



# Taxing Expats. Instrumental versus Expressive Voting Compared

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## Abstract

It is common knowledge that mobile individuals are difficult to tax. Governments accommodate these difficulties by granting special tax reductions to mobile individuals as it is expedient to get some tax revenue from these individuals rather than to lose them as tax payers completely. Taxing according to expediency is, however, criticized by ordinary tax payers who claim that the basic principles of tax equity are consequently violated. Therefore governments have to solve a difficult trade off between the two goals in order to survive. The variables entering in this optimization process remain disguised in the normal case of a representative democracy. In a direct democracy, however, the trade-off between tax expediency and tax equity principles is revealed by voters.

In this paper we distinguish between situations where voters vote instrumentally in favour of tax expediency and where voters vote expressively in favour of equity principles.

A popular vote in the canton of Zurich of 2009 serves as a natural experiment for testing the instrumental versus expressive voter hypotheses. We find that instrumental voting prevails in small rural municipalities and expressive voting in larger cities. As expressive voters are in majority in the canton, they exert a cross border externality by imposing their will on the majority decisions of the smaller municipalities. This observation may be of a particular importance when, on the federal level, expressive urban voters may impose their will on the voters of rural cantons voting instrumentally.

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*„Ita enim fieri solet,  
ut si uno loco nimis onerentur mercatores,  
alia sibi emporia quaesitum eant.“*

S. PUFENDORF (1672)

# **Taxing Expats. Instrumental versus Expressive Voting Compared**

by

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and

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## **1. Taxing Expats Differently**

There is huge literature on the taxation of mobile factors. Most of it is related to the taxation of capital and capital income. The investigations are mostly normative and often related to the European Union where free movement of capital has been introduced with the single market in 1992. The question was and still is how governments should react on tax evasion in the single market in order to prevent mobile capital from escaping taxation (s. e.g. SINN, 2003, ch. 2).

In this paper we ask how governments decide on personal income taxation when taxpayers are differentially mobile. The tax laws of the United Kingdom e.g. distinguish between resident taxpayers and taxpayers who have only a temporary status, often so-called “expats” coming from abroad and living for some time in the UK. Such persons may opt for and obtain a so-called resident “Non Dom”

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status and hence benefit from a regulation which dates back to the first British income tax law of 1799. Based thereupon wealthy subjects landed in the British Dominions were taxed on a "remittance basis" when they returned home. They had only to declare what they transferred home and what they earned at home but not on what they earned abroad. This old rule has been extended subsequently to all persons who have their family roots outside the UK. It survived in essence up to the present. The actual British legislation requires, in addition, that a lump-sum tax be paid, this tax increasing with the length of stay and hence decreasing mobility. It is planned that "Non Doms" will have to pay 30,000 £ annually for a stay beyond 7 years and 50,000 £ annually if they stay longer than 12 years.

Similar taxes on "expats" are known in Belgium and in Austria. The United States Government, on the other hand, does not differentiate among forms of residence. It taxes U.S. citizens independently of their residence worldwide. The German government distinguishes between residents and non-residents, but not between different permanencies of residence. All residents are taxed on all their domestic and foreign revenues according to the residence principle. Non-residents are taxed according to the sources principle for revenues which are generated in Germany.

Switzerland also applies the remittance principle as an option for non-working foreigners with residence in Switzerland, i.e. individuals who are presumably more mobile because they live from (worldwide) rents and capital income compared to those who live mostly from labour income earned in Switzerland and who are therefore less mobile.<sup>1</sup> But the authorities check whether the declared amount of rents and capital income is reasonable compared to taxpayer's living standard.

If the income declared is unreasonably low compared with taxpayer's standard of living in Switzerland, tax authorities assess taxation on the latter. The assessed living standard or consumption then serves as a base on which the ordinary

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<sup>1</sup> Art.14 Direct Federal Tax Law (*Bundessteuergesetz über die direkte Bundessteuer, DBG, SR 642.11*). Art. 6 Tax Harmonization Law (*Steuerharmonisierungsgesetz, StHG, SR 642.14*), Ordinance on Lump-sum Consumption Taxation (*Verordnung über die Besteuerung nach dem Aufwand, SR 642,123*) of 1990. The proposed new regulation of 2011 restricts lump-sum consumption tax to a minimal tax base of 400.000 CHF (*Botschaft zum Bundesgesetz über die Besteuerung nach dem Aufwand vom 30. Juni 2011*).

progressive income tax schedules for local, state and federal income tax are applied under the presumption that the income earned abroad is taxed there (in the country of origin) and regarded as surrogate for possible tax obligations in Switzerland. If, however, the revenues from rents and capital located in Switzerland are larger than the assessed living expenses those become the relevant tax base.<sup>2</sup> This latter case is, however, rare for the typical foreign capitalist applying for residence in Switzerland has his wealth abroad. In practice most applicants fall into the intermediate class of the standard-of-living based taxation. A rule for the assessment of the tax base is actually five times the rental value of the residence to which the local governments add some increments practically up to the point where the taxpayer will consider leaving for another community in Switzerland or move to a foreign country.<sup>3</sup> In reality the living expenses are assessed in negotiations locally and endorsed by the cantonal government over a foreseeable amount of years. In this sense one can say that these individuals are subject to a *“lump-sum consumption tax”*.

