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Local Income Taxation and Migration

Estimating the Effect of Local Income Tax Rates on Migration in a Tiebout Setting

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Abstract

This study examines the impact of local income taxation on migration by using the Tiebout hypothesis. By studying the municipalities in the old Malmöhus region during 1992-2012 it is found that the level of a local income tax rate does not deter migrants, while a high tax rate relative to the average in the area does. The study identifies that the tax rate of neighbouring municipalities affects migration. Smaller municipalities are negatively affected by an increase in the tax rate of a larger neighbour. The results suggest that smaller municipalities are more sensitive to tax competition. The impact of local expenditures is less conclusive. By modifying the specification from expenditures per capita to per user, the results from the tobit estimation show that local expenditures on child care do have a positive impact on migration, which confirms earlier findings.

Keywords: *Tiebout, local income taxation, local public goods, migration, municipality*

Contents

1 Introduction

In Sweden taxes and tax levels are central in political debates, especially close to an election. The focus of the discussion is often on the central level tax rate, and not on the municipality tax (Linder, 2012). However, the local tax is important to discuss and evaluate since everyone is affected by it, one way or another. Either you work and pay income tax, or as a child you go to school or you may receive social assistance. In Sweden there are 290 municipalities with their own local government elected by the residents every fourth year. The income tax rate and the expenditures in the municipality are determined by the local government and vary across different municipalities and time. For instance, in 1992 the income tax rate was as low as 16.52 in Sjöbo, while the highest rate, 30.02, was observed in Malmö in 1998.[1] This study will focus on municipality income tax and its influence on people's behaviour concerning the decision where to live. Specifically, I will look at the casual effect of income tax rates on migration by using the Tiebout hypothesis. The hypothesis suggests that, simplified, people reveal their preferences for pubic goods, and the corresponding funding, when deciding which community to move to. Various aspects are taken into account, for example job opportunities, financial status, life situation, social life, and, the focus of this study and in the Tiebout hypothesis, what people prefer when considering local public good expenditures and income taxes. Some might prefer high expenditures by the municipality and correspondingly high taxes, and some low taxes and less expenditure. It all depends on individual's preferences and what maximises utility. For the municipality and its politicians, in short terms at least, they can only affect the income tax rate and public expenditures, not employment opportunities and accommodation possibilities. Therefore, it is important for local politicians to have knowledge about preferences concerning income tax rates and public expenditures. Since people choose the municipality which matches their preferences the best, it is important to evaluate the impact of neighbouring municipalities' characteristics as well. The study will therefore also examine the effect of income tax rates of neighbouring municipalities on the location decision.

The purpose of this study is to examine in what way taxes affect intra-

[1] Max and min from the data set used in this study.

country migration in a Tiebout framework. To evaluate this, I attempt to answer two questions;

- How do local income tax rates affect migration?
- Are there any differences in sensitivity among the municipalities?

This is done by analysing migration patterns in old Malmöhus region during the time period 1992-2012. The study also examines if there are any differences between migrants as a whole group and families with children and retirees. Additional, it analyses whether there are any changes in patterns after year 2000. The study contributes to the existing research on the Tiebout framework by analysing what effect municipality income tax rates have on residence choice. Most research on migration and taxes has been on property tax and this study complement the existing research by focusing on local income taxes. The importance of this field must be stressed, because if local politicians truly understand individual preferences and migration behaviour in terms of local tax rates and expenditures, municipalities would be able to customise the local public goods provided by the local income tax. Additional, knowledge of these preferences can increase efficiency in the use of tax revenues. If the tax revenues are not used efficiently, then the residents move to another municipality where they receive more for their tax payments.

The main responsibilities for municipalities are to provide child care, elderly care and education. They also provide culture, libraries and parks (The Swedish Government, 2013). However, education has not always been provided by the local government. Before 1991 education expenditures were provided by the central level (SKL, 2011). Since education is a large share of total expenditures, thus, affecting the tax rate, this study includes data from 1992 to 2012. The study is also restrained by the choice of municipalities to include, which is limited to the old region Malmöhus. The restriction to only include municipalities belonging to old Malmöhus is motivated by the fusion of Malmöhus and Kristianstad into Region Skåne in 1997. Before 1997, there were differences in tax rate at regional level, which possibly also influenced the decision of where to live. By only including old Malmöhus, disturbance due to regional differences would be avoided. Another argument to only include old Malmöhus in the analysis is the job market. In the area of Malmöhus, it is assumed to be possible to commute, hence, the job situation is being controlled for. What people actually do when receiving a job offer placed in a different municipality, cannot be examined and are outside the framework of this essay. This study relies on the assumption of old Malmöhus being one single job market and that it is possible to commute.

I find that the level of a local income tax rate does not deter migrants, while the income tax rate relative to the average income tax rate in the area does. The total effect is however negative since the impact of relative tax outweighs the positive of tax rate. Another important finding is that the tax rate of neighbouring municipalities affects the migration. For smaller municipalities the migration is negatively affected by an increase in the tax rate of a larger neighbour, and symmetrically, the migration of a large municipality is positively affected by an increase in the tax rate of a smaller neighbour. The results suggest that smaller municipalities are more sensitive to tax competition, similar to what can be seen on country level. These findings suggest that local politicians should be aware of what their colleagues in other municipalities do.

The disposition of the essay is organised as follows. In the next section theory will be presented. Section 3 discusses previous research briefly and the model is derived in section 4. In the following section, 5, the data is described and the results are shown and discussed in section 6. Finally, in section 7 concluding remarks are offered.

2 Theory

In economics it is common to assume that people maximise their utility. Given individual specific preferences people choose the most preferable bundle of goods given their budget restrictions. In terms of public goods the consumer pays taxes instead of paying a special price for a certain good. Some public goods are provided most efficiently on a central level, such as defence, and others on a local level, such as schooling and child care.[2] Then communities can offer different bundles of public goods and corresponding taxes, to finance the expenditures,

[2] For further discussion on efficiency of providing public goods on central versus local level, suggested reading Hindriks and Myles, 2013.

in order to attract households.

The Tiebout hypothesis states that, when there exist sufficiently many different communities, people choose the community which matches their preferences the best, i.e. which maximises utility. When choosing community, people reveal their true preferences. This is also referred to as "voting with their feet" (Hindriks and Myles, 2013). Or as Tiebout (1956, p. 418) himself explained, "the consumer-voter may be viewed as picking that community which best satisfies his preferences for public goods ... the consumer-voter moves to that community whose local government best satisfies his set of preferences". Tullock (1971) expands this theory by including taxes as an aspect people take into account when deciding which community to live in. Hence, Tullock emphasise that both taxes and public goods provided by the local government affects the decision (Cebula and Clark, 2013).

The theory relies on several assumptions. First, as already mentioned, there must be a sufficient amount of communities. Second, consumers are assumed to be able to choose freely between different communities. This assumption needs the housing market to be efficient in order to be fulfilled, meaning, the possibility of finding accommodation in the preferred community should not affect the decision. Third, when consumers receive income from employment, for the hypothesis to hold it is necessarily that all communities offer all employment prospects. If not, communities which offer better employment opportunities will be preferable, even if another one provides a more attractive bundle of public goods (Hindriks and Myles, p. 213). Hindriks and Myles identify the no transaction cost assumption in the housing market as the key assumption for the hypothesis. If there exists significant transaction costs, such as legal fees and real estate agent fees, the freedom of moving to another more preferable community will be limited.

The assumptions of the theory have been criticised as not being realistic. For example, the results from Downing et al (1994) was mixed and they doubted the application of the theory, since it assumes perfect knowledge of all bundles of public goods and taxes offered by the different communities. But, as Tiebout (1956, p. 423) explains, "Consumer-voters do not have perfect knowledge and set preferences, nor are they perfectly mobile. The question is how do people actually react in choosing a community?". Another discussed limitation of the model is the assumption of perfect mobility and ignoring that employment opportunities, most of them at least, are bounded to specific areas (Liebig, 2007). This in mind, Mieszowski and Zodrow (1989) suggest that for a given job the migration occur within nearby communities. Hence, to evaluate the effect of taxes and public goods provided, one should limit the analysis of migration within a commuting distance (Liebig, 2007).

Additional to the Tiebout hypothesis, John et al. (1995) argue that factors which affecting the migration decision can be categorised into two opposite effects, push and pull factors. Push factors are variables which motivate people to move out of an area, while pull factors attract migrants to the municipality. This will be further discussed in the Data section, where the variables will be categorised intuitively into push and pull factors.

To summarise, the choice of residence location depends on different factors and the Tiebout hypothesis suggests, when controlling for job market, that locally provided public goods and tax rates are important factors that people take into consideration. With this theoretical framework in mind, the econometric model will be derived in section 4, but next a brief review of previous research will be presented.

3 Previous research

Ever since Tiebout (1956) published his hypothesis it has been a topic for extensive empirical research. The theory has been further explained by Tullock (1971) and tested empirically (Epple, Zelenitz and Visscher, 1978; Gramlich and Rubinfield, 1982; Hamilton, 1976; Oates, 1969). The research on the Tiebout hypothesis can be divided into two fields, one which focus on the effect of the right-hand side; public goods provided by the local government, and the other one focus on the left-hand side; what finance the expenditures.

In the widespread discussion about expenditures by the local government and internal migration Banzhaf and Walsh (2008) find evidence of correlation between exogenous improvement in public goods and population density. Furthermore, this finding, that people tend to actually vote with their feet when facing changes in public goods, is supported by Bayer and Timmins (2007); Ferreyra (2007); Kahn (2000). Using Swedish data, Dahlberg et al (2012) examine the impact of local public goods on the community decision of households. They find that childcare is an important service when it comes to choosing where to live, while education and elderly care are not as significant. Furthermore, the Tiebout hypothesis has also been strongly criticised for its lack of real-world assumptions (Brewley, 1981).

As I previously mentioned, the other field focuses on the subject of financing public goods, i.e. taxes. The majority of research in this field focuses on property taxation, since in most countries, as in the US and Canada, property taxes are decided on a local level and are in many cases the most important income for the local government (Liebig, 2007). Islam et al (1991) examined the causality between property taxation and inter-municipality migration in Canada and found support for the Tiebout hypothesis. Grassmueck (2011) on the other hand, found evidence of people being attracted by higher property taxes and corresponding higher local governmental spending on public goods. However, Cebula and Clark (2013) concluded people were attracted by higher expenditures on schools and lower property tax rates.

This strand of research, local property taxation, has been extensive (Oates, 1969; Hamilton 1976; Cebula, 1979; Greenwood, 1985; Ross and Yinger, 1999; Epple and Nechyba, 2004) while investigating the effect of local taxation has been less numerous. However, Cebula and Clark (2012) took in to account both property and income tax rates when examining migration in a Tiebout framework, and the results showed people were attracted to states with high expenditures on schooling and low property and income taxes.

Little research has been made in the field of migration and income taxation, and Schmidheiny (2006) highlights this matter when investigating whether there exist segregated equilibriums due to income taxation when households differ in both preferences and income. His results suggest that it is more likely for rich households to move to a low tax municipality than for low income household. Moreover, Liebig et al (2007) examines the relationship between internal migration and income taxation in Switzerland. Their results supports the Tiebout framework, and the group who is most sensitive to different rates of local income taxation in their decision making where to live, is young college graduates.

To summarise, extensive research is done in Tiebout's aftermath. Economists have examined the relationship between locally provided public goods and internal migration, which, to some extent, supports Tiebout and the phenomena of voting with one's feet. Furthermore, the impact of property taxation has been well examined, though research on the effect of income taxation is still rare.

4 Model

First, individuals' decision process is determined by maximising utility. Hence, if another community generates greater utility, and there exists no migration costs, people move (Schmidheiny, 2006). This setting can be illustrated by

$$u_{ij} > u_{ic} \tag{1}$$

Where individual i choose municipality j over all other c if and only if it maximises utility.

Further, following Dahlberg et al and assuming preferences are additively separable, the utility function can be written as:

$$u_{ic} = a_c + z(\omega_{ic}) + m(ch_c, ed_c, e_c, o_c) + \epsilon_{ic} \tag{2}$$

Where a_c refer to community amenities, ω_{ic} is private good consumption, ch_c is childcare expenditure, ed_c is education expenditure, e_c is elderly care expenditure and o_c is other expenditures. ϵ_{ic} is the random component and i and c are index for individual i and community c. The individual faces the budget constraint:

$$y_i(1 - \tau_c) = p_c\omega_{ic} \tag{3}$$

Where y_i denotes income and τ_c is tax rate. The right side refers to consumption of private goods, i.e. price times quantity. This because local public goods and services are financed by tax revenues. When combining these two equations, (2) and (3), we get (Dahlberg et al, p.322)

$$u_{ic} = a_c + \beta_1 ln(1-\tau_c) + \beta_2 ln(p_c) + \beta_3 ln(ch_c) + $$
$$+ \beta_4 ln(ed_c) + \beta_5 ln(e_c) + \beta_6 ln(o_c) + \epsilon_{ic} \quad (4)$$

Were it is assumed $z(.)$ and $m(.)$ are logarithmic and y_i is ignored since individual income does not vary among different municipalities. The β_i coefficients are interpreted as marginal effects, for example, β_1 is the marginal utility of tax rate, to be precise, the percentage left of income after paying taxes.

Schmidheiny (2006) observed problems when ignoring the endogeneity problem inherited in aggregated data. Liebig (2007) explains further; "since community characteristics are themselves influenced by inhabitant choices, only community characteristics from the perspective of the individual household can be accepted as a given" (p. 811), which both use as an argument for preferring micro data on households when analysing the effect of tax rates on migration. However, this type of data is not always available. Grassmueck (2011) for example solves the obstacle of using OLS on aggregated data by cluster-correction of the standard errors. He argues that the residuals do not fulfill the independence assumption and are likely to be positively correlated when using aggregated data, i.e. they are clustered.

Since I use panel data on municipality level and not on individual level, generalising equation (4) gives

$$U_{ct} = X_{ct}^T \beta + \epsilon_{ct} \quad (5)$$

Where migration is assumed to occur when $u_{ij} > u_{ic}$. Then (5) can be rewritten in panel form

$$M_{ct} = \alpha_c + X_{ct}^T \beta + \epsilon_{ct} \quad (6)$$

Where M_{ct} is the migration, defined as immigrants minus emigrants, for municipality c at time t,X_{ct}^T is municipality characteristics at time t, ϵ_{ct} is the error component and α_c is a vector of unobserved municipality specific factors. Unobserved factors which affect outcome are bad news for estimations because of the bias omitted variable cause. However, since there exist no time subscript on α_c, the problem can be solved using the fixed effects model (Verbeek, 2012). In practice there are two methods, differencing and deviations from means. Deviations from means get rid of α_c by, as it says, subtracting the municipality means from the observations,

$$M_{ct} - \overline{(M_c)} = \alpha_c - \overline{\alpha_c} + (X_{ct} - \overline{X_c})^T \beta + \epsilon_{ct} - \overline{\epsilon_c} \tag{7}$$

And, since $\alpha_c = \overline{\alpha_c}$ the problem of unobserved fixed effects is gone. The other method, differencing, takes the difference between time periods. When dealing with data on more than two periods, the deviations from means (or within) estimation is preferred (Angrist and Pischke, 2009 p. 224).

Nevertheless, when using aggregated data endogeneity problem may arise. The error term captures the idiosyncratic variation in migration across municipalities and years. Municipality and time-specific shocks generate statistical inference problems due to clustering. This would not be a problem if the shocks are assumed to be independent across municipalities and time, but, as previously mentioned, I agree with Liebig and Schmidheiny and believe bad, or good, things happen in one municipality, it is also more likely it happens in the next year as well. For example, if some negative shock happens to Malmö in 1993 and tax rate is needed to be risen, it is more likely the tax rate is high the following year as well. This is called serial correlation in clustered panel data (Angrist and Pischke, p. 318) and has been examined by Kézdi (2004) and Bertrand, Duflo and Mullainathan (2004). When having a serial correlation problem standard errors must be adjusted for the correlation within clusters. Liang and Zeger (1986) suggest we cluster the standard errors by municipality, since it allows for unrestricted residual correlation within clusters, thus, the serial correlation problem is controlled for (Angrist and Pischke, p. 319).

However, Angrist and Pischke recommend at least 42 clusters in order to avoid underestimate serial correlation and Moulton problem.[3] They continue by providing a list of solutions to the problem when the number of clusters is less than 42, as in this study. These solutions are still under study and no consensus has yet emerged of which is the most preferable; it all depends on the

[3]Moulton problem is correlation within a group, such as test scores and school classes. For further explanation see Angrist and Pischke p. 308ff

case. Luckily, this issue is less severe in the case of serial correlation. Hansen (2007), in his study using data on Canada and the 10 provinces, found that the method suggested by Liang and Zeger (1986) worked reasonably good even with only 10 clusters.

