts, and Attitudes toward Immigration. *The Journal of Politics*. 75,1. 17-35.
- DFI, Département Fédéral de l'Intérieur, 2015. Précipitations. Somme de la demi-journée (7-19), 8.02.2014-9.02.2014. Office Fédéral de Météorologie et de Climatologie Météosuisse. Zurich-Flughafen. Ordered August 24th.
- Esipova, N., A. Pugliese and, J. Ray, 2015. *European Most Negative toward Immigration*. Washington, D.C.: Gallup World Headquarters. http://www.gallup.com/poll/186209/europeans-negative-toward-immigration.aspx
- ESS, European Social Survey, 2012. *Round 6 Data*. Data file edition 2.1. Norwegian Social Science Data Services, Norway Data Archive and distributor of ESS data. Bergen.

- FDFA, Federal Department of Foreign Affairs, 2016. *Switzerland and the European Union*. 2nd revised edition. Pp 21-42. Directorate for European Affairs. Bern.
- Frey, C.B. and, M.A. Osborne, 2017. The Future of Employment: How Susceptible are Jobs to Computerisation? *Technological Forecasting and Social Change*. 114. 254-280.
- Gerfin, M. and, B. Kaiser, 2010. The Effects of Immigration on Wages: An Application of the Structural Skill-Cell Approach. Discussion Paper 10-12. Faculty of Economics and Social Sciences. University of Bern. September.
- Geys, B., 2006. Explaining Voter Turnout: A Review of Aggregate-Level Research. *Electoral Studies*. 25. 637-663.
- Green E.G.T., O. Sarrasin, N. Fasel and, C. Staerkle, 2011. Nationalism and Patriotism as Predictors of Immigration Attitudes in Switzerland: A Municipal-Level Analysis. Swiss Political Science Review. 17, 4. 369-393.
- Gross, D.M., 2012. Free Mobility with the EU and Immigration of North American Brains to Switzerland: What consequences?" *Swiss journal of Economics and Statistics*. 148, 4. 497-532.
- Gross, D.M., 2006. Immigration Policy and Foreign Population in Switzerland. Policy Research Working Paper 0-3437. February. The World Bank, Washington, DC.
- Hainmueller, J. and, M.J. Hiscox, 2010. Attitudes toward Highly Skilled and Low-skilled Immigration: Evidence from a Survey Experiment. *American Political Science Review.* 104, 1. 61-84.
- Hainmueller, J. and, D.J. Hopkins, 2014. Public Attitude toward Immigration. *Annual Review of Political Science*. 17. 225-249.
- Hansford, T.G., and, B.T. Gomez, 2010. Estimating the Electoral Effects of Voter Turnout. *American Political Science Review*. 104, 2. 268-88.
- Hatton, T.J., 2014. Public Opinion on Immigration: Has the Recession Changed Minds? IZA Discussion Paper No 8248. June.
- Institut du Fédéralisme, undated. Les votations cantonales du 9 février 2014. *Newsletter*. Faculté de Droit. Université de Fribourg. Accessed, October 13th 2014. http://www.unifr.ch/ius/federalism_fr/prestations/newsletter/votations_cantonales
- Kerr, S.P., and W.E. Kerr, 2015. Economic Impacts of Immigration: A Survey. NBER Working Paper No 16736. Cambridge, MA.
- Kirchgässner, G. and, T. Schulz, 2005. Expected Closeness or Mobilisations: Why do Voters go to the Polls? Empirical Results for Switzerland, 1981-1999. CESifo working paper No 1387.