The paper is organized as follows: Section 2 describes the motivation of expats to come to Switzerland and to opt for lump-sum consumption taxation. Section 3 characterizes the tradeoffs that a Leviathan and a representative government face respectively when they decide between special taxation for expats and ordinary taxation according to equity criteria. In section 4 we focus on the choice between ordinary taxation and special expat taxation in a direct democracy. We shall develop the central hypothesis derived from the economic theory of voting and apply it to the recent vote on lump sum consumption taxation in the canton of Zurich. Voting recommendations are interpreted in section 5, and the econometric estimates follow in section 6. Conclusions are drawn in section 7.

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<sup>2</sup> With the effect that taxpayers have an incentive to keep their properties abroad. British Non Dom Residents, in contrast, can tax exempt their commercial investments in the UK.

<sup>3</sup> For a general legal interpretation see HÖHN and WALDBURGER (2009). Under the announced new Swiss legislation the relevant tax base is seven times the rental value.

## 2. Why Do Expats Settle in Switzerland?

Up to 1999 only 3000 non-working foreign residents of Switzerland have opted for lump-sum consumption taxation in Switzerland. This number seems negligible compared to the total number of about 7 million inhabitants of which about one half pays direct taxes. But the number of lump-sum taxed individuals has increased to 5,000 until 2008 and is expected to increase still further mostly due to decreasing Swiss immigration regulations, to increasing taxation abroad, to unpredictable foreign regulations and to other political uncertainties. The majority of those who apply for lump-sum consumption taxation come from the UK, the Netherlands, Germany and France. The overall federal, state and local revenues from lump-sum consumption tax amount to about 580 million CHF ( $\approx$ 380 million Euro) or 0.1% of the GDP, almost 5% of the total tax bill in 2008. On the average a lump-sum taxed person paid taxes of about 116,000 CHF ( $\approx$ 75,000 Euros); the highest tax was 23,211 million CHF ( $\approx$  15,100 million Euro) in 2008.<sup>4</sup> Hence despite of their preferential treatment these people pay taxes which are far above of what an average Swiss taxpayer pays. Therefore especially small municipalities are highly interested in attracting lump-sum taxed individuals.<sup>5</sup>

In a survey we have asked expats to enumerate their reasons for coming to Switzerland and opting for lump-sum consumption taxation. We have reached 126 individuals of the upper tail of the 5,000 non-working foreign residents who opted for lump-sum consumption taxation and asked them for their motives to be rated from 1 to 6 for coming to Switzerland (figure 1).<sup>6</sup> The respondents gave 5 to 6 points to the following factors: Security, quality of life, political stability, reliability of the authorities and taxes. Though taxes are named last of the top five factors, they are not of lesser importance. In fact, all five top factors are closely linked to each other. Where authorities are reliable and the political system is stable, tax obligations are reasonable and reliable and the quality of life is positively affected. Therefore all five factors have to be seen as a bundle.

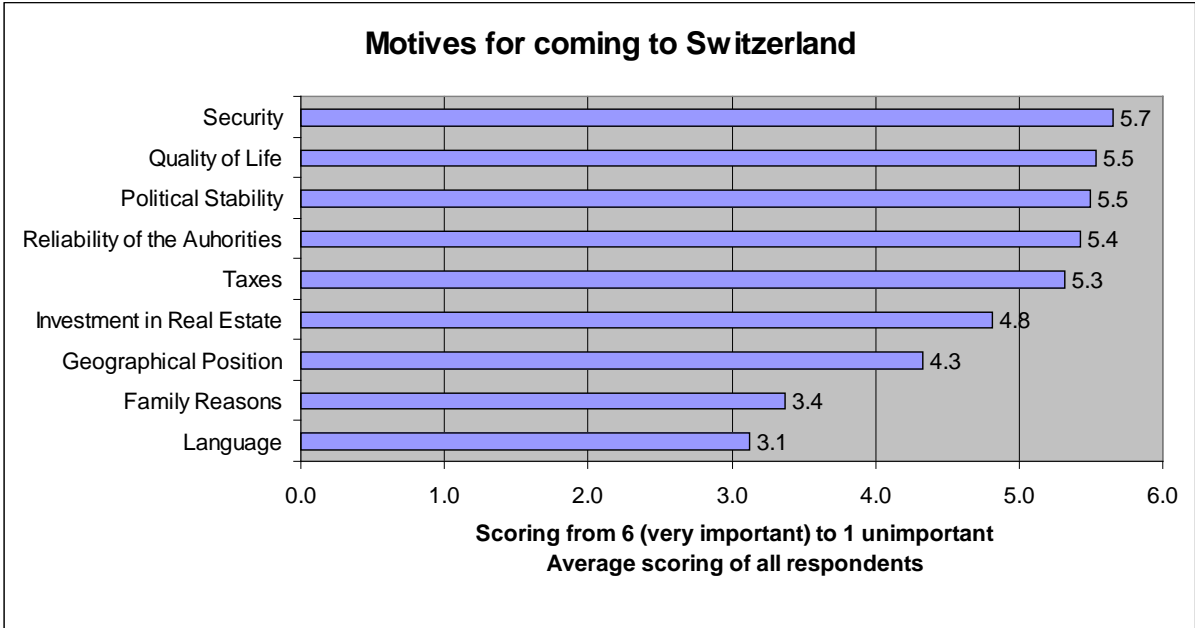
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<sup>4</sup> Raw data from *Finanzdirektorenkonferenz FDK* (2009).