To summarise so far, when dealing with panel data without data on individual level, endogeneity and serial correlation problem arise. Schmidheiny and Liebig recommend micro data, which Dahlberg et al uses. However, household-level data is not always attainable. If using aggregated data, one could solve the endogeneity and serial correlation problem by clustering the standard errors in a fixed effect model. In this study, the number of clusters is 20, which would be fine even if it is less than recommended 42. Expanding (6) we get

$$\begin{aligned} m_{ct} = a_c + \beta_1 \tau_{ct} + \beta_2 \tau i_{ct} + \beta_3 ch_{ct} + \beta_4 ed_{ct} + \beta_5 e_{ct} + \beta_6 o_{ct} + \\ + \beta_7 ur_{ct} + \beta_8 pop_{ct} + \beta_9 hp_{ct} + \beta_{10} \sum_{j=1}^{20} d_c \tau_{jt} + \epsilon_{ct} \end{aligned} \tag{8}$$

Where the new variables are τi_{ct} denotes tax index, ur_{ct} is unemployment rate, pop_{ct} is population and hp_{ct} is house prices in municipality c and year t. The interaction term $d_c \tau_{jt}$ is the neighbouring municipalities' tax rate, were d_c is a dummy and takes the value 1 if municipality j with τ_{jt} if it is a neighbour to municipality c, and zero otherwise. As mentioned, some municipalities have few neighbours and others have up to six, hence the summation sign.

An important remark has to be made. Transforming the variables into logarithmic form give rise to sample selection problem. The variable M_{ct} measures the migration, hence, it takes negative values when emigration exceeds immigration. This becomes a problem because the logarithmic function does not work mathematically with non-positive numbers, i.e. observations with negative M_{ct} either get ignored or treated as 0. Either way, this causes sample selection problem. One solution to sample selection problem here is to use Tobit model, which is preferable when the dependent variable either takes a continuous positive value or zero (for $M_{ct} < 0$) (Verbeek, 2010). Another model which takes this problem into account is the Heckman's sample selection model (Heckman, 1979). Simply put, there is a second equation which relates to the regression of interest, where the underlying equation determines whether the dependent variable is in the sample or not. In the context of this study, the underlying equation determines if the migration is positive and thereby enables the transformation into logarithmic form, thus, be included in the sample. Equation 9 illustrate:

$$\begin{cases} ln(M_{ct}) = X_{ct}^{T}\beta + \epsilon_{ct}, & \text{if } M > 0 \text{ in} \\ M_{ct} = X_{ct}^{T}\beta + \epsilon_{ct} \end{cases} \tag{9}$$

In practice Heckman model comes in two versions, maximum likelihood and a two-step estimator. In this study the two-step version is chosen, since it is preferable when applying on large data set and it is more stable than the ordinary maximum likelihood when the data are problematic (Johnsson, 2012). However, the disadvantage of using two-step is that it does not support the option of clustering the standard errors (STATA).

The drawbacks of using Tobit and Heckman model are that they do not control for unobserved factors, which were discussed previously. Moreover, when censoring the observations with negative migration lots of information is lost. It seems to exist a trade-off, if using fixed effect estimator the variables cannot be in logarithmic form, and by estimating with Tobit and Heckman model the unobserved fixed effects are ignored and informative observations are censored. Therefore, I will perform estimations using both models and analyse the results in terms of their advantages and disadvantages.

5 Data

As mentioned in Introduction, the analysis is limited to the old Malmöhus region with the municipalities Bjuv, Burlöv, Eslöv, Helsingborg, Höganäs, Hörby, Höör, Kävlinge, Lomma, Lund, Malmö, Sjöbo, Skurup, Staffanstorp, Svalöv, Svedala, Trelleborg, Vellinge and Ystad during the time period 1992-2012. All data are obtained from Statistics Sweden and adjusted into 1992's price level to avoid disturbance by inflation. Due to limitations in access of data, this study includes the aggregated migration of the municipality and not on individual level. This may cause potential bias in the estimations since I cannot control for from where individuals move and therefore not isolate intra-regional migration. It means that individuals who move to the region from outside the area are included in the data set. Therefore the estimation will also catch regional differences, and not only municipality preferences. However, since all municipalities in Malmöhus region are assumed to be within a commutative distance, one can argue that once an individual decides to move to the region, the municipality chosen as residence location is assumed to be preferred over the others in the region. Since the interest of this thesis is which municipality is the most preferred in terms of tax rate, I choose to use the available data but keeping in mind the potential problems that may arise when intra-regional migration is not isolated.

The municipality characteristics are summarised in table 1. Total number of observations is 420, 20 municipalities during 21 years. In the top of the table the dependent variable migration is summarised. Migration in this setting denotes the difference between immigrants and emigrants during a year. During 1992-2012 the 20 municipality have a mean migration of 269 persons per year. This means, there have been a positive migration flow in the area of interest. The standard deviation, 53.68, shows that the migration varies quite a lot among municipalities and years. The municipality with the highest average migration was, not surprisingly, Malmö. 2 222 more persons moved to Malmö than moved out and in 2009 it was as many as 5 554 persons. Bjuv, on the other hand, has the lowest average number of migration. However, the average migration is still positive but small with a surplus of 3 persons. In 1997 the migration was at its minimum, with -224, i.e. 224 more moved out of Bjuv than in. As a whole, all the municipalities have experienced a positive inflow of migrants during the time period.

In addition to total migration I will analyse the migration for those in age less than 15, which is a proxy for families with children, and those in age more than 64, which is a proxy for retirees. I do this in order to examine if there are any differences in preferences between people in different life stages. The migration and preferences of families are picked up by the migration of children, since it is reasonable to assume children move together with their family and not on their own (Grassmueck, 2011). Similar to total migration, the table shows that the average migration for families is positive, which means the area has obtained a positive inflow of families during the time period. Looking at the group within age > 64 the mean migration is less than the corresponding number for both the total sample and for families (age < 15), but it is still positive. In other words, a positive inflow of retirees has occurred in the area as well.

Table 1: Descriptive statistics: municipality characteristics ($N = 420$)

Variables	**Mean**	**(S.D)**	
Migration, Total	268.77	(53.68)	
Max	2 222.29	(351.03)	Malmö
Min	3.05	(26.26)	Bjuv
Migration, age < 15 (Families)	55.8	(120.73)	
Migration, age > 64 (Retirees)	3.45	(34.37)	
A.Tax rates			
Municipal tax rates (percentage)	19.67	(0.21)	
Tax index	10.00	(0.64)	
Min	92.11	(0.44)	Vellinge
Max	121.08	(5.32)	Malmö
B.Expenditures			
Total	1 391 022 664	(303546031)	
Percentage of total expenditure devoted to:			
Child care	15%		
Education	32 %		
Elderly care	28 %		
Other purposes	25 %		
C.Variables relevant for the empirical analysis			
Municipal tax rates (percentage)	19.67	(0.21)	
Tax index	100.00	(0.64)	
Education(per capita)	10270.39	(272.89)	
Elderly care(per capita)	9135.59	(432.40)	
Child care(per capita)	4922.15	(244.51)	
Other purposes(per capita)	7839.31	(670.56)	
House price	722.82	(10.91)	
Population size	43243.21	(565.01)	
Municipal unemployment (percentage of population age 18-65)	4.04	(0.26)	

Note: House price, which is the average price of a sold house in a municipality, is in 1000 SEK and adjusted into 1992 prices by a property price index. The expenditures per capita are in 1992 prices and adjusted by CPI, consumer price index.

Further, panel A summarises the tax variables. First, the average income tax rate in this area is 19.7. I introduced a tax index, which shows the income tax rate in one municipality relative to the others. 100 is the average, and if the tax rate in a municipality is greater than the mean, the corresponding tax index exceeds 100. By symmetry, if the tax rate is less than average, then the index is less than 100. Malmö is the municipality with the greatest index, 121, hence has 20 % higher tax rate than average. Worth noting is the standard deviation, 5.32, which is high relative to the general tax index and Vellinge. This shows a large variation in income tax rates in Malmö during the time period. Vellinge, on the other hand, has both smaller standard deviation and tax index, 92, which means the tax rate is 8 % less than average municipality. Income tax rate is assumed to be a push factor, meaning, all else equal, people prefer to pay lower taxes in order to attain higher disposable income.

Moving forward, panel B shows the expenditures. Total expenditure is 1 391 million SEK and by following Dahlberg et al, the expenditures are divided into four categories. 15 % is devoted to child care, 32 % to education, 28 % to elderly care and 25 % is devoted to other purposes, such as culture and social assistance. Expenditures on public goods, such as parks and infrastructure, are included in other purposes. Isolating the effect of public goods on migration is therefore difficult. The reason to only include child care, education and elderly care and disabled is because of data limitations, but also since the main responsibility of a municipality is to provide child and elderly care and education (Dahlberg et al, 2012). In a Tiebout setting, expenditure variables act as pull factors. Ceteris paribus, people prefer living in a community with greater public expenditure (Grassmueck, 2011).

Panel C summarise the variables included in the empirical analysis. First are the variables of special interest, tax rate and tax index. Second are the expenditure variables, where education is the largest expenditure item with 10 270 SEK per capita on average. The largest variance is however for other purposes, which reflects a large variation in expenditures which is not devoted to education, child care, elderly care both within and across different municipalities. The variable house price, 722 821 SEK, is the average price of a sold house in this area, adjusted into 1992's price level. There has been an extensive discussion whether the property tax is fully captured in the property value (Cebula, 1978; Oates, 1969; Edel and Sclar, 1974). If that is the case, then house prices should not have an effect on municipality decision. However, since property tax is not decided on municipality or state level in Sweden, in contrast to the US, I follow Dahlberg et al and include house prices in my empirical model as a control variable. The house price variable is more difficult to categorise as a push or pull factor. Obviously, if it is more costly to buy a house in one municipality, that municipality is less attractive, ceteris paribus. This however, relies on the assumption of measuring all regional amenities, which is not very realistic (Dahlberg et al, 2012 p.325). Additionally, if the municipality characteristics are capitalised into house prices, which have been extensively discussed, the interpretation is ambiguous and categorisation as push and pull factor is difficult to predetermine. There are large differences in population size between the municipalities, for example is the population size in Malmö 20 times bigger than in Svalöv. One can therefore argue population size is a relevant control variable because the largest municipality will have the greatest share of immigrants by construction (Dahlberg et al).

Last, there is the unemployment variable. During the years 1992-2012 the method of measuring unemployment has changed, and to avoid disturbance I chose to only include those who were openly unemployed and ignore students and people in various unemployment programs. The average rate in the area during the time period was 4 % of the population in age 18-65. Including the unemployment variable should not be necessary if the assumption of the area being one single local labour market, however, it is included because of other reasons. People may not want to live in a municipality with high unemployment due to individual preferences. For example, an individual may not want to live in an area with high unemployment because of preconceptions that there would be an increase in tax rate or higher criminality. Thus, unemployment is assumed to be push factor.

Additional to the variables in table 1, the empirical model will include tax rate in neighbouring municipalities. Tax rates of neighbours are included in the model in order to examine whether the surrounding municipalities' rates affect the choice of one particular municipality over the neighbouring. The numbers of neighbouring municipalities differ, and table 2 shows the relations. For example, Lund is surrounded by six municipalities, and Höganäs has only one neighbour.

In the econometric model the tax rate of all the neighbouring municipalities will be included, hence, for Lund there will be six neighbour tax rates and for Höganäs only one.

Table 2: Neighbouring municipalities

Municipality	**Neighbours**					
Svalöv	Bjuv	Helsingborg	Landskrona	Eslöv	Kävlinge	
Staffanstorp	Burlöv	Lomma	Lund	Malmö	Svedala	
Burlöv	Malmö	Lomma	Staffanstorp			
Vellinge	Malmö	Svedala	Trelleborg			
Bjuv	Helsingborg	Svalöv				
Kävlinge	Landskrona	Lund	Lomma	Eslöv	Svalöv	
Lomma	Burlöv	Staffanstorp	Lund	Kävlinge		
Svedala	Skurup	Trelleborg	Vellinge	Malmö	Staffanstorp	Lund
Skurup	Ystad	Sjöbo	Lund	Svedala	Trelleborg	
Sjöbo	Ystad	Skurup	Lund	Eslöv	Hörby	
Hörby	Eslöv	Höör	Sjöbo			
Höör	Hörby	Eslöv				
Malmö	Burlöv	Vellinge	Svedala	Staffanstorp		
Lund	Staffanstorp	Lomma	Eslöv	Sjöbo	Skurup	Svedala
Landskrona	Helsingborg	Kävlinge	Svalöv			
Helsingborg	Höganäs	Bjuv	Landskrona	Svalöv		
Höganäs	Helsingborg					
Eslöv	Lund	Kävlinge	Svalöv	Höör	Hörby	
Ystad	Skurup	Sjöbo				
Trelleborg	Vellinge	Svedala	Skurup			

6 Results

In this section the estimations will be analysed. There will be three groups analysed, group one is the total sample, group two is migrants age less than 15 (henceforth referred to as families) and the third is age over 64 (referred to as retirees). The first part presents the results for the whole time period, both with and without neighbours. The second part focuses on the migration patterns after the new millennium and the installation of the bridge between Sweden and Denmark, Öresundsbron. In the following part some variables are modified and additional estimations are offered. The fourth and last part analyses the results in terms of the theory discussed in earlier section.

6.1 Part one- Results of time period 1992-2012

Table 3 provides an overview of the main results from the four models, which only includes the estimates on the total sample. Column 1 and 2 are estimates from OLS, 3 and 4 from fixed effects, 5 and 6 from Tobit, 7 and 8 are the Heckman's estimates. 2, 4, 6 and 8 are the results from estimations including neighbours. More detailed tables including estimates for families and retirees are found in appendix.

Table 3: Overview of main results from OLS, FE, Tobit and Heckman,standard errors in parenthesis. ^{c} stands for clustered standard errors, *** denotes 1% significance, ** 5% and * 10% significance. (N=420)

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Tax rate	225.631***	236.703***	180.594***	192.655***	1.956***	1.846***	0.914***	0.807***
	(37.011)	(38.699)	(38.695)	(39.142)	(0.256)	(0.249)	(0.263)	(0.251)
	(80.858)^c**	(92.343)^c**	(77.689)^c**	(84.461)^c**	(0.458)^c***	(0.483)^c***		
Tax index	-60.294***	-65.098***	-47.866***	-60.704***	-0.378***	-0.354***	-0.174***	-0.158***
	(7.431)	(7.787)	(8.840)	(9.182)	(0.052)	(0.051)	(0.051)	(0.049)
	(19.374)^c***	(22.839)^c***	(18.670)^c**	(21.797)^c**	(0. 096)^c***	(0.103)^c***		
Expenditure	**variables**							
Child care	-0.029	-0.025	-0.076*	-0.097**	-2.237***	-2.081***	-1.469***	-1.332***
	(0.023)	(0.024)	(0.040)	(0.040)	(0.710)	(0.694)	(0.412)	(0.383)
	(0.024)^c	(0.024)^c	(0.033)^c**	(0.033)^c***	(0.884)^c**	(0.913)^c**		
Education	-0.004	-0.004	-0.026	-0.029	-3.774***	-3.499***	-0.304	0.210

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Table 3 – continued from previous page

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	(0.016)	(0.017)	(0.021)	(0.021)	(1.015)	(0.979)	(0.758)	(0.727)
	$(0.016)^{c}$	$(0.020)^{c}$	$(0.013)^{c*}$	$(0.013)^{c**}$	$(0.893)^{c***}$	$(0.969)^{c***}$		
Elderly	-0.006	-0.007	0.019	0.037	1.927**	1.829**	-0.005	-0.066
care	(0.013)	(0.013)	(0.029)	(10.029)	(0.759)	(0.737)	(0.478)	(0.449)
	$(0.015)^{c}$	$(0.016)^{c}$	$(0.020)^{c}$	$(0.017)^{c**}$	$(1.242)^{c}$	$(1.275)^{c}$		
Other	0.009	0.008	0.007	0.002	0.275	0.247	0.748**	0.728**
purposes	(0.009)	(0.009)	(0.013)	(0.013)	(0.652)	(0.631)	(0.334)	(0.308)
	$(0.010)^{c}$	$(0.011)^{c}$	$(0.008)^{c}$	$(0.008)^{c}$	$(1.185)^{c}$	$(1.150)^{c}$		
Control	**variables**							
House	-0.295***	-0.444***	0.036	-0.107	0.928	0.213	0.347	-0.099
prices	(0.108)	(0.121)	(0.366)	(0.370)	(0.568)	(0.572)	(0.288)	(0.276)
	$(0.171)^{c}$	$(0.225)^{c*}$	$(0.296)^{c}$	$(0.296)^{c}$	$(0.858)^{c}$	$(1.023)^{c}$		
Unemploy-	-72.734***	-65.673***	-69.829***	-63.398***	-0.872***	-0.780***	-0.341***	-0.266**
ment rate	(15.846)	(16.235)	(17.515)	(17.483)	(0.105)	(0.102)	(0.111)	(0.106)

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Table 3 – continued from previous page

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	(19.950)^{c}***	(18.444)^{c}***	(12.150)^{c}***	(9.648)^{c}***	(0.166)^{c}***	(0.146)^{c}***		
Population	0.011***	0.011***	0.030***	0.027***	1.140***	1.062***	0.930***	0.911***
	(0.000)	(0.001)	(0.005)	(0.005)	(0.261)	(0.281)	(0.132)	(0.132)
	(0.001)^{c}***	(0.001)^{c}***	(0.007)^{c}***	(0.007)^{c}***	(0.458)^{c}**	(0.450)^{c}**		
Intercept	2086.232***	2541.908***	885.778	2343.728***	22.543**	24.604**	2.370	0.358
	(323.397)	(370.476)	(629.113)	(686.665)	(10.576)	(10.441)	(6.424)	(6.096)
	(594.410)^{c}***	(883.901)^{c}***	(823.447)^{c}	(1148.747)^{c}*	(10.825)^{c}**	(11.601)^{c}**		
Neighbours	No	Yes	No	Yes	No	Yes	No	Yes
Logarithmic form	No	No	No	No	Yes	Yes	Yes	Yes
R^2	0.695	0.707	0.408	0.468	-	-	-	-

In table 3 column one the baseline results from OLS estimation are shown. Including the whole sample, both the tax rate and tax index are significant at the 1 % significance level with ordinary standard errors. However, considering the clustered the significance for tax rate coefficient is 5 % instead, which I consider as an acceptable level. The baseline results imply that there is a positive relation between tax rate and migration, i.e, if the tax were raised with one percentage point the migration increase by 226 persons. On the other hand, the tax index suggests that there is a negative relation between migration and relative tax rate. If the municipality's tax rate were to be one per cent higher than the average in the area, the migration will decrease by 60 persons. Worth noting is that none of the expenditure variables are significant in this baseline estimation, but unemployment rate is. It works as a push factor; it is less attractive to live in an area with high unemployment.