- Kirchgässner, G. and, J. Schimmelpfennig, 1992. Closeness Counts if it Matters for Electoral Victory: Some Empirical Results for the United Kingdom and the Federal Republic of Germany. *Public Choice*. 73. 283-299.
- Krishnakumar, J. and, T. Mueller, 2012. The Political Economy of Immigration in a Direct Democracy: The Case of Switzerland. *European Economic Review*. 56. 174-189.
- Lutz, G., 2006. Participation, Information and Democracy. The Consequences of Low Levels of Participation and Information for the Functioning of Democracy. Lit-Verlag, Hamburg.
- Lutz, G. and, M. Marsh, 2007. Introduction: Consequences of Low Turnout. *Electoral Studies*. 26. 539-547.
- Martins R. and F.J. Veiga, 2014. Does Voter Turnout Affect the Votes for the Incumbent Government? European Journal of Political Economy. 36. 274-286.
- Matsusaka, J.G. and F. Palda, 1999. Voter Turnout. How Much Can we Explain? *Public Choice*. 98. 431-446.
- Miguet, F., 2008. Voting about Immigration Policy: What does the Swiss Experience tell us? *European Journal of Political Economy*. 24. 628-641.
- OECD, Organisation for Economic Cooperation and Development, 2016, 2018. *OECD Databases*. Paris.
- OECD, 2010. *International Migration Outlook: SOPEMI 2010*. Part III: Public Opinions and Immigration: Individual Attitudes, Interest Groups and the Media. Paris.
- OFS, Office Fédéral de Statistiques, 2016. *Enquête Omnibus 2015: qualité de l'environnement et comportements environnementaux*. Actualités OFS. 02 Espaces et environnement. Neuchâtel.
- OFS, 2015a, 2018. Encyclopédie Statistique de la Suisse. Neuchâtel.
- OFS, 2015b. Atlas Statistique de la Suisse. Neuchâtel.
- OFS, 2015c, Les votations populaires fédérales, résultats détaillés. Table 17.3.2.2. Neuchâtel.
- OFS, 2015d. Votation populaire du 9 février 2014. Initiative populaire «Contre l'immigration de masse». Neuchâtel.
- OFS, 2015e. *Thèmes*. 015 Education, sciences. Définitions. Système éducatif. Neuchâtel. Accessed on September 2nd. http://www.portal-stat.admin.ch/isced97/files/fr/index.html
- OFS, 2014-2016. STAT-TAB. Données interactives. Neuchâtel.
- OFS, 2013. Statistiques de la Superficie. Edition from 09.08. Neuchâtel.

- OFS, 2012. Espace et Environnement. Communiqué de Presse. Neuchâtel.
- OFS, 2011. Statistique des votations fédérales. Elections au Conseil national de 2011. Neuchâtel.
- OFS, 2008. NOGA 2008. Nomenclature générale des activités économiques. Structure. Neuchâtel.
- Ottaviano, G.I.P and, G. Peri, 2012. Rethinking the effect of immigration on wages. *Journal of European Economic Association*. 10. 152–97
- RTS, Radio Télévision Suisse, 2014. L'initiative "Contre l'immigration de masse" gagne du terrain. RTSINFO. January 30th.
- Schenker, R. and, M. Straub, 2011. Spatio-Temporal Dynamics in Swiss Regional Unemployment. KOF Working Papers. No 274. ETH. Swiss Federal Institute of Technology. Zurich.
- Scheve, K.F. and, M. J. Slaughter, 2001. Labor Market Competition and Individual Preferences over Immigration Policy. *The Review of Economics and Statistics*. 83, 1. 133-45.
- Sheldon, G., 2000. The Impact of Foreign Labor on Relative Wages and Growth in Switzerland. Labor Market and Industrial Organization Research Unit (FAI), University of Basel, http://www.unibas.ch/wwz/fai.
- SECO, Secrétariat d'Etat à l'Economie, 2014. Dixième rapport de l'Observatoire sur la libre circulation des personnes entre la Suisse et l'UE. Confédération Suisse. Juillet 9.
- SEM, 2016. Free Movement of Persons Switzerland-EU/EFTA. Confédération Suisse, Bern. Accessed, September 20th. https://www.sem.admin.ch/sem/en/home/themen/fza_schweiz-eu-efta.html.
- Urban, J. and, V. Máca, 2013. Linking Traffic Noise, Noise Annoyance and Life Satisfaction: A Case Study. *International Journal of Environmental Research and Public Health*. 10. 1895-1915.

Appendix A: Variables

Dependent.

Yesvote; Percentage of valid yes votes in 2342 municipalities on Feb. 9, 2014. There were officially 2,352

municipalities but in 10 of them, voters were asked to vote in a neighbouring municipality (OFS, 2015a, Table 17.3.2.2). For 2000, 2282 municipalities as explanatory variables were not available for all 2888

municipalities.

*Turnout*_i Percentage of registered voters who voted on Feb. 9, 2014 (OFS, 2015a, Table 17.3.2.2).

Independent.

LPopdensi Municipal population density per squared kilometer in 2013, in natural log (OFS, 2015a, Table 21.03.01).

Bornabroad_i Share of Swiss citizens born abroad residing in municipalities in 2012 (OFS, 2014).