<sup>5</sup> Due to the fact that expats are high income earners and that the federal income tax is highly progressive, about three fifth of the tax revenue accrues to the federal government, two fifth to cantonal and local governments.

<sup>6</sup> The raw data were delivered by *Mehrwert Schweiz* from a survey conducted in July and August 2009.

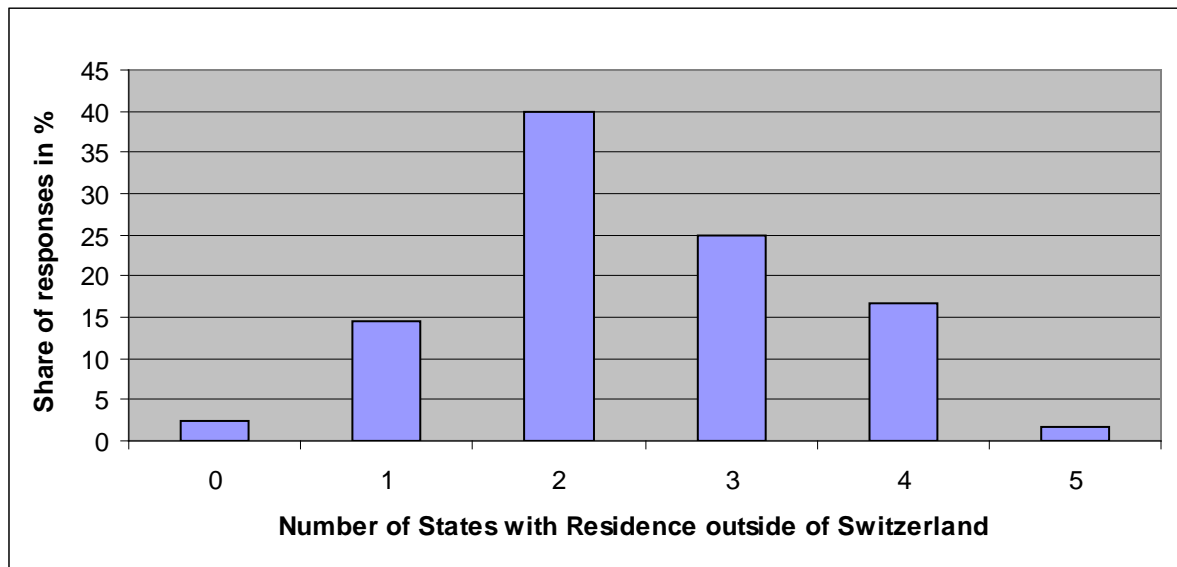
Figure 1: Weights given to reasons of residence in Switzerland



Source: Own compilation, see note 6.

The justification to tax expats differently rests on the assumption that they are indeed more mobile than other taxpayers. A first indicator of a comparatively high mobility is that 70% of the respondents live for less than 7 years in Switzerland and 57% for less than 4 years. Another indicator is that 98% of the respondents own one or more residences abroad that they could use as a substitute residence if the tax rules deteriorate in Switzerland (figure 2). Finally we asked how many countries they could consider to live in if the lump-sum consumption tax is abolished. 80% of the respondents have quoted at least one country, many quoted more than one.

Figure 2: Real estate owned by the respondents outside of Switzerland in %



Source: Own compilation, see note 6.