In column two and three in table 5, found in appendix, the baseline estimations on families and retirees are shown. There is no significance for the tax rate variable for families, but for the retirees the tax rate deters them from moving into a municipality. The tax index however works as a pull factor for both groups, but less severe for the retirees. Further, house prices do not seem to deter these groups to migrate and expenditures do not seem to have an impact on families. Retirees on the other hand are affected by the expenditures on elderly care in a positive way, and in a negative way when considering expenditures on education.

Moving forward, the FE estimations are shown in the right part of the table. The tax variables are not different in terms of signs, but diverge in magnitude. It appears OLS overestimates the effect of tax rate and tax index of the total sample, which is quite common when comparing these two models (Angrist and Pischke, 2009). This because OLS estimates over all variation and does not take municipality fixed effects into account. Instead of 226 the coefficient for tax rate in the FE model is 181, which correspond to a positive migration of 181 persons if the tax rate were raise by one percentage. For retirees, the migration decrease with 8. When looking at R^2 of the two models, the OLS seems to fit the data best. Even though the OLS provides the highest R^2, I believe the results provided by FE are more close to the true values due to the assumptions and the characteristics of the FE model discussed in previous section.

In table 6 (appendix) the tax rates of the neighbouring municipalities are included. Beginning with the left part, the OLS estimation provides similar results for the tax variables as in table 5. New in table 6 is the significance level of tax rate for families. As before, in total there is a positive relation between tax rate and migration, while for both families and retirees the relationship is negative. For the variable tax index, it is the opposite; for families and retirees tax index has a positive impact on migration while in total it is negative. Considering unemployment rate and house prices, both work as a push factor for total sample while for families house prices work in divergent way. For retirees house prices and unemployment are not significant if applying clustered standard errors. As in previous table, the expenditure variables are only significant for retirees.

Further, the table includes the names of all municipalities, as in the quality of being a neighbouring municipality. The coefficient should be interpreted as how the municipality tax rate affects the neighbours' migration. For example, the coefficient for Burlöv for families is -11 and interprets as reduction of migration for the neighbouring municipalities, i.e Malmö, Lomma and Staffanstorp, with 11 if the tax rate in Burlöv increases by one percentage point. Worth noting is that none of the neighbours are significant in column one and families seem to be most sensitive to tax rates of the neighbouring communities.

In the right part the FE estimates are presented. As before, looking at the tax variables the results differs slightly from the OLS estimates in level, but not in sign. When including neighbours the magnitude of tax rate has increased to 193 and the tax index has decreased to -61, both with 5 % significance considering the clustered standard errors. For those age < 15 and >64, the patters are similar to table 3. For families, the tax index coefficient is significant on a 1 % level while the coefficient for tax rate is insignificant. However, for retirees both variables are significant. Interestingly, in the fixed effect model the variable house prices is only significant for retirees, and opposite to OLS, it affects migration in a negative way. When it comes to the expenditure variables, child care, education and elderly care are significant for the total sample (with clusters), but not for the other two groups. Worth noting, child care and education expenditures have a negative impact on residence location choice, which is the opposite of what to expect.

Moving forward, similar to the estimations provided by OLS, the neighbouring municipalities in the right panel have less impact on total than on families and retirees. Also, the same municipalities have statistical significance for families in both the models with only slightly difference in magnitude. For example, Helsingborg has in OLS -6.5 and -6.4 in FE for families, which correspond to a 7 and 6 (since there can be no half child) child reduction in migration for the municipalities Höganäs, Bjuv, Landskrona and Svalöv if Helsingborg raises the tax rate with one percentage. When looking at R^2, table 4 provides similar values as previous table with OLS having the highest. Notable is the value for retirees, which is much smaller than for the other two groups but the model including neighbours giving a better fit, 38 % and 21 % compared to 29 % and 15 %.

Table 5 and 6 presented estimations on non-transformed variables. To handle the sample selection problem which arises when transforming into logarithmic form, the Tobit and Heckman models are used instead. Table 7 (appendix) shows the results from the estimations without neighbours. First, in the left part, the estimates of tax variables provided by Tobit confirm previous results. In column one, tax rate has a positive impact and tax index has the opposite. Since the variables are in different functional form, comparison on magnitude level is not appropriate. Sign however, are still comparable. As before, families seem not to care of taxes but retirees do. Higher tax rates seem to deter people age > 64. Different to table 5 and 6, which showed the results provided by OLS and FE, the Tobit model shows that family migration is negatively affected by high unemployment. This is not surprising, since it could be expected that unemployment rate works as a push factor. What is surprising though is that high spending on child care is negative for families on a 5 and 10 % significance level, depending on which standard errors are applied. As in previous table, education has negative impact for total and retirees, while the impact of elderly care expenditures is positive.

In the right part of the table Heckman's two-step estimations are presented. For total age, the results are similar to what has already been shown. For age

$<$ 15 and $>$ 64 there are no significance in tax variables, except for tax index with 10 % significance concerning retirees. In opposite what has earlier been shown, the variable population has a positive impact on migration for families as well. The expenditure variables are only significant for total age, while child care (as before) is negative and other expenditures have a positive coefficient. Focusing on the bottom of the table, the log-L and the LR-test suggest that, for both models, the hypothesis of all coefficients being zero can be rejected.

In table 8 neighbours are included. Estimations provided by the Tobit model are more or less the same when it comes to tax variables; they are significant for total age with tax rate having positive impact on migration and tax index a negative, no significance for families and for retirees there is a negative relation between tax rate and migration. The house prices variable is still only significant for age $<$ 15 while unemployment no longer is. Moving to the expenditures, as before, child care has a negative coefficient as well as education in column one. For retirees, the sign for education expenditure is the same and the coefficient for other expenditures is negative as well, while it is positive for elderly care. The results are not shocking, since it could be expected individuals older than 64 naturally prefer expenditures which they gain, or will be gaining from. As in table 7, the estimates imply families are more sensitive to neighbouring tax rates in the residence location decision. Out of the 20 municipalities, 13 have significant coefficients for families while the corresponding number for total is 3. Interestingly, the big municipalities Malmö, Lund and Helsingborg all have negative impact on their neighbour's migration, while smaller communities like Skurup, Staffanstorp and Svalöv have a positive impact on neighbouring migration. One interpretation could be that migration to small municipalities, which are neighbours to larger ones, are more sensitive to a raise in tax rate.

In the right part of the table the tax variables are only significant for total age, with only a slight difference in magnitude from the table without neighbours. As before, the only significant expenditure variables are child care and other purposes, where the coefficients still are negative respectively positive. The observation of families being more sensitive to tax rate of neighbouring municipalities is confirmed by the Heckman estimates, were age $<$ 15 has 15 significant neighbours while total age has 3. The pattern of large communities having negative impact on smaller neighbours and smaller municipalities has a positive on large neighbours are confirmed by the estimates provided by the Heckman model.

Summing up so far, there are no major differences between OLS, FE, Tobit and Heckman when it comes to sign of tax variables for total age. There is however some differences in significance when it comes to families and retirees, but overall the models provide similar results. Most surprisingly, the variable child care expenditures is negative in its coefficient in most estimations, those which provide significant results at least. The coefficient for education expenditures is also a bit surprising; when it is significant it takes a negative value. One could expect that both child care and education would be negative for retirees, but positive for families. However, these estimates in this study show that the expenditures do not have a positive impact on families' residence location choice. Following Dahlberg et al and assuming that there exists a correlation between quality and expenditure level, the results suggest that municipalities that offer child care and education with higher quality do not attract families. What does affect migration is relative tax level, which is supported by the results obtained from OLS and FE. All four models show that families are more sensitive to tax rate in neighbouring communities.

6.2 Part two- Results of time period 2000-2012

In this section the time period is narrowed to the years 2000-2012 in order to evaluate whether there are any different patterns in the new millennium and after the bridge opened. As in the previous section, the tables referred to are found in appendix.

Table 9 in appendix shows the results from OLS and FE estimations, excluding neighbours. The variables of interest, the tax variables, lack significance both among the two models and the three groups. For total age, it is only the variables population and unemployment rate that are significant, but if applying clustered standard errors it is only the population variable. For families, in excess of the variables mentioned the coefficient for house prices is also significant. House prices do not seem to deter migration. Both OLS and FE provide a negative coefficient for population, which is similar to what was seen in table

5 and 6. As for the time period 1992-2012, the variable child care expenditures is surprisingly negative for families. The same is for expenditures on education, but the clustered standard errors do not provide significance and the negative coefficient might not be correct. For retirees there are no major differences from earlier estimations, worth noting though is that the FE provides a positive coefficient for unemployment where the OLS estimates a negative. However, the clusters suggest that it is not significant. Also, expenditures on other purposes have a positive coefficient, which differs from the Tobit estimates in previous section.

In table 10(appendix) the results from OLS and FE estimations including neighbours are shown. As without neighbours, the tax variables do not provide any significant coefficients. Neither does the variable house prices, but unemployment rate is still significant in the FE for total age. The FE estimation does also provide significance in the population variable among all three groups, where in OLS it is only significant for total age. Among the expenditure variables, they are only significant for retirees. In OLS the education expenditures variable has a negative coefficient while elderly care has a positive, similar to what was found in previous section. The results from the FE estimation imply, instead, that other expenditures have a positive impact on migration. As before, families are most sensitive to neighbours' tax rate, but now the number of significant neighbours for total age exceeds the corresponding number for the time period 1999-2012. For OLS the number is 8 and for FE 11, compared to 1 and 6 in table 6.

Comparing R^2 between tables 9 and 10 it is shown that including neighbours has a positive impact, especially for families in the FE model. In table 9(which presented the estimations excluding neighbours) R^2 is 7 %, compared to 69 % in table 10(including neighbours). This suggests neighbours should be included in the model.

Moving forward, the estimations on transformed variables are presented in table 11 (appendix). The results from the Tobit model provide significant coefficients for the tax variables, as opposed to the OLS and FE estimates in tables 9 and 10. For total age, the tax rate coefficient is positive and takes a value which is approximately twice as large as in table 7(which presented the tobit and

Heckman estimations on the whole time period). It suggests people during this twelve year period are more sensitive to tax rate, which the tax index coefficient supports with a value twice as large as in section 1992-2012. For families and retirees the significance is less, notable however is that the signs have changed. In table 11 the tax rate coefficients are positive while in table 7 the coefficient was negative for retirees. The control variables house prices and unemployment rate affect the migration in the same way as before, and so do expenditures. The coefficients for child care expenditures are still negative, while elderly care for retirees is positive. In the right part, the Heckman estimates lack significance in the tax variables. The variables population and other expenditures are the only significant for total age, while for families it is only population and for retirees it is house prices. The variables which are significant, do not distinguish from previous results in any great matter.

In the next table, table 12 in appendix, neighbours are included. The tobit estimates now only provide significant values in tax variables for total age, not for families and retirees. The magnitudes of the coefficients are still approximately twice as big as in table 8(where the tobit and Heckman estimates for the whole time period are presented). Looking at the neighbours, similar to table 8, the group families is more sensitive to tax rate in neighbouring municipalities which now have 16 significant coefficients compared to 15 in previous section. The pattern described before, i.e large communities have negative coefficient and smaller with large neighbour have a positive coefficient, are repeated in this table. For retirees, there are no surprises. The variables unemployment rate and education expenditure are negative, population and elderly care are positive and some of the neighbours are significant. As in table 11, there are few significant variables estimated by the Heckman model. However, there is significance among the neighbours especially for families. As been observed before, yet worth to be emphasised, the estimates from Heckman confirm the results of tax rate in neighbouring municipalities affect migration when it comes to families.

These four tables have shown results from estimating the effects on migration during the time period 2000-2012. Three out of four models lack significance in the variables of interest. The Tobit model however provides estimations which show that, during these years, people were more sensitive to tax rate and tax index. All four models cohesively show that neighbouring tax rates affect families in their residence location choice more than the other groups. The other variables, such as expenditures and house prices, affect the migration in the same way as in previous section.

6.3 Further analysis with modified variables

This sub-section will further examine the relation between income tax rates and migration as some modifications of the initial model and its variables will be analysed. Taking the results from previous section in to account, from now on I will only apply the FE and tobit model with clustered standard errors. The FE is preferred over OLS because of the unobserved municipality specific factors and tobit is preferred over Heckman since clustering the standard errors are allowed.

When considering where to live, one could argue that it is the expenditures and tax rates of the previous year individuals take into account and not the current year. However, the result from the estimation including lags does not provide any new information and does not differ from the results in previous section. Therefore the result will not be presented since it does not contribute to the analysis. The result from an estimation with migration as a fraction of the population as the dependent variable, instead of raw migration, does not either provide any new information that contributes to the analysis, and for the same reasons as before the result will not be presented in this paper.

Instead of defining the expenditure variables as expenditure per capita, as in previous sections, I redefine it as expenditures per user. This is done by assuming child care is used by children in age 0-6, education is used by children aged 7-15 and elderly care 65+, where the statistics of users are provided by SCB (Dahberg et al).

The main results can be seen in table 4, which only presents the results of the total sample, while the rest of the tables that I will refer to are found in appendix. In table 4, column 1 and 2 are the results from the fixed effect model and 3 and 4 are from the Tobit model, 1 and 3 are without neighbours while 2 and 4 include neighbours.

Table 4: Overview of FE and Tobit, including expenditures/user, clustered standard errors in parenthesis. *** denotes 1% significance, ** 5% and * 10% significance. ($N = 420$)

Variable	(1)	(2)	(3)	(4)
Tax rate	203.762**	210.425*	2.043***	1.894***
	(92.993)	(100.805)	(0.266)	(0.261)
Tax index	-49.820**	-60.956**	-0.392***	-0.363***
	(21.533)	(25.024)	(0.053)	(0.052)
Expenditure variables				
Child care	-0.009*	-0.008	-0.825	-0.857
	(0.004)	(0.005)	(1.040)	(0.998)
Education	-0.003**	-0.004***	-2.327***	-2.147***
	(0.001)	(0.001)	(0.802)	(0.773)
Elderly care	0.008**	0.011**	-0.813	-0.249
	(0.003)	(0.003)	(0.893)	(0.874)
Other	-0.005	-0.013*	1.357**	1.151**
	(0.009)	(0.007)	(0.587)	(0.568)
Control variables				
House prices	0.239	0.119	-0.613	-1.068*
	(0.288)	(0.263)	(0.551)	(0.545)
Unemployment rate	-81.418***	-73.739***	-0.895***	-0.789***
	(15.605)	(14.795)	(0.115)	(0.113)
Population	0.027***	0.024***	1.849***	1.765***

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Table 4 – continued from previous page

Variable	**(1)**	**(2)**	**(3)**	**(4)**
	(0.008)	(0.008)	(0.270)	(0.280)
Intercept	540.654	1894.842	23.743**	21.095**
	(791.227)	(1114.463)	(10.720)	(10.636)
Neighbours	No	Yes	No	Yes
Logarithmic form	No	No	Yes	Yes
R^2	0.421	0.479	-	-

As with expenditures per capita, the tax rate variable has a positive impact on migration while tax index has a negative, nothing new there. For the expenditures, as before the coefficient for child care is not significant on a 5 % significance level. For education the coefficients are significantly negative in all four specifications. For elderly care, the fixed effect provides a 5 % significant positive coefficient, while in the Tobit model it lacks significance. The opposite can be seen for other expenditures, the results from the Tobit model show a positive effect while it lacks significance in the FE model.