Women_j Share of women in Swiss population of municipalities in 2013 (OFS, 2015a, Table 21.03.01). $Pop65^{+}_{j}$ Share of people aged 65 years or more in 2013 in municipalities (OFS, 2015a, Table 21.03.01).

 $Educsupprof_k$ Share of Swiss citizens in states with tertiary education in professions, such as superior schools, federal

professional exams and federal superior professional exams in 2013 (OFS, 2015a, Table 15.08.02.07).

EducUniv_k Share of Swiss citizens in states with degrees from universities and institutes of technology, universities of

applied sciences and universities of teacher education, in 2013 per state (OFS, 2015a, Table 15.08.02.07).

*Urate*_j Unemployment rate per municipality in 2011 (OFS, 2015b, SECO, Map #12921).

Social help rate in municipality in 2012 (OFS, 2015a, Table 21.03.01).

Foreigners_j Share of permanent foreigners in municipal population in 2013 (OFS, 2015a, Table 21.03.01). EUforeign_j is

share of EU-27 citizens in municipal population in 2013 and NonEuforeign_j, other immigrants (OFS,

2015a, Table 21.03.01; OFS, 2014).

Religion_k Percentage of population in 2013 with other religion than Roman Catholic or Reformed Evangelic

Protestant, in states (OFS, 2015b).

CBWorkers_j Share of cross-border workers in total municipal employment in 2013 (OFS, 2014; OFS, 2015a, Table

21.03.01).

Housevac_i Housing intended for permanent rental or sale in 2013 (OFS, 2015a, Table 21.03.01).

LRental_k Average monthly net rental per state without heating cost and additional expenses, in natural log (OFS,

2015a, Table T 9.3.3.1.).

ToWorktime_k Percent of permanent active resident aged 15+ going to work or training and spending more than 30

minutes for commuting one way, per states in 2013 (OFS, 2015a, Table 11.04.04.09).

 $LVehperkm_k$ The number of motor vehicles per kilometer of national, cantonal and municipal roads per state in 2012, in

natural log (OFS 2015a, Table 11.3.2.1.1. and Table 11.3.1.4.).

Nat.Area; Percent of natural surface in municipality of forest not used for agricultural purpose (i.e., forest,

afforestation, lumbering areas and damaged forests) and non-productive land (lakes, rivers and unproductive land) in 2004/2009 with respect to settlement and urban areas, agricultural, forest and non-

productive land. (OFS, 2015a, Table 21.03.01).

Turnout2009; Percent of registered voters who voted on February 8, 2009, on renewal of agreement of free movement of

workers between Switzerland and the European Union and extension to Bulgaria and Romania (OFS,

2015a, Table 17.03.02.04.ep.540.c).

Langfrench_j, Langitalian_j, Langromansh_j: Dummy equal to 1 for municipalities where French, Italian or Romansh is the

national language with the largest percentage among Swiss citizens from census 2000 (OFS, 2015a, Table

Px-x4003000000 123).

*UDC*_i Percentage for political party Democratic Union of the Centre (*Union Démocratique du Centre*; UDC) in

national elections of 2011, per municipalities (OFS, 2011).

Schaffh Dummy equal to 1 for municipalities in the state of Schaffhausen (compulsory vote).

Issuescant_k Number of state-level questions along with federal initiative on immigration, on February 9th, 2014,

(Institut du Fédéralisme, undated).

Instruments.

Information The entropy measure is index = -aln(a) - (1-a)ln(1-a), with a=% of yes and rather yes, from survey on

January 30th, 2014, in three linguistic regions (Kirchgässner and Schimmelpfennig, 1992; RTS, 2014).

Weather Amount of rain falling on average in states during voting days (Saturday and Sunday; DFI, 2015).