### 3. Revenue Maximizing versus Equitable Taxation

A revenue maximizing Leviathan would tax all individuals down to their level of subsistence. As some of these individuals might escape taxation he would further on consider each individual's mobility and first assign the highest tax rate to the most immobile individual and then, down the scale, tax each individual at gradually lower rates up to the last fully mobile individual who pays no tax. Such an individualized tax would, however, create excessive administration costs. As an alternative Leviathan would compromise and bundle tax payers in different tax classes until the administrative cost of an additional tax class equals the marginal benefits.<sup>7</sup>

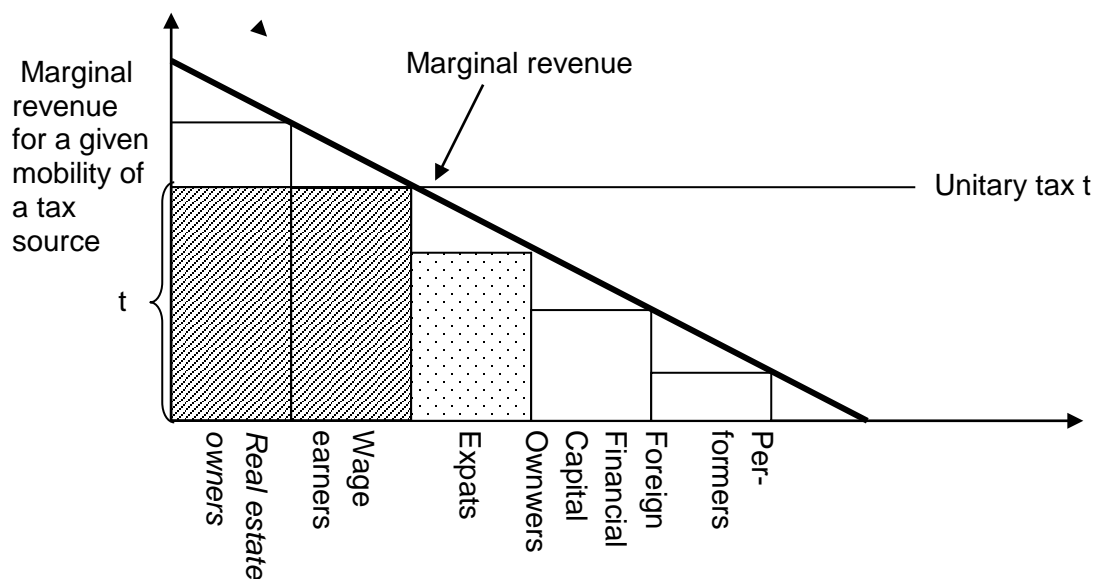
In figure 3 five tax classes with standardized tax revenue are considered: In the first class are the most immobile individuals, presumably the real estate owners. Leviathan would tax away their full land rate. A little more mobile are wage earners in class two. They can migrate between jobs. But they may also have acquired specific local skills reducing their mobility. Therefore they will be taxed less than real estate owners, but still more than expats of class three who live

<sup>7</sup> KEEN (2001) shows that tax maximizing competition between two countries generates similar results. We used the model above to compare government's and voters' choice in a better way.



exclusively from capital. Non-working expats have no locational productivity advantages. They can earn the same gross income anywhere in the world. Only tax rates count for their locational decision including those amenities that are related to taxes as explained in section II. Therefore it makes sense that Leviathan would impose on such individuals a reduced tax such as the lump sum consumption tax. Next comes foreign financial capital deposited anonymously in a bank whose ownership may, however, be revealed upon request from foreign tax authorities according to the recently extended OECD rules. Insofar even financial capital cannot fully escape taxation. Most mobile are, presumably, people such as travelling showmen, opera singers, foreign administrative board members, speakers at conferences etc. who stay only for a few hours or days in a country. They are taxed least of all, often directly at the source to assure that the tax is paid. The city of Zurich, for example, imposes a tax of 17% on the honorarium of a foreign opera star for a performance given one evening though his/her regular income taxation might require the top rate of 36.6% (for local, cantonal and federal income tax).

Figure 3: The Law of Declining Imposition



Source: Own illustration.

Leviathan's revenue maximizing taxation process according to mobility will, however, clash with the principles of equitable taxation e.g. by SCHANZ, HAIG and SIMONS requiring that all revenues accruing to an individual have to be added up independently of source and have to be subjected to the same individual rate.<sup>8</sup> Constraining taxation to the principles of equity has obviously a cost to Leviathan. He will get less revenue for he can no longer differentiate between an individual's revenues from land and from labour. Both have to be taxed at the same individual rate  $t$  in figure 3. The tax revenue shrinks from the total area under the step curve to the area in the hatched quadrangle on the left hand side of figure 3. All individuals with higher mobility (on the right hand side) will escape uniform taxation  $t$ . So expats will leave the country and cause a loss of revenues in the size of the dotted area. Of course the uniform tax rate  $t$  could be reduced so far that all expats remain in the country. But this might reduce revenues from wage and property owners and hence total revenues.