For the groups families and retirees, the results can be seen in tables 13 and 14. The results concerning the tax variables are somewhat the same as in previous sections. Focusing on the expenditures, including child care per user instead of per capita does not change the results and the coefficients are still not significant. Education expenditure per user does not either provide any significant coefficients for families, while it does for retirees. However, the coefficient is 0 and tells us that it is not an important factor for individuals aged > 64, which is quite intuitive. In opposite of what could be seen in previous section expenditures on elderly care are not significant for retirees in these estimations. For families however the Tobit model shows that expenditures on elderly care have a negative impact on migration. Expenditures on other purposes, such as public goods, do not provide any significant coefficients for families while for retirees the effect is a negative.

The next modification is in the tax variable. Instead of regressing on tax rate as level, tables 15 and 16 in appendix show the results from estimations including the change in tax rate, delta tax rate. In both tables the FE provides negative coefficients on a 1 % significance level for all three groups. These results show that an increase in tax rate deter migrants in all groups, which was not the case in previous estimations. On the other hand, an increase in tax index now attracts families and retirees in the FE model. Looking at the Tobit estimates, the coefficient of tax index for retirees is still negative. Another interesting result is that the Tobit estimate for child care expenditures per user now provides a positive coefficient on a 1 % significance level, which contradicts some of the earlier results.

A brief look at the neighbours in the tables 14 and 16 confirm earlier results; in general large municipalities have a negative coefficient while smaller neighbours have a positive. As before, this suggests that it exists a difference in sensitivity among the municipalities which give rise to tax competition. This will be further discussed in following sections.

6.4 Results in a Tiebout framework

In section Data the variables were intuitively categorised into push and pull factors. Tax rate was assumed to, ceteris paribus, deter migrants. However, the results show that for the sample as a whole it rather attracts residents. For families it does not seem to be an important variable, since it lacks significance in most of the estimations. The retirees however, were deterred by tax rate. When looking at the effect of changes in tax rates (delta tax rate) instead the estimates provide cohesive results for all groups, which show that changes in tax rates deter migrants. Relative tax, or as in the regressions, tax index, affects the groups in different way. For the total group, a high tax relative to other municipalities acts as a push factor. This result supports the theory and previous research (Grassmueck, 2011). Further, house prices do not seem to deter migrants while unemployment rates do, which are similar to findings by Dahlberg et al (2012). Either the assumption of the study is wrong, which means that old Malmöhus cannot be seen as one single job market, or, people prefer to avoid areas with high unemployment due to other reasons.

As were discussed in the sections Theory and Data, the expenditure variables could be expected to act as pull factors. Nevertheless, the results from previous sections show that child care and education expenditures actually work in the other way. One could expect retirees to have these preferences, which the estimates confirm, but families are assumed to prefer education and child care. The tables show however that this is not the case, either the variables are not significant or they are negative. These findings do not only contradict theory, but also previous research (Dahlberg et al). The explanation may be that the model providing these negative coefficients is not correctly specified for data restricted to families. However, when modifying the model to include expenditures per user and delta tax rate, child care expenditures were estimated to have a positive impact on total migration.

Comparing the results from the estimations on the narrowed time period 2000-2012 and the whole period 1992-2012, there were only significant values from the Tobit estimation. Those results showed that tax rate and tax index were twice as high during the last twelve years, and implicated that it has become a more important variable to consider when choosing residence location. However, since no other model confirms the findings, conclusions should be carefully made.

Moving forward, when the neighbours were included the models seemed to fit the data better, especially for families, where the R^2 value increased the most. Interestingly, a pattern could be seen. Large municipalities affect their smaller neighbours' migration in a negative way, while the tax rate of the smaller communities affect the large neighbour in a positive way. For example, if Svedala were supposed to raise taxes the number of migrants to Malmö would increase, without any changes in the Malmö variables. This is an important result, which suggests smaller municipalities should be more careful with raising taxes than larger need to be. This result is what could be expected from tax competition theory. In a tax competition context, larger municipalities can set a higher tax while smaller must offer a lower tax in order to continue to be competitive.[4]

The assumptions of the Tiebout hypothesis were described in section The-

[4]See for example Oates (1972), Wilson (1999) and Junevičius and Šniukštaitė (2009) for theoretical discussion.

ory. The assumption of there being sufficient amount of communities is difficult to evaluate out of the estimations made. Further, as already been touched, the assumption of all communities offer all employment possibilities can be discussed. This study assumes that the old Malmöhus region is one single job market, hence, all municipalities are able to offer all employment prospects in the region. The estimations do however provide information that employment rate deter migration, which implies that individuals prefer a community with low unemployment due to social preferences or the assumption does not hold. If the assumption fails to hold, then municipalities which offer better employment possibilities are more preferable than one that provides more attractive public good expenditures. The model will be unable to estimate the true preferences of local income taxation and public good expenditures and the results are misleading. Next, Hindriks and Myles identified the assumption of the consumer being able to freely choose among the communities as the most important one. It needs the housing market to be efficient and accommodation possibilities to not have an impact on which municipality to choose. Since the estimates only control for house prices and not for accommodation possibilities it is difficult to evaluate the validity of the assumption. However, since it exists transaction costs, such as real estate agent fees, one can argue the assumption is not entirely fulfilled.

Finally, a numerical example will illustrate the interpretation of the coefficients for tax rate and tax index. I choose to apply the values estimated by FE in table 6 because of the econometric discussion in section Model and the straightforward interpretation it provides comparing to Tobit and Heckman. The coefficient for tax rate predicts an increase in migrants if the tax rate is raised. However, the tax index predict a decrease if the change in tax rate affect the relation to average tax rate. These two forces work against each other. Let's assume the politicians in Vellinge, the municipality with the lowest tax rate in 2012, decide to raise the tax rate with the standard deviation, 0.214. The new tax rate is then 18.71. Everything else equal, this leads to an increase in migrants with 41 persons. However, since the new tax rate relates differently with all other municipalities, the effect by tax index decrease the migration with 61 persons.[5] In total, the tax raise leads to a 20 person decrease of migrants.

This numerical example together with the results from the estimations including delta tax rate show that taxes do act as determent, since the effect from relative tax exceeds the positive effect of tax rate, hence, the results supports theory and previous research.

7 Concluding remarks

In this study I have examined the impact of tax rate and public expenditures on residence location choice. The analysis has been limited to old Malmöhus region during the time period 1992-2012. I found that tax rate does not deter migrants while high tax rate relative to other municipalities in the area do. Considering retirees, the results were quite the opposite. Most of the estimations provided a negative tax rate coefficient which implies retirees are more sensitive to high tax rates in their decision where to live. Families however, or families in reality, seem not to care about tax rate at its absolute value, but in relative terms high tax actually attracts migrants. When modifying the model to include changes in tax rate and expenditures per user instead the estimation provided cohesive results. All three groups were negatively affected by a positive change in tax rate.

Focusing on the local public goods provided, Dahlberg et al (2012) found that expenditures on child care attract migrants, but this analysis provides mixed results. In most of the estimations child care expenditure actually deter migrants, but when modifying the variables to expenditures per user instead of per capita, expenditures on child care has a positive impact on migration. The results are less significant when it comes to education, elderly care and other expenditures, but for the older migrants, the retirees, expenditure on elderly care attracts while public spending on education deters.

This essay also studied the effect of neighbouring municipalities on residence location choice. This was done by including the tax rate of neighbours in the regressions. It was shown that the group families was most sensitive and that took this aspect into account when deciding where to live. The analysis did also

[5] New tax index is 93.05 instead of 92.04 lead to a decrease of 61 since $-60.70 * (93.05 - 92.04) = 61.46$

show a pattern of the tax rate in large municipalities affecting the migration into smaller neighbours in a negative way, and correspondingly, the tax rate in small municipalities affect the migration of a large neighbour positively. This result gives rise to a tax competition issue, where smaller municipalities are more sensitive to local income taxation than their larger neighbour. Therefore, for further research I purpose that a tax competition aspect should be incorporated in the model.

Although the results show that migrants did not find high tax rate as a deterrent, when considering the tax rate in relation to the others a higher tax rate than average in the area do work as a determent. This finding, together with the impact of the tax rate of neighbouring municipalities, contributes to the existing research on the topic. In excess of tax rate not necessarily being a deterrent, as was shown by Oates (1969) and Knapp, White, and Clark (2001), this study also suggest the relative tax rate is an important variable in the residence decision. It shows the importance of knowing what the neighbours do, because changes in the tax rate of other municipalities affect the migration.

When narrowing the time period to 2000-2012, the results were less conclusive. Out of the four estimation methods it was only Tobit that provided significant coefficients. The results suggested that the tax variables have been twice as important during the time period, and for families tax index changed sign from positive to negative. For all three groups the relative tax deterred migration. Since these results could not be confirmed by the other models, conclusions should be made with caution.

The study relies on the assumptions of an efficient housing market and of the area being one single job market. Transaction costs in the housing market and accommodation possibilities were not controlled for, while unemployment was. The estimations provided a significant negative coefficient which implies people avoid municipalities with high unemployment. Reasons for this can be further discussed in terms of preferences, but if believing that people choose one municipality over another because of employment prospects and not due to a more attractive public good bundle, then this study and its results fail.

One limitation of this study has been the aggregated data. In the perfect of worlds, data on individual level would be available and it could be possible to control for intra-area migration. It would also be possible to analyse whether differences in educational level have impact on residence location choice. However, individual data was not available to me and this study. In order to control for endogeneity problem inherited in aggregated data I followed Grassmueck (2011) and cluster-correct the standard errors. The correction did not affect the interpretation to a large extent, it changed significance in some variables but overall the ordinary and the clustered standard errors provided quite similar results.

It was discussed there would exist a trade–off between the methods using non-transformed data, OLS and FE, and those using data in logarithmic form, Tobit and Heckman. The results showed however the coefficients estimated were similar in signs. The estimations from FE were chosen when estimating the total effect of a tax raise, including both tax rate and tax index, because of its straightforward interpretation of coefficients and that it controls for unobserved municipality fixed effects. In this study, and for that purpose, the FE estimator was therefore the most preferable even though OLS had a greater R^2 value. One could argue the logarithmic form is the most realistic, and therefore preferable, but due to the data set including negative values of migration a transformation created sample selection problem. By using the Tobit and Heckman models the sample selection problem was handled, but important information was lost. Since the results did not differ in any great manner, I believe the FE estimator was preferable in this case.

The study provided two important results. First, tax rate by itself does not deter people from choosing a municipality as their residence location. Second, the tax rate relative to other municipalities' in the same area is an important factor. It has been shown that a high tax rate relative to the average deters migrants, and for smaller municipalities with a large neighbour, a raise in tax rate will lead to a decrease in migration. Hence, for local politicians it is important to know what their colleagues in other municipalities do.

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9 Appendix

9.1 Tables, part one

Table 5: OLS and FE 1992-2012, standard errors in parenthesis. ^{c} stands for clustered standard errors, *** denotes 1% significance, ** 5% and * 10% significance. (N=420)

	OLS			FE		
Variable	**Total**	**Age < 15**	**Age >64**	**Total**	**Age < 15**	**Age >64**
Tax rate	225.631***	-2.842	-8.968***	180.594***	-2.066	-7.579***
	(37.011)	(9.941)	(3.092)	(38.695)	(9.528)	(2.640)
	(80.858)^c**	(9.369)^c	(2.824)^c***	(77.689)^c**	(8.860)^c	(2.450)^c***
Tax index	-60.294***	9.196***	1.807***	-47.866***	12.072***	3.063***
	(7.431)	(1.996)	(0.621)	(8.840)	(2.177)	(0.603)
	(19.374)^c***	(3.662)^c**	(0.748)^c**	(18.670)^c**	(2.242)^c***	(0.719)^c***
House prices	-0.295***	0.260***	0.044***	0.036	0.095	-0.075***
	(0.108)	(0.290)	(0.009)	(0.366)	(0.090)	(0.025)
	(0.171)^c	(0.060)^c***	(0.017)^c**	(0.296)^c	(0.079)^c	(0.028)^c**
Unemployment rate	-72.734***	-5.104	2.224*	-69.829***	-4.777	2.345**
	(15.846)	(4.256)	(1.324)	(17.515)	(4.313)	(1.195)
	(19.950)^c***	(3.833)^c	(2.317)^c	(12.150)^c***	(2.702)^c	(2.072)^c
Population	0.011***	-0.002***	-0.000***	0.030***	-0.003**	0.001***
	(0.000)	(0.000)	(0.000)	(0.005)	(0.001)	(0.000)
	(0.001)^c***	(0.000)^c***	(0.000)^c**	(0.007)^c***	(0.002)^c*	(0.000)^c*
Exp child care	-0.029	-0.014**	-0.000	-0.076*	0.013	0.003
	(0.023)	(0.006)	(0.002)	(0.040)	(0.010)	(0.003)
	(0.024)^c	(0.010)	(0.004)^c	(0.033)^c**	(0.010)^c	(0.003)^c
Exp education	-0.004	-0.006	-0.005***	-0.026	-0.006	0.001

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Table 5 – continued from previous page

Variable	OLS Total	OLS Age < 15	OLS Age >64	FE Total	FE Age < 15	FE Age >64
	(0.016)	(0.004)	(0.001)	(0.021)	(0.005)	(0.001)
	$(0.016)^c$	$(0.007)^c$	$(0.002)^{c}$**	$(0.013)^{c}$*	$(0.007)^c$	$(0.002)^c$
Exp elderly care	-0.006	0.002	0.007***	0.019	-0.003	-0.002
	(0.013)	(0.003)	(0.001)	(0.029)	(0.007)	(0.002)
	$(0.015)^c$	$(0.005)^c$	$(0.002)^{c}$***	$(0.020)^c$	$(0.010)^c$	$(0.002)^c$
Exp other	0.009	0.002	-0.003***	0.007	-0.001	0.000
	(0.009)	(0.002)	(0.001)	(0.013)	(0.003)	(0.001)
	$(0.010)^c$	$(0.004)^c$	$(0.002)^{c}$*	$(0.008)^c$	$(0.003)^c$	$(0.001)^c$
Intercept	2086.232***	-791.749***	-12.024	885.778	-1009.644***	-178.642***
	(323.397)	(86.861)	(27.015)	(629.113)	(154.906)	(42.929)
	$(594.410)^{c}$***	$(287.671)^{c}$**	$(56.136)^c$	$(823.447)^c$	$(217.476)^{c}$***	$(78.956)^{c}$**
R^2	0.695	0.409	0.294	0.408	0.478	0.149
F-test	103.72	31.48	18.98	29.97	39.81	7.63
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 6: OLS and FE 1992-2012 including neighbours, standard errors in parenthesis. ^{c} stands for clustered standard errors, *** denotes 1% significance, ** 5% and * 10% significance. (N=420)

Variable	OLS Total	OLS Age < 15	OLS Age >64	FE Total	FE Age < 15	FE Age >64
Tax rate	236.703***	-14.823**	-10.972***	192.655***	-6.845	-9.380***
	(38.699)	(6.837)	(3.100)	(39.142)	(7.229)	(2.711)
	$(92.343)^{c}$**	$(4.856)^{c}$***	$(3.435)^{c}$***	$(84.461)^{c}$**	$(5.388)^c$	$(2.660)^{c}$***
Tax index	-65.098***	7.458***	1.639***	-60.704***	6.410***	3.071***

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Table 6 – continued from previous page