Table A.1: Sample characteristics

	Mean	Max.	Min.	Median	Mean	Max.	Min.	Median				
	For vote 2014-initiative)-initiative					
	Dependent variables ^{a/}											
Vote _{j,}	55.28	93.60	19.05	55.93	36.43	80.90	4.50	37.30				
Turnout _j	58.06	84.46	31.11	57.68	43.96	80.20	20.0	43.90				
-	•	Ind	lependent	variables			•					
Vote												
$Popdens_i$	394.59	12,024.92	0.83	157.47	354.80	11,171.63	0.31	144.22				
$Bornabroad_j$	7.96	33.22	0	6.97	5.75	25.88	0	5.02				
Women _j	50.69	59.28	36.36	50.76	50.75	60.61	18.18	50.76				
$Pop65^{+}_{j}$	17.60	75.00	5.75	17.23	14.55	50.00	2.50	14.23				
$Educsupprof_k$	13.07	16.73	8.96	13.42	10.74	14.71	7.39	11.16				
$EducUniv_k$	12.54	25.20	5.78	10.83	7.16	18.40	2.95	6.24				
$Urate_j$	2.29	12.50	0.00	2.00	1.19	7.97	0.00	0.99				
$Socialhelp_j$	1.71	11.45	0.00	1.27	-	-	-	-				
Foreigners _j	15.34	60.86	0.00	13.31	11.52	55.58	0.00	9.12				
$Religion_k$	11.41	17.37	0.00	12.01	6.70	11.88	2.77	7.01				
$EU for eign_j$	76.53	100.00	0.00	79.70	-	=	-	-				
NonEUforeignj	3.95	37.86	0.00	2.44	-	-	-	-				
$CBWorkers_{j}$	4.23	72.01	0.00	0.56	2.77	67.48	0.00	0.00				
Housevac _j	1.15	13.12	0.00	0.74	1.66	61.11	0.00	1.07				
$Rental_k^{\mathrm{b}/}$	1,262.17	1,796.00	918.00	1,220.00	1.006.00	1.348.00	766.00	997.00				
$ToWorktime_k$	27.62	45.13	19.07	28.68	16.46	26.78	7.65	17.82				
$Vehperkm_k$	76.35	229.34	31.95	63.05	62.92	211.56	27.14	53.25				
Nat.Area _j	39.89	97.49	0.00	36.86	39.47	97.50	0.00	36.50				
Turnout												
$Turnout2009_j [1999_j]$	52.11	87.81	22.39	51.80	44.15	86.2	11.0	44.3				
$Lang french_j$	0.294	1	0	-	0.296	1	0	-				
Langitalian _j	0.066	1	0	-	0.064	1	0	-				
$Langromansh_j$	0.016	1	0	-	0.010	1	0	-				
UDC_j	30.07	100.00	0.00	29.95	25.15	86.40	0.00	23.92				
Issuescant _k	0.65	3	0	- 141 11 . 1	0.61	3	0	- 000)				

^{a/} Both dependent variables are very close to normal distribution with small skewness (Turnout at 0.252; yes votes at -.089) and kurtosis (Turnout at 3.679; Yes-votes at 2.692). ^b The real increase for rentals from 2000 to 2013 is 14.93%.

Table A.2: Mean and Standard Deviations – Economic areas

	Economic	Activity ^{a/}	Ec	conomic Secto	Net Revenues ^{b/}		
	Low firm High firm density density		Intense Secondary	Intense Tertiary	Intense Primary	Low	High
Foreigners _j	11.7 (6.6)	10.5 (8.2)	15.2 (7.4)	25.2 (10.0)	7.9 (4.9)	10.3 (6.6)	14.9 (7.1)
CBWorkers _j	4.2 (8.4)	4.5 (9.6)	4.3 (8.8)	7.6 (11.4)	1.4 (3.7)	3.5 (8.0)	6.4 (10.3)
ToWorktime _k	28.0 (4.5)	26.3 (6.3)	27.5 (5.0)	27.5 (4.3)	27.9 (5.6)	27.4 (5.4)	28.2 (3.2)
Vehperkm _k	79.5 (31.8)	65.7 (26.9)	76.3 (29.1)	88.8 (40.3)	66.8 (22.2)	70.7 (24.1)	94.0 (42.7)
Nat.Area _j	37.7 (19.9)	47.4 (23.3)	41.6 (21.0)	37.1 (22.0)	39.2 (20.2)	41.9 (21.2)	33.6 (19.4)
n	1815	527	1140	524	678	1777	565

^{a/} Municipalities with less or more than 100 firms per 1,000 inhabitants. For full sample, mean=84; max=333; mean=20. ^{b/} Net revenue per inhabitant above and below Fr36,000.- (Fr35,866.- at national level).

Appendix B: Results for turnout in joint equation estimations.