What should the government do? Should it pursue revenue maximizing tax differentiation of Leviathan or rather observe the principle of equitable taxation by SCHANZ, HAIG and SIMONS? Interest groups of labour and of land owners will push towards taxation according to equity principles, whereas groups who are interested in public spending will search to promote revenue maximizing tax differentiation in order to widen the budget constraint for higher expenditures. Ordinary taxpayers might also welcome special treatment of expats if the latter's contribution sensibly reduces their own tax burden. All in all the government has to solve a difficult trade-off in order to survive in politics.

#### **4. Theoretical Considerations on Voting**

This difficult trade off can, however, be resolved and revealed in a popular vote where voters express their preferences directly in the ballot box. To trigger a popular vote is particularly easy in the canton of Zurich. It requires only 6,000 signatures or about 0.7% of the total electorate. In 2006 the social democratic party of the canton of Zurich succeeded to launch a popular initiative whose vote

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<sup>8</sup> SCHANZ (1896), HAIG (1921), SIMONS (1938).

was held February 8, 2009. As we shall see later in this paper, the voters of the canton of Zurich approved the initiative, i.e. they repealed the lump-sum consumption tax.

But what were the motives of the voters? The rational voter hypothesis (MUELLER, (2003, ch. 14) says that voters vote according to their expected benefits. They maximize their expected net return  $R$  resulting from the probability  $P$  that their vote is decisive and the expected benefits  $B$  of voter's preferred alternative over the less preferred alternative and the costs of voting  $C$ . The resulting equation according to DOWNS (1957) and RIKER and ORDESHOOK (1968) is:

From an instrumental point of view, voters (who vote) have good reason to vote against of the social democratic initiative. For an incremental expat generates above average tax revenue (see section 2). He reduces the tax burden of the other voters or he allows more utility generating public expenditures. From an expressive point of view things look differently. Voters merely want to express their sympathy with the initiators who are for equitable taxation a characteristic which is hardly seen as negative. But by voting expressively voters bear an opportunity cost. They give up the opportunity of voting instrumentally. Whether these costs are large or small may depend of the size of the local community. In a large community the budget pool is large and expats' contribution to is not so sensible. In a small community an incremental expat to be attracted may contribute considerably to the budget. Therefore we expect that voters will, in majority, vote instrumentally casting a no vote (against the initiative) in small communities and expressively a yes vote in a larger community.<sup>10,11</sup>

## 5. Voting Recommendations

At this point it is illustrative to look at the voting recommendations given by the initiative committee to the voters. The view that more tax revenues could be raised by subjecting expats to a separate tax was dismissed by the committee. They claimed that the financial contribution of the lump-sum consumption tax to the budget is not more than a „peanut“ of 6 million CHF to a total of 4,800 million

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<sup>10</sup> Under these circumstances, the fact that the vote is on a cantonal basis and all votes are counted in the aggregate does not affect voters' decision on the individual level. The level of aggregation – local or cantonal – is a constitutional question and not a question of voting behavior.

<sup>11</sup> For a theoretical treatment of the expressive voter hypothesis see BRENNAN and LOMASKY (1993) as quoted above. Unfortunately the empirical literature on expressive voting is very scarce. However, an early experiment with donations vs. voting has been executed by CARTER and GUERETTE (1992) with little empirical support for the hypothesis. More successful was a similar experiment accomplished by TYRAN (2004). He finds no evidence for the low cost hypothesis as a determinant of voting decisions, but rather supposes that voters tend to approve a donation if they expect others to follow. FISCHER (1996) shows in an experiment that individuals vote more expressively the smaller the chance of being decisive. SOBEL and WAGNER (2003) find that the amount of U.S. state governments' welfare payments is inversely related to the probability of a representative being the decisive voter. All in all experimental literature dominates. The only study on political voting (that by SOBEL and WAGNER) refers to parliamentary voting which is close to small group voting and therefore not comparable with our natural experiment.

CHF (2005) and that conversely a sensible revenue loss will not (yet) arise when the lump-sum consumption tax is abolished and expats emigrate.<sup>12</sup> The supporters of the initiative suggested that the citizens of Zurich can afford to lose the expats and that there is scope for voting expressively in favour of horizontal equity in taxation. They conceded, however, somewhat paradoxically, that the revenues from the lump-sum consumption tax might grow in the future and eventually become a relevant budgetary contribution. Therefore the decision to abolish the scheme should be taken rather now than later.<sup>13</sup> <sup>14</sup> Though the logic of this argument is questionable it was nevertheless important in the voting process in particular in small communities as it should help to pull as many votes as possible from the opponents' to the supporters' side of the initiative.