Variable	OLS			FE		
	Total	Age < 15	Age >64	Total	Age < 15	Age >64
	(7.787)	(1.376)	(0.624)	(9.182)	(1.700)	(0.636)
	$(22.839)^{c}$***	$(1.809)^{c}$***	$(0.626)^{c}$**	$(21.797)^{c}$**	$(1.181)^{c}$***	$(0.550)^{c}$***
House prices	-0.444***	0.092***	0.025***	-0.107	0.062	-0.076***
	(0.121)	(0.021)	(0.010)	(0.370)	(0.068)	(0.025)
	$(0.225)^{c}$*	$(0.025)^{c}$***	$(0.018)^{c}$	$(0.296)^{c}$	$(0.062)^{c}$	$(0.030)^{c}$**
Unemployment rate	-65.673***	1.621	2.938**	-63.398***	-1.034	2.803**
	(16.235)	(2.868)	(1.301)	(17.483)	(3.229)	(1.211)
	$(18.444)^{c}$***	$(2.712)^{c}$	$(2.267)^{c}$	$(9.648)^{c}$***	$(2.889)^{c}$	$(1.890)^{c}$
Population	0.011***	-0.001***	-0.000***	0.027***	-0.004***	0.001***
	(0.001)	(0.000)	(0.000)	(0.005)	(0.001)	(0.000)
	$(0.001)^{c}$***	$(0.000)^{c}$***	$(0.000)^{c}$	$(0.007)^{c}$***	$(0.001)^{c}$***	$(0.001)^{c}$**
Exp child care	-0.025	-0.006	0.001	-0.097**	0.007	0.003
	(0.024)	(0.004)	(0.002)	(0.040)	(0.007)	(0.003)
	$(0.024)^{c}$	$(0.005)^{c}$	$(0.004)^{c}$	$(0.033)^{c}$***	$(0.005)^{c}$	$(0.003)^{c}$
Exp education	-0.004	-0.003	-0.005***	-0.029	-0.003	0.002
	(0.017)	(0.003)	(0.001)	(0.021)	(0.004)	(0.001)
	$(0.020)^{c}$	$(0.003)^{c}$	$(0.002)^{c}$**	$(0.013)^{c}$**	$(0.002)^{c}$	$(0.002)^{c}$
Exp elderly care	-0.007	0.003	0.007***	0.037	-0.001	-0.003
	(0.013)	(0.002)	(0.001)	(10.029)	(0.005)	(0.002)
	$(0.016)^{c}$	$(0.003)^{c}$	$(0.002)^{c}$***	$(0.017)^{c}$**	$(0.003)^{c}$	$(0.002)^{c}$
Exp other	0.008	0.000	-0.004***	0.002	-0.001	0.001
	(0.009)	(0.002)	(0.001)	(0.013)	(0.002)	(0.001)
	$(0.011)^{c}$	$(0.002)^{c}$	$(0.002)^{c}$**	$(0.008)^{c}$	$(0.001)^{c}$	$(0.001)^{c}$

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Table 6 – continued from previous page

Variable	OLS			FE		
	Total	Age < 15	Age >64	Total	Age < 15	Age >64
Svalöv	8.913	2.501	0.731	10.196	2.342	0.302
	(11.211)	(1.980)	(0.898)	(10.238)	(1.891)	(0.709)
	$(11.129)^c$	$(1.759)^c$	$(0.433)^c$	$(10.293)^c$	$(1.652)^c$	$(0.417)^c$
Staffanstorp	-0.420	0.619	-0.092	-1.704	0.691	0.307
	(4.508)	(0.796)	(0.361)	(4.134)	(0.763)	(0.286)
	$(2.813)^c$	$(0.398)^c$	$(0.261)^c$	$(1.818)^c$	$(0.327)^{c}$**	$(0.253)^c$
Burlöv	-7.844	-10.772***	-0.872	-15.041	-10.172***	-1.053
	(10.121)	(1.788)	(0.811)	(9.320)	(1.721)	(0.646)
	$(6.888)^c$	$(1.366)^{c}$***	$(0.871)^c$	$(8.117)^{c}$*	$(1.305)^{c}$***	$(0.816)^c$
Vellinge	-7.583	-2.334	1.759	38.987	-5.017	-3.499
	(87.436)	(15.447)	(7.004)	(80.104)	(14.793)	(5.549)
	$(56.696)^c$	$(6.969)^c$	$(4.259)^c$	$(47.308)^c$	$(6.086)^c$	$(4.562)^c$
Bjuv	23.345	-8.086**	-1.921	17.296	-6.004*	-1.451
	(20.116)	(3.554)	(1.611)	(18.631)	(3.441)	(1.291)
	$(27.016)^c$	$(4.005)^{c}$*	$(2.217)^c$	$(20.473)^c$	$(2.367)^{c}$**	$(1.371)^c$
Kävlinge	-4.609	-0.765	0.390	-4.715	-0.916	0.195
	(3.812)	(0.674)	(0.305)	(3.512)	(0.648)	(0.243)
	$(2.439)^{c}$*	$(0.390)^c$	$(0.237)^{c}$*	$(2.389)^{c}$*	$(0.394)^{c}$**	$(0.164)^c$
Lomma	0.814	-5.529	-3.815	-46.883	-2.595	1.255
	(83.781)	(14.801)	(6.711)	(76.818)	(14.187)	(5.321)
	$(53.697)^c$	$(7.514)^c$	$(4.188)^c$	$(46.372)^c$	$(6.394)^c$	$(4.579)^c$
Svedala	4.590	5.521***	0.713	8.945*	4.893***	0.641*
	(5.498)	(0.971)	(0.440)	(5.000)	(0.923)	(0.346)
	$(3.265)^c$	$(0.764)^{c}$***	$(0.373)^{c}$*	$(3.600)^{c}$**	$(0.719)^{c}$***	$(0.410)^c$

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Table 6 – continued from previous page

Variable	OLS Total	OLS Age $<$ 15	OLS Age $>$64	FE Total	FE Age $<$ 15	FE Age $>$64
Skurup	2.349	-0.162	0.150	0.824	-0.170	-0.165
	(4.741)	(0.838)	(0.380)	(4.350)	(0.803)	(0.301)
	(2.307)^{c}	(0.354)^{c}	(0.363)^{c}	(1.922)^{c}	(0.286)^{c}	(0. 331)^{c}
Sjöbo	-4.083	0.656	0.103	-1.023	-0.004	0.579*
	(5.293)	(0.935)	(0.424)	(4.018)	(0.908)	(0.341)
	(4.616)^{c}	(0.571)^{c}	(0.399)^{c}	(3.765)^{c}	(0.531)	(0.334)^{c}
Hörby	-6.019	-4.177***	-1.145*	-8.564	-4.074***	-0.708
	(7.607)	(1.344)	(0.609)	(6.941)	(1.281)	(0.481)
	(7.173)^{c}	(1.068)^{c***}	(0.487)^{c**}	(7.775)^{c}	(1.128)^{c***}	(0.390)^{c*}
Höör	-4.206	-4.140**	-0.685	-8.256	-3.623**	-0.941
	(9.341)	(1.651)	(0.748)	(8.480)	(1.566)	(0.587)
	(5.097)^{c}	(0.981)^{c***}	(0.482)^{c}	(4.422)^{c*}	(0.933)^{c***}	(0.524)^{c}
Malmö	-4.741	-0.884	1.053	-4.417	-0.968	1.161**
	(7.980)	(1.410)	(0.639)	(7.251)	(1.339)	(0.502)
	(3.412)^{c}	(0.757)^{c}	(0.400)^{c**}	(2.488)^{c*}	(0.708)^{c}	(0.512)^{c**}
Lund	5.258	4.786***	0.360	8.894	4.595***	0.507
	(7.317)	(1.293)	(0.586)	(6.710)	(1.239)	(0.465)
	(3.926)^{c}	(0.807)^{c***}	(0.567)^{c}	(4.501)^{c*}	(0.709)^{c***}	(0.493)^{c}
Landskrona	-11.422	-0.448	0.133	-11.619	-0.540	0.783
	(13.212)	(2.334)	(1.058)	(12.073)	(2.230)	(0.836)
	(15.210)^{c}	(1.968)^{c}	(0.433)^{c}	(13.813)^{c}	(1.683)^{c}	(0.554)^{c}
Helsingborg	-13.462	-6.548***	-1.231	-17.712	-6.442***	-0.690
	(12.087)	(2.135)	(0.968)	(11.069)	(2.044)	(0.767)

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Table 6 – continued from previous page

Variable	OLS			FE		
	Total	Age $<$ 15	Age $>$64	Total	Age $<$ 15	Age $>$64
	(13.202)^{c}	(2.007)^{c}***	(0.621)^{c}*	(12.789)^{c}	(1.941)^{c}***	(0.575)^{c}
Höganäs	-29.061	3.093	1.075	-27.968	1.007	0.529
	(20.574)	(3.635)	(1.648)	(19.197)	(3.545)	(1.330)
	(29.197)^{c}	(4.377)^{c}	(2.485)^{c}	(23.922)^{c}	(2.969)^{c}	(1.251)^{c}
Eslöv	0.191	-1.547	0.517	-4.375	-1.209	0.449
	(6.805)	(1.202)	(0.545)	(6.234)	(1.151)	(0.432)
	(4.677)^{c}	(0.718)^{c}**	(0.326)^{c}	(2.791)^{c}	(0.615)^{c}*	(0.282)^{c}
Ystad	-6.819	-5.987***	0.696	-13.798*	-5.374***	0.409
	(7.952)	(1.405)	(0.637)	(7.500)	(1.385)	(0.520)
	(5.048)^{c}	(1.023)^{c}***	(0.721)^{c}	(3.641)^{c}***	(0.782)^{c}***	(0.535)^{c}
Trelleborg	-9.199	-10.991***	-2.422**	-16.862	-10.184***	-2.457***
	(13.769)	(2.433)	(1.103)	(12.471)	(2.303)	(0.864)
	(8.085)^{c}	(1.772)^{c}***	(0.680)^{c}***	(8.662)^{c}	(1.774)^{c}***	(0.890)^{c}**
Intercept	2541.908***	-297.003***	46.414	2343.728***	-212.023*	-148.677***
	(370.476)	(65.449)	(29.677)	(686.665)	(126.811)	(47.567)
	(883.901)^{c}***	(96.988)^{c}***	(34.966)^{c}	(1148.747)^{c}*	(97.462)^{c}**	(53.332)^{c}**
R^2	0.707	0.755	0.377	0.468	0.736	0.211
F-test	32.50	41.36	8.15	11.24	35.65	3.43
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 7: Tobit and Heckman(twostep) model 1992-2012 without neighbours, standard errors in parenthesis. ^{c} stands for clustered standard errors, *** denotes 1% significance, ** 5% and * 10% significance. (N=420)

	Tobit			Heckman		
Variable	**Total**	**Age < 15**	**Age >64**	**Total**	**Age < 15**	**Age >64**
Tax rate	1.956***	0.330*	-0.751***	0.914***	0.008	0.219
	(0.256)	(0.168)	(0.247)	(0.263)	(0.110)	(0.146)
	(0.458)^c***	(0.257)^c	(0.301)^c**			
Tax index	-0.378***	-0.023	0.074	-0.174***	0.006	-0.055*
	(0.052)	(0.034)	(0.051)	(0.051)	(0.020)	(0.031)
	(0. 096)^c***	(0.068)^c	(0.054)^c			
Ln House prices	0.928	0.307***	1.082*	0.347	0.811***	0.518
	(0.568)	(0.387)	(0.589)	(0.288)	(0.313)	(0.358)
	(0.858)^c	(0.795)^c***	(0.993)^c			
Unemployment rate	-0.872***	-0.179**	-0.153	-0.341***	-0.115***	0.015
	(0.105)	(0.070)	(0.188)	(0.111)	(0.039)	(0.064)
	(0.166)^c***	(0.072)^c**	(0.113)^c			
Ln Population	1.140***	-0.987***	0.608**	0.930***	0.476**	0.367**
	(0.261)	(0.181)	(0.269)	(0.132)	(0.211)	(0.165)
	(0.458)^c**	(0.753)^c	(0.598)^c			
Ln Exp child care	-2.237***	-0.967**	-0.915	-1.469***	0.358	-0.444
	(0.710)	(0.479)	(0.734)	(0.412)	(0.269)	(0.455)
	(0.884)^c**	(0.572)^c*	(1.008)^c			
Ln Exp education	-3.774***	-0.818	-3.742***	-0.304	-0.234	-0.884
	(1.015)	(0.683)	(1.050)	(0.758)	(0.271)	(0.660)
	(0.893)^c***	(1.237)^c	(1.150)^c***			

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Table 7 – continued from previous page

Variable	Tobit Total	Tobit Age < 15	Tobit Age >64	Heckman Total	Heckman Age < 15	Heckman Age >64
Ln Exp elderly care	1.927**	0.802	4.319***	-0.005	-0.049	0.361
	(0.759)	(0.509)	(0.777)	(0.478)	(0.386)	(0.466)
	(1.242)[c]	(0.919)[c]	(1.462)[c]***			
Ln Exp other	0.275	-0.392	-2.586***	0.748**	-0.508	0.108
	(0.652)	(0.441)	(0.670)	(0.334)	(0.331)	(0.399)
	(1.185)[c]	(0.932)[c]	(0.939)[c]***			
Intercept	22.543**	6.997	21.421*	2.370	-2.443	4.982
	(10.576)	(7.073)	(11.030)	(6.424)	(3.963)	(6.662)
	(10.825)[c]**	(10.589)[c]	(10.828)[c]**			
Log-L	-831.312	-764.293	-651.188	-	-	-
LR-test	195.46	71.64	83.00	194.61	181.13	43.54
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 8: Tobit and Heckman(twostep) model 1992-2012 including neighbours, standard errors in parenthesis. [c] stands for clustered standard errors, *** denotes 1% significance, ** 5% and * 10% significance. (N=420)

Variable	Tobit Total	Tobit Age < 15	Tobit Age >64	Heckman Total	Heckman Age < 15	Heckman Age >64
Tax rate	1.846***	0.002	-0.914***	0.807***	-0.032	-0.080
	(0.249)	(0.040)	(0.245)	(0.251)	(0.047)	(0.320)
	(0.483)[c]***	(0.047)[c]	(0.296)[c]***			
Tax index	-0.354***	0.004	0.093*	-0.158***	0.008	-0.011
	(0.051)	(0.008)	(0.051)	(0.049)	(0.009)	(0.043)

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Table 8 – continued from previous page

Variable	Tobit			Heckman		
	Total	Age < 15	Age >64	Total	Age < 15	Age >64
	(0.103)^{c}***	(0.009)^{c}	(0.052)^{c}*			
Ln House prices	0.213	0.248***	0.445	-0.099	0.170	0.721**
	(0.572)	(0.092)	(0.599)	(0.276)	(0.134)	(0.315)
	(1.023)^{c}	(0.103)^{c}**	(0.859)^{c}			
Unemployment rate	-0.780***	-0.004	-0.080	-0.266**	-0.005	0.016
	(0.102)	(0.016)	(0.106)	(0.106)	(0.017)	(0.060)
	(0.146)^{c}***	(0.014)^{c}	(0.106)^{c}			
Ln Population	1.062***	0.084*	0.892***	0.911***	0.203**	0.468**
	(0.281)	(0.047)	(0.290)	(0.132)	(0.090)	
	(0.450)^{c}**	(0.061)^{c}	(0.376)^{c}***			
Ln Exp child care	-2.081***	0.070	-0.646	-1.332***	0.055	-0.352
	(0.694)	(0.111)	(0.725)	(0.383)	(0.118)	(0.412)
	(0.913)^{c}**	(0.084)^{c}	(0.898)^{c}			
Ln Exp education	-3.499***	0.080	-3.083***	0.210	0.129	-1.405*
	(0.979)	(0.161)	(1.013)	(0.727)	(0.166)	(0.801)
	(0.969)^{c}***	(0.175)^{c}	(1.233)^{c}***			
Ln Exp elderly care	1.829**	0.003	4.176***	-0.066	-0.131	1.228
	(0.737)	(0.114)	(0.760)	(0.449)	(0.141)	(1.179)
	(1.275)^{c}	(0.105)^{c}	(1.156)^{c}***			
Ln Exp other	0.247	-0.066	-2.431***	0.728**	0.065	-0.535
	(0.631)	(0.101)	(0.651)	(0.308)	(0.115)	(0.705)
	(1.150)^{c}	(0.077)^{c}	(0.940)^{c}***			
Svalöv	-0.074	0.082***	-0.012	-0.011	0.098***	-0.021

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Table 8 – continued from previous page