Table B.1: Turnout_j for Table 4

	R	Role of economic growth externalities.							
	1.	2.	3.	4.					
d	24.13***	24.13***	24.10***	24.10***					
a	(0.81)	(0.81)	(0.81)	(0.81)					
Turmout 2000.	0.682***	0.682***	0.684***	0.684***					
Turnout 2009 _j	(0.01)	(0.01)	(0.01)	(0.01)					
I Dondons.	-0.249***	-0.249***	-0.262***	-0.261***					
<i>LPopdens</i> _j	(0.08)	(0.08)	(0.08)	(0.08)					
Down about ad.	-0.086***	-0.086***	-0.083***	-0.084***					
$Bornabroad_j$	(0.03)	(0.03)	(0.03)	(0.03)					
I an afranch	-0.099	-0.101	-0.171	-0.180					
Langfrench _j	(0.23)	(0.23)	(0.24)	(0.24)					
I an aitalian	-4.025***	-4.031***	-4.085***	-4.055***					
Langitalian _j	(0.44)	(0.44)	(0.44)	(0.44)					
I an anom anala	-2.138***	-2.133***	-2.294***	-2.317***					
Langromansh _j	(0.74)	(0.74)	(0.74)	(0.74)					
UDC.	0.009	0.009	0.008	0.008					
UDC_j	(0.01)	(0.01)	(0.01)	(0.01)					
Cala affla	2.318***	2.311***	1.999**	2.032**					
Schaffh	(0.89)	(0.89)	(0.89)	(0.89)					
Inguing a graph	0.598***	0.597***	0.616***	0.614***					
Issuescant _k	(0.14)	(0.14)	(0.14)	(0.14)					
Adj. R ²	0.605	0.605	0.605	0.605					
n	2342	2342	2342	2342					

S.E. in parentheses; ***, **, * significant at 1%, 5% and 10%.

Table B.2: Turnout_j for Tables 5 and 6.

	Externalit	ies and immig	grants under	."	itions and char	nges in them for	r 2014 on	
		mic contexts:		immigration initiative and federal policy: Table 6				
	1.	2.	3.	1. initiative: effects in 2000	Changes for 2014	2. policy: Effects in 2000	Changes for 2014	
d	24.20***	23.97***	23.99***	19.77***	13.3***	17.91***	6.719***	
Turnout 2009 _j	(0.81) 0.684***	(0.81) 0.684***	(0.81) 0.684***	(0.76) 0.718***	(1.20) -0.033*	(0.80) 0.742***	(1.26) -0.059***	
$LPopdens_j$	(0.01) -0.263*** (0.08)	(0.01) -0.258*** (0.08)	(0.01) -0.257*** (0.08)	(0.01) 0.029 (0.10)	(0.02) -0.290** (0.14)	(0.01) -1.325*** (0.10)	(0.02) 1.051*** (0.14)	
$Bornabroad_j$	-0.083***	-0.084*** (0.03)	-0.085*** (0.03)	0.250***	-0.334*** (0.05)	0.670***	-0.751*** (0.05)	
Langfrench _j	-0.173 (0.23)	-0.161 (0.24)	-0.159 (0.24)	1.787*** (0.29)	-1.968*** (0.39)	3.959*** (0.30)	-4.180*** (0.41)	
Langitalian _j	-4.173*** (0.44)	-3.882*** (0.44)	-3.887*** (0.44)	0.141 (0.53)	-4.180*** (0.73)	8.339*** (0.52)	-13.010*** (0.77)	
Langromansh _j	-2.285*** (0.74)	-2.355*** (0.74)	-2.384*** (0.74)	3.337*** (1.05)	-5.662*** (1.35)	2.262** (1.10)	-4.335*** (1.41)	
UDC_{j}	0.006 (0.01)	0.011 (0.01)	0.011 (0.01)	-0.019*** (0.01)	0.027** (0.01)	-0.048*** (0.01)	0.044*** (0.01)	
Schaffh	1.902** (0.89)	2.110** (0.89)	2.220*** (0.89)	7.285*** (1.02)	-5.238*** (1.44)	2.837*** (1.07)	-1.326 (1.51)	
Issuescant _k	0.598*** (0.14)	0.632*** (0.14)	0.633*** (0.14)	-0.469*** (0.14)	1.085*** (0.22)	0.114 (0.14)	0.440* (0.23)	
Adj. R ²	0.605 2342	0.606 2342	0.606 2342	0.7	784 524	0.6	585 534	

S.E. in parentheses; ***, **, * significant at 1%, 5% and 10%.