In addition the cantonal government raised its voice. A majority of them recommended the voters to vote no. This is not surprising as in their small committee every CHF counted. Every incremental CHF allowed them to spend more money. They explained their voters that the special expat taxation represents a locational advantage of the canton of Zurich vis-à-vis other cantons who would welcome the taxpayers expelled from Zurich in their own cantons. Hence government and parliament recommended the voters of the canton of Zurich to vote no.

## **6. Econometric estimates**

### *6.1. The Data*

Despite of government's recommendation to repeal the popular initiative the vote was a disappointment for the government. On February 8, 2009 the electorate of the canton Zurich was called for a vote on continuing or abolishing lump sum consumption tax. A majority of 52.9% of the voters and 90 of the 171

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<sup>12</sup> This figure seems to be too low. Following our estimates, the state and local revenues of the canton of Zurich encompassed about 15 to 20 million CHF in 2005. Actually, in 2008, the Zurich lump-sum consumption tax brought a sum of 32 million CHF of which 13 mill CHF accrued to local communities, 12 million CHF to the canton and about 7 million to the federal government.

<sup>13</sup> Source: *Regierungsrat des Kantons Zürich, ed., Abstimmungszeitung des Kantons Zürich vom 08. Februar 2009.*

<sup>14</sup> Another argument that land prices would rise due to immigrant expats was less convincing, as the 400 Expats who immigrated in 2008 were only 0.2% of the total of 108,000 net immigrants into Switzerland in 2008.

municipalities voted in favour of the initiative. Hence from 2010 onwards the 201 foreigners falling under the provision of the lump-sum consumption will either have to pay the ordinary income and wealth tax or to take residence in another canton or abroad.<sup>15 16</sup>

According to our hypothesis the voting results differed significantly between urban and rural municipalities. In figure 4 one can see that two areas are standing out in voting “Yes” for the initiative. The urban areas of Zurich city and Winterthur voted with over 60% for the abolition of the tax. These two city-municipalities account for about one third of the canton’s inhabitants. Furthermore the ten most populous communities (e.g. USTER, WETZIKON, DIETIKON) voted in favour of the initiative. On the other hand the inhabitants of the 79 municipalities in which a majority of voters voted against the abolition of lump-sum taxation account for about 25% of canton’s inhabitants, among which mainly the thinly populated communities. Even from eyeball-statistics one can conclude that community size may have had an effect on the voting result. Voters indeed seemed to vote instrumentally in small communities and expressively in large communities.

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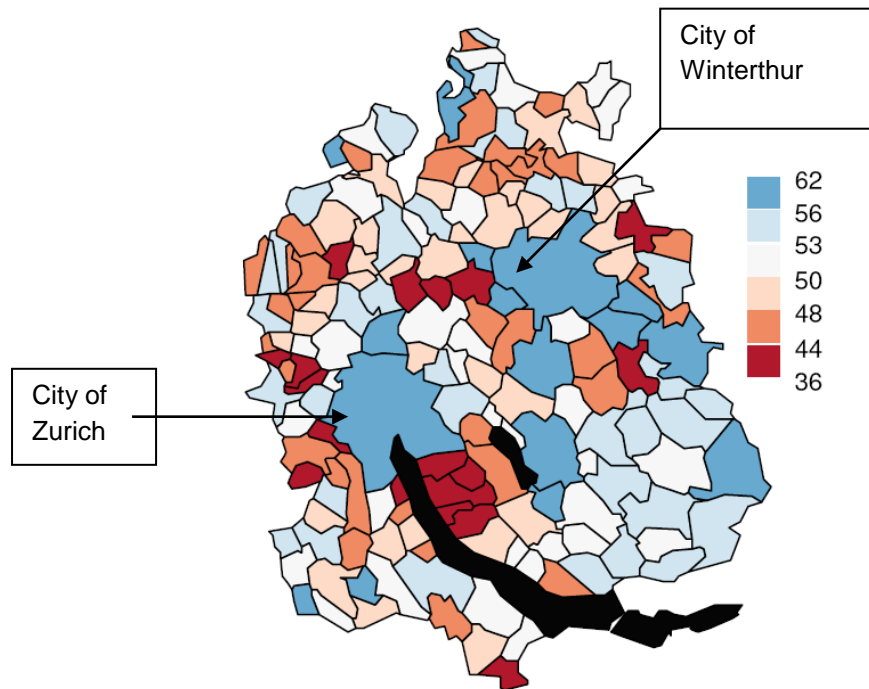
<sup>15</sup> Source: Zurich Statistical Office, 2009.