Variable	Tobit			Heckman		
	Total	**Age < 15**	**Age >64**	**Total**	**Age < 15**	**Age >64**
	(0.083)	(0.014)	(0.080)	(0.036)	(0.013)	(0.040)
	(0.056)^c	(0.014)^{c}***	(0.053)^c			
Staffanstorp	0.001	0.079***	0.042	0.001	0.093***	-0.016
	(0.030)	(0.012)	(0.030)	(0.013)	(0.011)	(0.025)
	(0.026)^c	(0.014)^{c}***	(0.034)^c			
Burlöv	-0.001	-0.094***	-0.086	-0.023	-0.118***	0.024
	(0.065)	(0.016)	(0.065)	(0.029)	(0.015)	(0.051)
	(0.062)^c	(0.017)^{c}***	(0.073)^c			
Vellinge	1.007*	-0.111	0.336	-0.020	0.082	-0.361
	(0.571)	(0.098)	(0.586)	(0.275)	(0.095)	(0.378)
	(0.944)^c	(0.127)^c	(0.584)^c			
Bjuv	-0.114	-0.235***	-0.215	-0.055	-0.031	0.023
	(0.148)	(0.038)	(0.143)	(0.064)	(0.169)	(0.105)
	(0.086)^c	(0.017)^{c}***	(0.096)^c			
Kävlinge	-0.018	0.026***	0.014	-0.011	0.025***	-0.001
	(0.024)	(0.005)	(0.025)	(0.011)	(0.004)	(0.014)
	(0.027)^c	(0.009)^c	(0.021)^c			
Lomma	-1.016*	-0.051	-0.492	-0.039	-0.278***	0.368
	(0.547)	(0.095)	(0.562)	(0.264)	(0.093)	(0.412)
	(0.894)^c	(0.127)^c	(0.556)^c			
Svedala	0.030	0.013**	0.071*	0.032**	0.025***	-0.032
	(0.036)	(0.006)	(0.037)	(0.016)	(0.005)	(0.039)
	(0.031)^c	(0.005)^{c}***	(0.034)^{c}*			

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Table 8 – continued from previous page

	Tobit			Heckman		
Variable	**Total**	**Age $<$ 15**	**Age $>$64**	**Total**	**Age $<$ 15**	**Age $>$64**
Skurup	-0.011	0.034***	-0.016	0.018	0.020***	0.009
	(0.030)	(0.006)	(0.031)	(0.013)	(0.005)	(0.018)
	(0.028)^{c}	(0.005)^{c}***	(0.041)^{c}			
Sjöbo	0.071**	-0.006	0.049	0.012	0.008	-0.014
	(0.035)	(0.006)	(0.036)	(0.016)	(0.005)	(0.029)
	(0.031)^{c}**	(0.005)^{c}	(0.034)^{c}			
Hörby	0.083	-0.022**	-0.035	-0.009	-0.037***	-0.011
	(0.051)	(0.009)	(0.052)	(0.023)	(0.008)	(0.029)
	(0.054)^{c}	(0.009)^{c}**	(0.043)^{c}			
Höör	-0.032	-0.017	-0.051	-0.008	-0.0445***	0.028
	(0.060)	(0.010)	(0.062)	(0.027)	(0.010)	(0.044)
	(0.065)^{c}	(0.008)^{c}**	(0.062)^{c}			
Malmö	-0.036	-0.080***	0.077	0.005	-0.043***	-0.013
	(0.052)	(0.009)	(0.054)	(0.025)	(0.009)	(0.045)
	(0.060)^{c}	(0.010)^{c}***	(0.057)^{c}			
Lund	0.025	-0.042***	0.063	0.053***	-0.028***	-0.027
	(0.047)	(0.009)	(0.048)	(0.020)	(0.009)	(0.041)
	(0.051)^{c}	(0.012)^{c}***	(0.048)^{c}			
Landskrona	0.101	0.009	0.077	0.040	0.016	-0.017
	(0.099)	(0.013)	(0.096)	(0.043)	(0.012)	(0.057)
	(0.037)^{c}**	(0.009)^{c}	(0.040)^{c}			
Helsingborg	0.097	-0.106***	0.005	0.036	-0.122***	-0.015
	(0.087)	(0.018)	(0.086)	(0.039)	(0.017)	(0.042)
	(0.068)^{c}	(0.028)^{c}***	(0.057)^{c}			

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Table 8 – continued from previous page

Variable	Tobit			Heckman		
	Total	Age < 15	Age >64	Total	Age < 15	Age >64
Höganäs	0.126	0.160***	0.174	0.053	-0.076	-0.019
	(0.145)	(0.043)	(0.143)	(0.065)	(0.176)	(0.091)
	$(0.131)^c$	$(0.031)^{c***}$	$(0.108)^c$			
Eslöv	-0.035	0.010	0.040	0.011	0.026***	-0.015
	(0.046)	(0.007)	(0.047)	(0.021)	(0.007)	(0.032)
	$(0.043)^c$	$(0.006)^c$	$(0.043)^c$			
Ystad	-0.078	0.012	0.020	-0.047**	0.028**	0.029
	(0.053)	(0.012)	(0.053)	(0.024)	(0.011)	(0.027)
	$(0.038)^{c**}$	$(0.018)^c$	$(0.057)^c$			
Trelleborg	-0.036	-0.002	-0.211**	-0.077*	-0.057***	0.021
	(0.090)	(0.015)	(0.093)	(0.041)	(0.015)	(0.100)
	$(0.113)^c$	$(0.012)^c$	$(0.092)^{c**}$			
Intercept	24.604**	0.716	15.286	0.358	0.109	5.926
	(10.441)	(1.696)	(10.946)	(6.096)	(1.727)	(6.039)
	$(11.601)^{c**}$	(2.024)	$(12.008)^c$			
Log-L	-810.084	-133.823	-633.131	-	-	-
LR-test	237.92	1332.58	119.11	322.12	2877.06	103.30
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

9.2 Tables, part two

Table 9: OLS and FE 2000-2012 without neighbours, standard errors in parenthesis. ^{c} stands for clustered standard errors, *** denotes 1% significance, ** 5% and * 10% significance. (N=260)

	OLS			FE		
Variable	**Total**	**Age < 15**	**Age >64**	**Total**	**Age < 15**	**Age >64**
Tax rate	112.208	111.269	31.926	315.889	58.203	-35.702*
	(254.328)	(68.525)	(23.221)	(290.478)	(63.277)	(20.667)
	$(226.024)^c$	$(111.559)^c$	$(19.964)^c$	$(254.128)^c$	$(79.344)^c$	$(33.798)^c$
Tax index	-26.929	-19.867	-4.909	-47.595	-7.723	8.344*
	(50.101)	(13.499)	(4.574)	(60.222)	(13.119)	(4.285)
	$(47.904)^c$	$(22.683)^c$	$(4.622)^c$	$(54.621)^c$	$(16.644)^c$	$(6.821)^c$
House prices	-0.210	0.189***	0.018	-0.919	-0.005	0.027
	(0.137)	(0.037)	(0.013)	(0.738)	(0.161)	(0.052)
	$(0.192)^c$	$(0.056)^{c}$***	$(0.020)^c$	$(0.663)^c$	$(0. 094)^c$	$(0.058)^c$
Unemployment rate	-74.606***	-21.820***	-5.200**	-151.558***	-26.421***	4.775**
	(26.554)	(7.154)	(2.424)	(32.345)	(7.046)	(2.301)
	$(47.675)^c$	$(12.452)^{c}$*	$(3.260)^c$	$(72.576)^{c}$**	$(11.762)^{c}$**	$(4.825)^c$
Population	0.010***	-0.002***	-0.001***	0.014**	-0.003**	0.003***
	(0.001)	(0.000)	(0.000)	(0.006)	(0.001)	(0.000)
	$(0.001)^{c}$***	$(0.000)^{c}$***	$(0.000)^{c}$***	$(0.005)^{c}$**	$(0.002)^c$	$(0.000)^{c}$***
Exp child care	-0.008	-0.016**	0.000	0.021	0.021	-0.005
	(0.031)	(0.008)	(0.003)	(0.066)	(0.014)	(0.005)
	$(0.027)^c$	$(0.008)^{c}$*	$(0.005)^c$	$(0.065)^c$	$(0.017)^c$	$(0.005)^c$
Exp education	-0.025	-0.025***	-0.017***	-0.026	-0.011	0.004
	(0.032)	(0.009)	(0.003)	(0.050)	(0.011)	(0.004)
	$(0.024)^c$	$(0.017)^c$	$(0.005)^{c}$***	$(0.027)^c$	$(0.012)^c$	$(0.004)^c$

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Table 9 – continued from previous page

Variable	OLS Total	OLS Age < 15	OLS Age >64	FE Total	FE Age < 15	FE Age >64
Exp elderly care	-0.007	0.000	0.004**	-0.027	-0.016	-0.003
	(0.019)	(0.005)	(0.002)	(0.046)	(0.010)	(0.003)
	(0.019)^c	(0.011)^c	(0.003)^c	(0.034)^c	(0.008)^c*	(0.003)^c
Exp other	0.024	0.013***	0.002	-0.059	-0.006	0.006**
	(0.019)	(0.005)	(0.002)	(0.038)	(0.008)	(0.003)
	(0.027)^c	(0.014)^c	(0.003)^c	(0.052)^c	(0.008)^c	(0.003)^c**
Intercept	994.395	114.127	15.358	263.235	103.889	-320.519**
	(857.318)	(230.990)	(78.275)	(2135.199)	(465.124)	(151.912)
	(1113.494)^c	(451.258)^c	(141.909)^c	(1324.802)^c	(303.658)^c	(146.231)^c**
R^2	0.794	0.581	0.441	0.161	0.071	0.210
F-test	106.82	38.56	21.89	4.91	1.95	6.84
	(0.000)	(0.000)	(0.000)	(0.000)	(0.046)	(0.000)

Table 10: OLS and FE 2000-2012 including neighbours, standard errors in parenthesis. ^{c} stands for clustered standard errors, *** denotes 1% significance, ** 5% and * 10% significance. (N=260)

Variable	OLS Total	OLS Age < 15	OLS Age >64	FE Total	FE Age < 15	FE Age >64
Tax rate	135.456	-74.897	-9.773	231.891	-24.241	-41.482*
	(250.547)	(50.158)	(21.270)	(231.562)	(40.493)	(22.231)
	(130.181)^c	(64.479)^c	(27.926)^c	(159.278)^c	(41.061)^c	(36.310)^c
Tax index	-21.516	16.123	2.482	-42.203	5.732	9.534**
	(49.433)	(9.897)	(4.197)	(48.282)	(8.443)	(4.635)
	(29.155)^c	(14.094)^c	(5.205)^c	(32.914)^c	(8.458)^c	(7.270)^c

Continued on next page

Table 10 – continued from previous page

Variable	OLS Total	OLS Age < 15	OLS Age >64	FE Total	FE Age < 15	FE Age >64
House prices	-0.183	0.052*	-0.013	-0.752	0.068	0.029
	(0.142)	(0.028)	(0.120)	(0.575)	(0.101)	(0.055)
	$(0.133)^{c}$	$(0.036)^{c}$	$(0.020)^{c}$	$(0.702)^{c}$	$(0.107)^{c}$	$(0.070)^{c}$
Unemployment rate	-66.596**	-5.687	-2.576	-90.103***	-6.509	6.136**
	(26.216)	(5.248)	(2.226)	(25.626)	(4.481)	(2.460)
	$(57.223)^{c}$	$(8.005)^{c}$	$(3.161)^{c}$	$(0.107)^{c}$**	$(3.327)^{c}$*	$(5.848)^{c}$
Population	0.006***	-0.000	0.000*	0.024***	-0.001***	0.003***
	(0.001)	(0.002)	(0.000)	(0.005)	(0.001)	(0.000)
	$(0.001)^{c}$***	$(0.000)^{c}$	$(0.000)^{c}$	$(0.004)^{c}$***	$(0.000)^{c}$***	$(0.003)^{c}$***
Exp child care	-0.016	-0.003	0.005*	-0.065	-0.001	-0.006
	(0.030)	(0.006)	(0.003)	(0.051)	(0.009)	(0.005)
	$(0.018)^{c}$	(0.006)	$(0.006)^{c}$	$(0.039)^{c}$	$(0.007)^{c}$	$(0.004)^{c}$
Exp education	-0.047	0.000	-0.011***	0.017	0.002	0.004
	(0.033)	(0.007)	(0.003)	(0.039)	(0.007)	(0.004)
	$(0.017)^{c}$**	$(0.003)^{c}$	$(0.003)^{c}$**	$(0.028)^{c}$	$(0.004)^{c}$	$(0.002)^{c}$*
Exp elderly care	0.005	0.004	0.003**	0.028	0.006	-0.003
	(0.019)	(0.004)	(0.002)	(0.037)	(0.006)	(0.004)
	$(0.017)^{c}$	$(0.004)^{c}$	$(0.002)^{c}$***	$(0.036)^{c}$	$(0.005)^{c}$	$(0.003)^{c}$
Exp other	0.028	0.002	-0.001	-0.040	-0.004	0.007***
	(0.018)	(0.004)	(0.002)	(0.029)	(0.005)	(0.003)
	$(0.018)^{c}$	$(0.003)^{c}$	$(0.001)^{c}$	$(0.039)^{c}$	$(0.004)^{c}$	$(0.003)^{c}$***
Svalöv	12.862	4.681*	0.541	-5.776	0.409	0.450
	(12.961)	(2.595)	(1.100)	(10.481)	(1.833)	(1.007)
	$(12.699)^{c}$	$(3.069)^{c}$	$(0.473)^{c}$	$(5.578)^{c}$	$(1.271)^{c}$	$(0.409)^{c}$

Continued on next page

Table 10 – continued from previous page

Variable	OLS			FE		
	Total	Age $<$ 15	Age $>$64	Total	Age $<$ 15	Age $>$64
Staffanstorp	2.932	0.499	-0.293	3.500	0.766	0.061
	(5.196)	(1.040)	(0.441)	(4.170)	(0.729)	(0.400)
	$(3.318)^{c}$	$(0.467)^{c}$	$(0.327)^{c}$	$(2.419)^{c}$	$(0.326)^{c**}$	$(0.229)^{c}$
Burlöv	-13.923	-6.663***	0.260	-17.016*	-7.381***	-0.413
	(11.055)	(2.213)	(0.938)	(8.846)	(1.547)	(0.849)
	$(7.169)^{c*}$	$(1.071)^{c***}$	$(0.\ 921)^{c}$	$(4.253)^{c***}$	$(0.816)^{c***}$	$(0.639)^{c}$
Vellinge	-43.793	-5.275	-4.904	-26.500	-6.203	-10.684
	(101.691)	(20.358)	(8.633)	(81.159)	(14.192)	(7.791)
	$(52.365)^{c}$	$(5.710)^{c}$	$(5.233)^{c}$	$(55.172)^{c}$	$(5.108)^{c}$	$(6.704)^{c}$
Bjuv	72.070***	-13.426*	-7.329***	729.278***	147.867***	7.540
	(24.612)	(4.927)	(2.089)	(59.062)	(10.328)	(5.670)
	$(28.301)^{c**}$	$(9.329)^{c}$	$(0.925)^{c***}$	$(174.172)^{c***}$	$(35.521)^{c***}$	$(2.926)^{c**}$
Kävlinge	-2.905	-0.967	0.345	-3.732	-0.848	0.332
	(4.063)	(0.813)	(0.345)	(3.324)	(0.581)	(0.319)
	$(1.561)^{c*}$	$(0.467)^{c*}$	$(0.279)^{c}$	$(1.674)^{c**}$	$(0.380)^{c**}$	$(0.214)^{c}$
Lomma	22.278	-1.259	3.900	12.732	0.330	9.197
	(98.188)	(19.657)	(8.335)	(78.295)	(13.691)	(7.517)
	$(48.460)^{c}$	$(5.608)^{c}$	$(4.941)^{c}$	$(52.431)^{c}$	$(4.889)^{c}$	$(6.410)^{c}$
Svedala	9.972	3.506**	-0.178	11.168**	3.678***	0.279
	(6.171)	(1.235)	(0.524)	(4.828)	(0.844)	(0.464)
	$(3.909)^{c**}$	$(0.544)^{c***}$	$(0.439)^{c}$	$(3.165)^{c***}$	$(0.500)^{c***}$	$(0.269)^{c}$
Skurup	3.101	0.720	0.261	0.235	0.215	0.006
	(5.283)	(1.058)	(0.449)	(4.287)	(0.750)	(0.411)

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Table 10 – continued from previous page