<sup>16</sup>The equity goal of the initiative to bring all individuals under the same tax law was obviously not achieved in the canton of Zurich. For actually 92 of the 201 foreigners taxed at lump-sum consumption tax in 2008 (about 50%) out-migrated presumably for tax reasons to other cantons or countries. Regarding those individuals, nothing has been achieved on equity grounds. They did not and do not pay the tax demanded by the majority of the voters, while all normal tax payers pay more and are on equity grounds neither better nor worse off than before. Therefore abolition of the lump-sum consumption taxation seems to be an inefficient means to achieve equity.

Another question is whether tax revenues will increase after the abolition of the lump-sum consumption tax. BRÜLHART (2010, 2011) is optimistic. Considering data of 2010 of Zurich, he concludes that public revenues might increase. These data are, however, not very reliable. It is one thing to calculate the tax loss from those who emigrated. But it is much more difficult, even impossible, to forecast how much taxes will be paid by those expats who remain in the canton of Zurich, as their foreign income and wealth will be taxed under the new regulation, while they were tax exempt under the old regulation. The more foreign income and wealth will be taxed under the new regime, the more outmigration will take place and vice versa. It is like chasing one’s own tail.

A more pragmatic approach is to look at cantons’ revealed preferences. From a static point of view one can say: In as much as cantons adopted the lump-sum consumption tax voluntarily in the past and hence benefitted from it (revealed preferences), they will lose when this tax is involuntarily abolished in the future. Cantons experience a once and for all loss. However, if the expat population grows over time, the losses from abolishing the tax will increase from year to year.

Figure 4: Voting results in canton Zurich, share of “Yes” votes for the abolition of the lump-sum consumption tax



Source: MOSER, 2009.

The 16 voting districts of the municipality of Zurich and the six voting districts of the municipality of Winterthur were aggregated to two single entities as both communities have only one budget each. With that we obtain 171 (instead of 185) municipal voting results and shares of municipal inhabitants.

But to plausibly identify expressive voting through community size we had to control for additional possible municipal influences on the voting results. For that reason we collected data which cover the economic, socio-demographic and partisan (affiliation) characteristics of the 171 municipalities. As economic indicators we chose the fiscal capacity index and the municipal unemployment rate. The fiscal capacity index is computed as tax income per capita and is thus an indicator for the fiscal strength of the community. The socio-demographic influences are measured by a variable that contains the municipal share of the elderly (above 80). As a partisan variable we computed the voting results for the SVP (right wing conservative party) in the last cantonal election. The SVP was meant to be the single major party that argued against the abolition of the lump-

sum consumption tax for foreign non-workers. Hence this variable covers symmetrically the political pros and cons in our econometric setting.

With these variables we are able to control for expressive/instrumental voting apart from political preferences later on. All municipal control variables date from either 2007 or 2008 and were drawn from the statistical office of the canton Zurich.

## 6.2. *Econometric Model*

In a first step we estimate a simple OLS model with municipal voting share of “Yes” votes as dependent variable and municipal variables (control variables and community size) as independent variables:

$$Vote\_Share_i = const + b1_n M_{in} + b2 Inhab\_Share_i + e_i, \quad (2)$$

where *Vote\_Share* represents the voting result of community and *i* and *M* accounts for *n* different control variables in *i* different municipalities. *Inhab\_Share* depicts the share of inhabitants to total cantonal residents of community *i*. The coefficients *b1* (due to *n* control variables) and *b2* capture the influence of the respective variables. In the basic model a constant variable *const* is included and *e* is the error term.

In a second model we estimate the same OLS model but we are excluding the municipalities of Zurich and Winterthur to control for the possible effect of outliers and hidden heteroskedasticity.

In a third model we estimate a robust weighted OLS model due to a heteroskedastic error term structure. In the setting of model one and two the error variance differed significantly due to municipal share of inhabitants: the greater the share of inhabitants the smaller the error variance. Furthermore, we tackle the effect of outliers without excluding the important city municipalities Zurich and



Winterthur. Hence the estimated error terms from simple OLS estimation served as a weight in our modified model.

### 6.3. *Results*

Table 1 shows the results of the three different above described model settings. In an additional fourth model we test for squared influences. As a control variable we chose the municipal financial capacity index (FCI) which is an indicator in the cantonal fiscal transfer system and represents thus a measure for the general fiscal strength of a community. Furthermore UNEMPL is the municipal unemployment rate, ELDERLY the share of residents above 80 years and VOTE\_SVP the municipal result of the SVP party in the last cantonal election.