Variable	OLS Total	OLS Age < 15	OLS Age >64	FE Total	FE Age < 15	FE Age >64
	$(3.245)^{c}$	$(0.570)^{c}$	$(0.537)^{c}$	$(1.939)^{c}$	$(0.310)^{c}$	$(0.374)^{c}$
Sjöbo	3.262	0.999	0.011	5.024	1.201	0.199
	(6.035)	(1.208)	(0.512)	(4.770)	(0.834)	(0.458)
	$(2.824)^{c}$	$(0.620)^{c}$	$(0.435)^{c}$	$(2.442)^{c*}$	$(0.485)^{c**}$	$(0.293)^{c}$
Hörby	-7.937	-3.466**	-0.778	0.128	-1.806	-0.472
	(8.642)	(1.730)	(0.734)	(6.923)	(1.211)	(0.665)
	$(4.616)^{c}$	$(1.247)^{c**}$	$(0.393)^{c*}$	$(3.652)^{c}$	$(0.721)^{c**}$	$(0.430)^{c}$
Höör	-9.296	-4.013*	-0.273	-3.770	-2.682*	-0.739
	(10.702)	(2.142)	(0.909)	(8.527)	(1.491)	(0.819)
	$(4.078)^{c**}$	$(0.836)^{c***}$	$(0.836)^{c}$	$(3.367)^{c}$	$(0.582)^{c***}$	$(0.540)^{c}$
Malmö	2.423	-0.696	0.624	-4.096	-1.494	0.762
	(9.531)	(1.908)	(0.809)	(7.472)	(1.307)	(0.717)
	$(4.286)^{c}$	$(0.594)^{c}$	$(0.448)^{c}$	$(3.131)^{c}$	$(0.518)^{c***}$	$(0.447)^{c}$
Lund	7.266	2.844*	-0.122	9.298	3.352***	0.283
	(7.958)	(1.593)	(0.676)	(6.392)	(1.118)	(0.614)
	$(3.913)^{c**}$	$(0.646)^{c***}$	$(0.615)^{c}$	$(2.981)^{c***}$	$(0.567)^{c***}$	$(0.417)^{c}$
Landskrona	-3.637	-3.008	-0.624	14.426	1.563	-0.245
	(15.171)	(3.037)	(1.288)	(12.139)	(2.123)	(1.165)
	$(13.770)^{c}$	$(3.689)^{c}$	$(0.684)^{c}$	$(7.693)^{c*}$	$(1.796)^{c}$	$(0.501)^{c}$
Helsingborg	-13.813	-6.486**	-0.831	3.427	-2.370	-0.779
	(14.107)	(2.824)	(1.198)	(11.307)	(1.976)	(1.085)
	$(10.093)^{c}$	$(2.786)^{c**}$	$(0.729)^{c}$	$(7.477)^{c}$	$(1.634)^{c}$	$(0.603)^{c}$
Höganäs	-81.159***	11.141**	7.965***	-768.915***	-157.448***	-7.842

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Table 10 – continued from previous page

Variable	OLS Total	OLS Age < 15	OLS Age >64	FE Total	FE Age < 15	FE Age >64
	(25.077)	(5.020)	(2.129)	(61.411)	(10.739)	(5.896)
	$(26.310)^{c}$***	$(8.787)^{c}$	$(0.990)^{c}$***	$(182.828)^{c}$***	$(37.083)^{c}$***	$(2.897)^{c}$**
Eslöv	1.503	-0.261	0.417	-7.253	-1.681	0.373
	(7.973)	(1.596)	(0.677)	(6.350)	(1.111)	(0.610)
	$(5.597)^{c}$	$(0.973)^{c}$	$(0.287)^{c}$	$(3.524)^{c}$*	$(0.578)^{c}$***	$(0.330)^{c}$
Ystad	-5.869	-3.834**	1.199	-17.339**	-5.563***	0.557
	(9.034)	(1.808)	(0.767)	(7.464)	(1.305)	(0.717)
	$(5.917)^{c}$	$(1.195)^{c}$***	$(0.822)^{c}$	$(4.025)^{c}$***	$(0.952)^{c}$***	$(0.473)^{c}$
Trelleborg	-22.093	-7.766**	-1.054	-17.519	-7.204***	-1.569
	(16.043)	(3.212)	(1.362)	(12.532)	(2.192)	(1.203)
	$(7.163)^{c}$***	$(1.069)^{c}$***	$(0.883)^{c}$	$(5.886)^{c}$***	$(0.933)^{c}$***	$(0.772)^{c}$*
Intercept	258.406	-34.342	32.609	-729.948	-149.428	-361.960**
	(872.593)	(174.687)	(74.077)	(1709.825)	(298.995)	(164.154)
	$(633.462)^{c}$	$(180.894)^{c}$	$(53.963)^{c}$	$(1397.209)^{c}$	$(220.984)^{c}$	$(146.001)^{c}$**
R^2	0.832	0.812	0.6075	0.570	0.693	0.263
F-test	39.40	34.33	12.27	9.63	16.42	2.60
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 11: Tobit and Heckman 2000-2012 without neighbours, standard errors in parenthesis. ^{c} stands for clustered standard errors, *** denotes 1% significance, ** 5% and * 10% significance. (N=260)

	Tobit			Heckman		
Variable	**Total**	**Age < 15**	**Age >64**	**Total**	**Age < 15**	**Age >64**
Tax rate	3.926***	1.996*	3.751*	0.132	-0.086	-1.172
	(1.185)	(1.114)	(2.014)	(0.778)	(1.241)	(2.442)
	(1.407)^c***	(1.356)^c	(2.102)^c*			
Tax index	-0.806***	-0.483**	-0.738*	-0.036	-0.014	0.291
	(0.233)	(0.219)	(0.396)	(0.155)	(0.249)	(0.499)
	(0.280)^c***	(0.268)^c*	(0.408)^c*			
Ln House prices	1.114**	1.460***	0.716	-0.237	0.457	1.441***
	(0.475)	(0.446)	(0.813)	(0.301)	(0.482)	(0.549)
	(0.499)^c**	(0.873)^c*	(0.837)^c			
Unemployment rate	-0.211*	-0.356***	-0.780***	-0.108	-0.063	-0.029
	(0.119)	(0.112)	(0.206)	(0.070)	(0.131)	(0.329)
	(0.125)^c*	(0.159)^c***	(0.187)^c***			
Ln Population	0.928***	-0.733***	-0.059	0.858***	0.615*	0.078
	(0.227)	(0.215)	(0.388)	(0.131)	(0.332)	(0.257)
	(0.185)^c***	(0.580)^c	(0.512)^c			
Ln Exp child care	-2.521***	-2.217***	-2.193*	-0.307	0.028	-1.135
	(0.741)	(0.700)	(1.254)	(0.483)	(0.865)	(0.942)
	(0.866)^c***	(1.077)^c**	(1.306)^c*			
Ln Exp education	-4.023**	-1.551	-11.249***	-1.593	0.549	1.967
	(1.649)	(1.546)	(2.810)	(0.988)	(1.675)	(5.893)
	(1.416)^c***	(2.469)^c	(2.722)^c***			

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Table 11 – continued from previous page

Variable	Tobit Total	Tobit Age < 15	Tobit Age >64	Heckman Total	Heckman Age < 15	Heckman Age >64
Ln Exp elderly care	1.065	0.538	4.595***	-0.431	-0.186	0.655
	(0.765)	(0.717)	(1.327)	(0.464)	(0.724)	(1.795)
	$(0.658)^c$	$(1.403)^c$	$(1.220)^{c***}$			
Ln Exp other	-0.225	-0.512	-1.591	0.961**	0.023	0.037
	(0.632)	(0.590)	(1.064)	(0.388)	(0.586)	(0.790)
	$(0.885)^c$	$(1.069)^c$	$(0.975)^c$			
Intercept	42.176**	44.270***	93.431***	12.303	-5.471	-27.489
	(17.395)	(16.318)	(29.627)	(10.585)	(21.066)	(53.439)
	$(15.772)^{c***}$	$(28.686)^c$	$(28.850)^{c***}$			
Log-L	-453.323	-432.656	-382.172	-	-	-
LR-test	153.71	87.85	70.27	219.92	36.55	24.08
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.004)

Table 12: Tobit and Heckman 2000-2012 including neighbours, standard errors in parenthesis. ^{c} stands for clustered standard errors, *** denotes 1% significance, ** 5% and * 10% significance. (N=260)

Variable	Tobit Total	Tobit Age < 15	Tobit Age >64	Heckman Total	Heckman Age < 15	Heckman Age >64
Tax rate	3.141***	-0.255	2.951	-0.252	-0.296	0.032
	(1.032)	(0.251)	(1.930)	(0.584)	(0.279)	(1.425)
	$(1.164)^{c***}$	$(0.235)^c$	$(1.967)^c$			
Tax index	-0.613***	0.053	-0.545	0.058	0.060	0.034
	(0.204)	(0.050)	(0.381)	(0.116)	(0.056)	(0.284)

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Table 12 – continued from previous page

Variable	Tobit Total	Tobit Age < 15	Tobit Age >64	Heckman Total	Heckman Age < 15	Heckman Age >64
	(0.241)^{c}**	(0.044)^{c}	(0.377)^{c}			
Ln House prices	0.812*	0.280***	-0.205	-0.362	0.267**	1.534***
	(0.428)	(0.104)	(0.816)	(0.233)	(0.110)	(0.585)
	(0.525)^{c}	(0.122)^{c} **	(0.877)^{c}			
Unemployment rate	-0.068	0.006	-0.553***	-0.067	0.010	-0.102
	(0.107)	(0.027)	(0.203)	(0.055)	(0.030)	(0.183)
	(0.125)^{c}	(0.027)^{c}	(0.173)^{c}***			
Ln Population	0.649***	0.097*	0.593	0.724***	0.115	0.144
	(0.224)	(0.054)	(0.414)	(0.110)	(0.078)	(0.256)
	(0.212)^{c}***	(0.048)^{c}**	(0.290)^{c}**			
Ln Exp child care	-1.992***	0.096	-0.604	-0.246	0.131	-1.246*
	(0.673)	(0.168)	(1.255)	(0.376)	(0.197)	(0.701)
	(0.846)^{c}**	(0.102)^{c}	(1.527)^{c}			
Ln Exp education	-3.499**	0.095	-11.574***	-1.702**	0.160	-0.476
	(1.440)	(0.346)	(2.698)	(0.737)	(0.376)	(3.894)
	(1.321)^{c}***	(0.319)^{c}	(2.529)^{c}***			
Ln Exp elderly care	1.452**	0.054	0.979**	0.205	0.084	1.194
	(0.698)	(0.166)	(1.301)	(0.360)	(0.166)	(1.027)
	(0.715)^{c}**	(0.153)^{c}	(1.238)^{c}**			
Ln Exp other	-0.566	-0.107	-0.588	0.686**	-0.095	-0.276
	(0.555)	(0.131)	(1.022)	(0.298)	(0.131)	(0.542)
	(0.768)^{c}	(0.127)^{c}	(0.984)^{c}			
Svalöv	-0.009	0.105***	-0.024	0.018	0.106***	-0.029

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Table 12 – continued from previous page

Variable	Tobit Total	Tobit Age < 15	Tobit Age >64	Heckman Total	Heckman Age < 15	Heckman Age >64
	(0.053)	(0.150)	(0.094)	(0.026)	(0.015)	(0.047)
	$(0.047)^{c}$	$(0.014)^{c}$***	$(0.074)^{c}$			
Staffanstorp	0.008	0.075***	0.059	0.020*	0.078***	0.001
	(0.021)	(0.013)	(0.040)	(0.012)	(0.013)	(0.030)
	$(0.020)^{c}$	$(0.017)^{c}$***	$(0.048)^{c}$			
Burlöv	-0.014	-0.084***	-0.127	-0.038*	-0.090***	0.025
	(0.045)	(0.017)	(0.081)	(0.023)	(0.017)	(0.066)
	$(0.044)^{c}$	$(0.018)^{c}$***	$(0.102)^{c}$			
Vellinge	1.502***	0.153	0.066	0.191	0.113	0.155
	(0.420)	(0.109)	(0.805)	(0.223)	(0.107)	(0.432)
	$(0.583)^{c}$**	$(0.117)^{c}$	$(0.707)^{c}$			
Bjuv	0.038	-0.221***	-0.337**	0.024	-0.075	-0.046
	(0.093)	(0.038)	(0.164)	(0.044)	(0.155)	(0.139)
	$(0.029)^{c}$	$(0.012)^{c}$***	$(0.061)^{c}$**			
Kävlinge	0.005	0.014***	0.005	-0.010	0.014***	-0.028
	(0.016)	(0.005)	(0.031)	(0.008)	(0.005)	(0.019)
	$(0.020)^{c}$	$(0.010)^{c}$	$(0.038)^{c}$			
Lomma	-1.498***	-0.329***	-0.227	-0.262	-0.296***	-0.111
	(0.405)	(0.107)	(0.780)	(0.215)	(0.105)	(0.428)
	$(0.534)^{c}$***	$(0.116)^{c}$***	$(0.657)^{c}$			
Svedala	0.014	0.023***	0.062	0.023*	0.025***	-0.031
	(0.025)	(0.006)	(0.045)	(0.012)	(0.006)	(0.035)
	$(0.023)^{c}$	$(0.007)^{c}$***	$(0.048)^{c}$			

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Table 12 – continued from previous page

Variable	Tobit Total	Tobit Age < 15	Tobit Age >64	Heckman Total	Heckman Age < 15	Heckman Age >64
Skurup	0.014	0.033***	-0.059	0.018	0.030***	0.002
	(0.022)	(0.006)	(0.039)	(0.011)	(0.006)	(0.030)
	(0.014)^c	(0.006)^{c***}	(0.052)^c			
Sjöbo	0.020	0.012**	0.075*	0.027**	0.015**	-0.006
	(0.024)	(0.006)	(0.044)	(0.012)	(0.006)	(0.034)
	(0.024)^c	(0.006)^{c**}	(0.047)^c			
Hörby	0.025	-0.031***	-0.055	-0.012	-0.033***	-0.017
	(0.035)	(0.010)	(0.063)	(0.018)	(0.009)	(0.039)
	(0.038)^c	(0.009)^{c***}	(0.055)^c			
Höör	-0.012	-0.043***	-0.104	-0.029	-0.047***	0.026
	(0.044)	(0.012)	(0.081)	(0.023)	(0.011)	(0.062)
	(0.046)^c	(0.009)^{c***}	(0.095)^c			
Malmö	-0.059	-0.046***	0.092	0.002	-0.040***	-0.038
	(0.039)	(0.011)	(0.073)	(0.021)	(0.015)	(0.058)
	(0.057)^c	(0.011)^{c***}	(0.071)^c			
Lund	-0.015	-0.022**	0.093	0.034**	-0.019*	-0.003
	(0.032)	(0.010)	(0.059)	(0.016)	(0.010)	(0.045)
	(0.032)^c	(0.014)^c	(0.062)^c			
Landskrona	0.030	-0.001	0.039	0.019	0.001	-0.019
	(0.061)	(0.015)	(0.102)	(0.029)	(0.014)	(0.051)
	(0.021)^c	(0.005)^c	(0.042)^c			
Helsingborg	-0.012	-0.103***	-0.003	-0.002	-0.105***	0.009
	(0.057)	(0.019)	(0.102)	(0.028)	(0.019)	(0.051)
	(0.049)^c	(0.027)^{c***}	(0.076)^c			

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Table 12 – continued from previous page

Variable	Tobit			Heckman		
	Total	Age $<$ 15	Age $>$64	Total	Age $<$ 15	Age $>$64
Höganäs	-0.034	0.150***	0.341*	-0.027	-0.007	0.077
	(0.095)	(0.043)	(0.174)	(0.046)	(0.161)	(0.133)
	$(0.061)^{c}$	$(0.026)^{c***}$	$(0.102)^{c***}$			
Eslöv	-0.032	0.035***	0.024	0.006	0.037***	-0.013
	(0.032)	(0.008)	(0.060)	(0.016)	(0.008)	(0.034)
	$(0.045)^{c}$	$(0.006)^{c***}$	$(0.053)^{c}$			
Ystad	-0.023	0.018	0.018	-0.028	0.020	0.029
	(0.037)	(0.012)	(0.066)	(0.018)	(0.012)	(0.036)
	$(0.042)^{c}$	$(0.020)^{c}$	$(0.061)^{c}$			
Trelleborg	-0.005	-0.040**	-0.255**	-0.069**	-0.051***	0.029
	(0.066)	(0.017)	(0.125)	(0.035)	(0.017)	(0.120)
	$(0.088)^{c}$	$(0.018)^{c**}$	$(0.144)^{c*}$			
Intercept	33.313**	-0.184	84.542***	9.545	-1.485	-5.580
	(15.396)	(3.703)	(28.641)	(7.956)	(4.767)	(31.876)
	$(14.383)^{c**}$	$(3.604)^{c}$	$(26.452)^{c***}$			
Log-L	-410.202	-37.889	-362.387	-	-	-
LR-test	239.95	877.38	109.84	574.39	2289.77	63.96
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

9.3 Tables, further analysis

Table 13: FE and Tobit including expenditures per user, cluster standard errors in parenthesis. *** denotes 1% significance, ** 5% and * 10% significance. (N=420)