In the first column the results of the basic OLS model, with all municipalities included, are displayed. As one can see, communities with more unemployed and a greater share of older residents voted in favour of the initiative and the abolition of the lump-sum taxation. Thus in our setting communities with a greater share of unemployed and older residents tended to more cheering/expressive voting. On the other hand the partisan (affiliation) variable VOTE\_SVP showed the expected negative sign. Communities that voted in favour of the SVP in earlier elections were significantly less willing to vote in favour abolishing tax privileges (as described above, the SVP, was the single major party that argued against the abolition of the lump-sum taxation for foreigners). Furthermore the financial capacity index (FCI) also had a significant negative sign. Hence citizens in wealthier communities tended to vote more in favour of a special tax treatment of non-working foreigners and thus voted instrumentally. They presumably expected a lower tax burden when wealthy foreigners immigrate into the community. Finally the share of municipal residents to total cantonal residents had a significant positive impact on the voting result. Thus our hypothesis seems to be corroborated that expressive voting prevails in larger communities as voters are confronted with a low cost decision there. As White's Test for heteroskedasticity gives no indication of an influenced error term structure the result seems robust.

It could be criticized that the large city-communities Zurich and Winterthur could distort the above observed effects. It must be remembered that the residents of

these two cities amount to a third of all residents of the canton and that they voted strongly in favour of the initiative. Thus in the second column the results of the basic OLS model excluding Zurich and Winterthur are displayed. These results may be interpreted as control results for the general hypothesis. As one can see, the influence of the municipal control variables remains the same. The influence of INHAB\_SHARE on the voting results is even stronger in the model excluding Winterthur and Zurich. The significance level is, however, still weak. But White's Test now gives an indication for heteroskedasticity in the data. Consequently, our two outliers Zurich and Winterthur seem to conceal a general heteroskedastic error term structure in the first model. For that we have to adjust model one due to outliers and heteroskedasticity. We therefore apply a weighted OLS model to tackle the outlier problem and include robust standard errors to contain the heteroskedastic error term structure in the next step (third model).

In the third column the results of the robust weighted OLS model are displayed. At this point one can see that INHAB\_SHARE is now even more significant as compared to Model 1 and Model 2. Furthermore the reliability of the model – measured through  $R^2$  – increases. The hypothesis that community size had an influence on the voting result is thus statistically proven and robust.

In the fourth column we test, additionally, our weighted robust least squared model with squared inhab\_share. The negative sign of  $\text{inhab\_share}^2$  implies a diminishing positive influence of the share of inhabitants on voting yes for the initiative. Our general hypothesis measured by inhab\_share is now even stronger (1.7935\*\*). The unemployment rate and the share of the elderly are no longer consistent. The overall soundness (or “reliability”) of the model increases. Hence, it is further proven that, in smaller communities, the rejection of the initiative is increasing over proportionally.

Table 1: Estimation Results

Endogenous variable:				
VOTE_SHARE				
YES	Model 1	Model 2	Model 3	Model 4
FCI	-0.1509***	-0.1496***	-0.1514***	-0.1514***
UNEMPL	0.8842*	0.6853	0.9018*	0.6789
ELDERLY	0.4650*	0.4297*	0.4643**	0.4031
VOTE_SVP	-0.0821**	-0.0727*	-0.0824*	-0.0694*
INHAB_SHARE	0.2876*	1.5862*	0.2375***	1.7935**
INHAB_SHARE^2				-0.0592**
const	67.9555***	67.3672***	68.0288***	67.46008***
R <sup>2</sup>	0.2426	0.2324	0.2800	0.3554

P-values: \*\*\*  $p < 0.01$ ; \*\*  $0.01 < p < 0.05$ ; \*  $0.05 < p < 0.1$

Source: Own compilation.

## 7. Conclusions

Expressive voting has become a challenging hypothesis since FIORINA's seminal paper of 1976. But empirical tests have been regarded as difficult. In this paper we are able to measure expressive voting due to data of a natural experiment. In the case of lump-sum consumption taxation in the canton of Zurich, expressive voting turned out to be prevalent in large cities where lump-sum consumption tax adds little to the budget whereas instrumental voting is more frequent in small communities where the budget is sensibly improved by the special tax attracting mobile individuals. Our tests on voting are in accordance with our theoretical hypotheses.

Voting in small versus large communities on lump sum consumption taxation has, however, to be distinguished from the outcome of the cantonal vote as a whole. Eventually the majority of all votes in the canton is decisive. As expressive voters in the large cities represent in a vast majority in the canton, it was easy for them to crowd out opposing majority decisions in small communities. Insofar the urban majorities exerted a cross-border externality on majorities of small communities. How far such cross border externalities are to be tolerated is a constitutional question to be discussed in the coming federal debate on the future of lump-sum consumption taxation.

At first sight, expressive voters seem to be the great winners of the vote in the canton of Zurich as well as possibly even on the federal level. They succeeded to secure that all inhabitants are taxed according to the same principles. But expressive voters' satisfaction may turn out to be short sighted as those who should pay the higher tax will emigrate and hence not pay their due share. Looking at inhabitants ex post, tax equity has (seemingly) improved. Considering inhabitants ex ante, however, tax equity has not changed by the vote. Tax equity runs away as a shy deer.

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