	FE			**Tobit**		
Variable	**Total**	**Age < 15**	**Age >64**	**Total**	**Age < 15**	**Age >64**
Tax rate	203.762**	0.266	-5.474*	2.043***	0.483***	-1.000***
	(92.993)	(12.249)	(2.641)	(0.266)	(0.173)	(0.273)
Tax index	-49.820**	11.757***	2.552***	-0.392***	-0.051	0.117**
	(21.533)	(2.730)	(0.614)	(0.053)	(0.034)	(0.055)
House prices	0.239	0.107	-0.079**	-0.613	1.444***	-0.834
	(0.288)	(0.098)	(0.030)	(0.551)	(0.364)	(0.592)
Unemployment	-81.418***	-6.567*	1.815	-0.895***	-0.232***	-0.061
rate	(15.605)	(3.758)	(2.068)	(0.115)	(0.075)	(0.123)
Population	0.027***	-0.002	0.001*	1.849***	-0.658***	1.203***
	(0.008)	(0.002)	(0.001)	(0.270)	(0.179)	(0.292)
Exp child care	-0.009*	-0.001	-0.000	-0.825	-0.243	1.417
/user	(0.004)	(0.001)	(0.000)	(1.040)	(0.683)	(1.122)
Exp education	-0.003**	-0.000	0.000**	-2.327***	-0.828	0.681
/user	(0.001)	(0.000)	(0.000)	(0.802)	(0.527)	(0.871)
Exp elderly	0.008**	-0.000	-0.000	-0.813	-1.195**	-0.308
care /user	(0.003)	(0.001)	(0.000)	(0.893)	(0.596)	(0.954)
Exp other /user	-0.005	0.003	0.001	1.357**	0.317	-1.190*
	(0.009)	(0.003)	(0.001)	(0.587)	(0.392)	(0.622)
Intercept	540.654	-1052.652***	-155.623**	23.743**	19.660***	-7.386

Continued on next page

Table 13 – continued from previous page

Variable	FE			Tobit		
	Total	Age < 15	Age >64	Total	Age < 15	Age >64
	(791.227)	(256.586)	(67.490)	(10.720)	(7.031)	(11.805)
R^2	0.421	0.476	0.151	-	-	-
F-test	981.04	52.47	74.42	-	-	-
	(0.000)	(0.000)	(0.000)			
Log-L	-	-	-	-840.207	-763.219	-669.567
LR-test	-	-	-	177.67	73.79	46.24
				(0.000)	(0.000)	(0.000)

Table 14: FE and Tobit including expenditures per user, cluster standard errors in parenthesis. *** denotes 1% significance, ** 5% and * 10% significance. (N=420)

Variable	FE			Tobit		
	Total	Age < 15	Age >64	Total	Age < 15	Age >64
Tax rate	210.425*	-6.576	-7.482***	1.894***	0.027	-1.197***
	(100.805)	(5.679)	(2.312)	(0.261)	(0.041)	(0.268)
Tax index	-60.956**	6.354***	2.577***	-0.363***	-0.000	0.141**
	(25.024)	(1.243)	(0.432)	(0.052)	(0.008)	(0.055)
House prices	0.119	0.062	-0.083**	-1.068*	0.287***	-1.196**
	(0.263)	(0.056)	(0.031)	(0.545)	(0.084)	(0.586)
Unemployment rate	-73.739***	-1.582	2.463	-0.789***	-0.013	0.026
	(14.795)	(3.763)	(1.894)	(0.113)	(0.017)	0.120)
Population	0.024***	-0.004***	0.001*	1.765***	0.064	1.468***

Continued on next page

Table 14 – continued from previous page

Variable	FE Total	FE Age < 15	FE Age >64	Tobit Total	Tobit Age < 15	Tobit Age >64
	(0.008)	(0.000)	(0.001)	(0.280)	(0.045)	(0.298)
Exp child care /user	-0.008	-0.000	0.000	-0.857	-0.051	1.429
	(0.005)	(0.000)	(0.000)	(0.998)	(0.152)	(1.066)
Exp education /user	-0.004***	0.000	0.000**	-2.147***	-0.048	0.927
	(0.001)	(0.000)	(0.000)	(0.773)	(0.121)	(0.828)
Exp elderly care /user	0.011**	-0.000	0.000	-0.249	0.081	0.399
	(0.003)	(0.000)	(0.000)	(0.874)	(0.136)	(0.926)
Exp other /user	-0.013*	0.001	0.001	1.151**	-0.041	-1.214**
	(0.007)	(0.002)	(0.001)	(0.568)	(0.092)	(0.596)
Svalöv	9.295	2.247	0.379	-0.082	0.082***	-0.046
	(9.469)	1.666	(0.415)	(0.081)	(0.013)	(0.080)
Staffanstorp	-2.051	0.722*	0.306	0.000	0.077***	0.043
	(1.694)	(0.369)	(0.249)	(0.030)	(0.011)	(0.031)
Burlöv	-14.811*	-10.216***	-1.043	0.005	-0.091***	-0.084
	(8.202)	1.243	(0.799)	(0.066)	(0.016)	(0.068)
Vellinge	40.454	-5.729	-3.757	0.967*	-0.110	0.277
	(46.883)	(6.045)	(4.592)	(0.582)	(0.098)	(0.603)
Bjuv	16.205	-6.094**	-1.256	-0.151	-0.232***	-0.322**
	(18.741)	(2.371)	(1.224)	(0.149)	(0.038)	(0.143)
Kävlinge	-4.712*	-0.941**	0.180	-0.013	0.025***	0.021
	2.476744	(0.423)	(0.172)	(0.024)	(0.004)	(0.025)

Continued on next page

Table 14 – continued from previous page

Variable	FE			Tobit		
	Total	Age < 15	Age >64	Total	Age < 15	Age >64
Lomma	-47.853	-1.869	1.516	-0.978*	-0.049	-0.433
	(46.077)	(6.512)	(4.561)	(0.558)	(0.094)	(0.578)
Svedala	9.000**	4.926***	0.622	0.020	0.013**	0.064*
	(3.662)	(0.687)	(0.391)	(0.037)	(0.005)	(0.037)
Skurup	0.638	-0.183	-0.167	-0.010	0.034***	-0.021
	(1.922)	(0.293)	(0.329)	(0.031)	(0.005)	(0.032)
Sjöbo	-1.071	0.012	0.584*	0.059*	-0.005	0.050
	(3.460)	(0.558)	(0.327)	(0.035)	(0.005)	(0.036)
Hörby	-8.523	-4.016***	-0.722*	0.085	-0.021**	-0.015
	(7.493)	(1.101)	(0.377)	(0.052)	(0.008)	(0.052)
Höör	-7.548	-3.574***	-0.996*	-0.024	-0.016	-0.041
	(4.408)	(0.952)	(0.528)	(0.061)	(0.010)	(0.064)
Malmö	-3.979	-0.995	1.126**	-0.034	-0.080***	0.068
	(2.358)	(0.714)	(0.482)	(0.052)	(0.009)	(0.056)
Lund	9.118*	4.587***	0.485	0.021	-0.041***	0.060
	(4.465)	(0.698)	(0.492)	(0.048)	(0.009)	(0.050)
Landskrona	-10.584	-0.505	0.670	0.103	0.007	0.119
	(12.754)	(1.740)	(0.436)	(0.100)	(0.012)	(0.096)
Helsingborg	-16.692	-6.363***	-0.795	0.101	-0.105***	0.037
	(12.034)	(1.964)	(0.584)	(0.088)	(0.017)	(0.086)

Continued on next page

Table 14 – continued from previous page

Variable	FE			Tobit		
	Total	Age < 15	Age >64	Total	Age < 15	Age >64
Höganäs	-27.031	1.104	0.343	0.168	0.159***	0.278*
	(22.585)	(2.944)	(1.179)	(0.147)	(0.043)	(0.145)
Eslöv	-4.805*	-1.230*	0.463	-0.028	0.010	0.031
	(2.479)	(0.630)	(0.278)	(0.046)	(0.007)	(0.048)
Ystad	-13.767***	-5.380***	0.386	-0.059	0.011	0.016
	(3.527)	(0.797)	(0.527)	(0.053)	(0.011)	(0.054)
Trelleborg	-17.197*	-10.194***	-2.410***	-0.034	-0.002	-0.199**
	(8.706)	(1.714)	(0.846)	(0.091)	(0.015)	(0.096)
Intercept	1894.842	-227.588**	-119.808	21.095**	2.017	-16.897
	(1114.463)	(98.650)	(41.756)	(10.636)	(1.684)	(11.628)
R^2	0.479	0.735	0.358	-	-	-
F-test	981.04	52.47	74.42	-	-	-
	(0.000)	(0.000)	(0.000)			
Log-L	-	-	-	-819.063	-133.974	-647.958
LR-test	-	-	-	219.96	1332.28	89.46
				(0.000)	(0.000)	(0.000)

Table 15: FE and Tobit including delta tax rate, cluster standard errors in parenthesis. *** denotes 1% significance, ** 5% and * 10% significance. (N=420)

	FE			**Tobit**		
Variable	**Total**	**Age < 15**	**Age >64**	**Total**	**Age < 15**	**Age >64**
Δ Tax rate	-59.141***	-16.540***	-5.301***	-0.283*	0.156	0.063
	(19.409)	(4.703)	(1.297)	(0.153)	(0.099)	(0.169)
Tax index	-4.074	12.794***	1.731***	-0.001	0.034***	-0.073***
	(3.965)	(0.961)	(0.265)	(0.020)	(0.012)	(0.024)
House prices	0.787**	0.128	-0.085***	-1.074*	1.323***	-0.614
	(0.367)	(0.089)	(0.024)	(0.590)	(0.366)	(0.598)
Unemployment	-18.457	-3.662	1.275	-0.490***	-0.161**	-0.274
rate	(15.991)	(3.874)	(1.061)	(0.115)	(0.070)	(0.118)
Population	0.034***	-0.001	0.001***	2.127***	-0.584***	1.080***
	(0.005)	(0.001)	(0.000)	(0.288)	(0.180)	(0.295)
Exp child care	0.003	-0.001	-0.001**	3.310***	0.618	-0.752
/user	(0.003)	(0.001)	(0.000)	(0.986)	(0.602)	(0.982)
Exp education	-0.006**	0.000	0.000***	-0.776	-0.532	-0.040
/user	(0.002)	(0.000)	(0.000)	(0.848)	(0.525)	(0.903)
Exp elderly	0.013***	0.000	-0.000	-1.183	-1.310**	-0.111
care /user	(0.004)	(0.001)	(0.000)	(0.961)	(0.601)	(0.975)
Exp other /user	-0.044***	0.002	0.002***	-0.832	-0.025	-0.134
	(0.010)	(0.002)	(0.001)	(0.599)	(0.373)	(0.620)
Intercept	-1287.606**	-1206.961***	-169.924***	-16.157	11.831*	13.145

Continued on next page

Table 15 – continued from previous page

Variable	FE			Tobit		
	Total	**Age < 15**	**Age >64**	**Total**	**Age < 15**	**Age >64**
	(597.395)	(144.737)	(39.948)	(10.490)	(6.486)	(11.084)
R^2	0.406	0.493	0.180	-	-	-
F-test	29.66	42.16	9.53	-	-	-
	(0.000)	(0.000)	(0.000)			
Log-L	-	-	-	-864.381	-764.346	-675.383
LR-test	-	-	-	125.28	68.52	32.72
				(0.000)	(0.000)	(0.000)

Table 16: FE and Tobit including delta tax rate and neighbours, cluster standard errors in parenthesis. *** denotes 1% significance, ** 5% and * 10% significance. (N=420)

Variable	FE			Tobit		
	Total	**Age < 15**	**Age >64**	**Total**	**Age < 15**	**Age >64**
ΔTax rate	-60.601***	-13.119***	-5.194***	-0.369**	0.013	0.121
	(19.924)	(3.609)	(1.357)	(0.150)	(0.022)	(0.162)
Tax index	-12.881***	5.941***	1.402***	0.004	0.005	-0.092***
	(4.563)	(0.827)	(0.311)	(0.020)	(0.003)	(0.024)
House prices	0.709*	0.065	-0.094***	-1.588***	0.283***	-0.910
	(0.368)	(0.067)	(0.025)	(0.579)	(0.084)	(0.594)
Unemployment	-6.850	-0.745	1.531	-0.386***	-0.011	-0.238**
rate	(16.189)	(2.933)	(1.102)	(0.112)	(0.016)	(0.117)
Population	0.0303***	-0.003***	0.001***	2.007***	0.070	1.332***

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Table 16 – continued from previous page

Variable	FE Total	FE Age < 15	FE Age >64	Tobit Total	Tobit Age < 15	Tobit Age >64
	(0.005)	(0.001)	(0.000)	(0.297)	(0.045)	(0.305)
Exp child care /user	-0.006***	-0.001	-0.001***	2.878***	-0.011	-1.085
	(0.002)	(0.001)	(0.000)	(0.944)	(0.134)	(0.951)
Exp education /user	0.014***	0.000	0.000***	-0.565	-0.031	-0.069
	(0.004)	(0.000)	(0.000)	(0.809)	(0.120)	(0.856)
Exp elderly care /user	-0.051***	0.000	0.000***	-0.360	0.080	0.523
	(0.011)	(0.001)	(0.000)	(0.933)	(0.137)	(0.956)
Exp other /user	0.004	0.002	0.003***	-0.935	-0.059	0.078
	(0.003)	(0.002)	(0.001)	(0.581)	(0.087)	(0.604)
Svalöv	4.762	1.476	0.092	-0.117	0.083***	-0.028
	(10.294)	(1.865)	(0.701)	(0.084)	(0.014)	(0.084)
Staffanstorp	-1.931	0.555	0.224	0.007	0.078***	0.034
	(4.145)	(0.751)	(0.282)	(0.032)	(0.012)	(0.032)
Burlöv	-15.777*	-10.316***	-1.078*	-0.006	-0.093***	-0.070
	(9.377)	(1.699)	(0.639)	(0.071)	(0.016)	(0.070)
Vellinge	43.290	-7.856	-4.874	0.813	-0.104	0.352
	(80.608)	(14.602)	(5.489)	(0.623)	(0.099)	(0.618)
Bjuv	6.363	-6.263*	-1.142	-0.271*	-0.233***	-0.256*
	(18.429)	(3.338)	(1.255)	(0.150)	(0.038)	(0.150)
Kävlinge	-2.866	-0.886	0.168	-0.004	0.025***	0.017
	(3.525)	(0.639)	(0.240)	(0.026)	(0.005)	(0.026)

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Table 16 – continued from previous page

Variable	FE Total	FE Age < 15	FE Age >64	Tobit Total	Tobit Age < 15	Tobit Age >64
Lomma	-52.351	0.773	2.917	-0.858	-0.058	-0.483
	(77.290)	(14.001)	(5.263)	(0.597)	(0.095)	(0.593)
Svedala	10.010**	4.936***	0.611*	0.030	0.013**	0.057
	(5.021)	(0.910)	(0.342)	(0.039)	(0.006)	(0.039)
Skurup	1.149	-0.094	-0.138	-0.013	0.034***	-0.012
	(4.388)	(0.795)	(0.299)	(0.033)	(0.006)	(0.033)
Sjöbo	0.744	-0.118	0.487	0.095**	-0.005	0.023
	(4.935)	(0.894)	(0.336)	(0.037)	(0.006)	(0.038)
Hörby	-5.012	-3.548***	-0.567	0.114**	-0.022**	-0.030
	(6.997)	(1.268)	(0.477)	(0.055)	(0.009)	(0.055)
Höör	-6.154	-3.293**	-0.890	-0.029	-0.018*	-0.031
	(8.510)	(1.542)	(0.580)	(0.065)	(0.010)	(0.066)
Malmö	-3.289	-1.564	0.835*	-0.026	-0.079***	0.057
	(7.294)	(1.321)	(0.497)	(0.057)	(0.009)	(0.058)
Lund	9.501	4.654***	0.516	0.022	-0.042***	0.057
	(6.763)	(1.225)	(0.461)	(0.051)	(0.009)	(0.051)
Landskrona	-1.219	0.140	0.800	0.187*	0.008	0.072
	(12.072)	(2.187)	(0.822)	(0.101)	(0.013)	(0.101)
Helsingborg	-10.955	-5.668***	-0.569	0.147	-0.107***	0.014
	(11.078)	(2.007)	(0.754)	(0.091)	(0.018)	(0.091)

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Table 16 – continued from previous page

Variable	FE Total	FE Age < 15	FE Age >64	Tobit Total	Tobit Age < 15	Tobit Age >64
Höganäs	-19.212	1.193	0.226	0.264*	0.159***	0.226
	(19.021)	(3.446)	(1.295)	(0.150)	(0.043)	(0.151)
Eslöv	-6.803	-1.701	0.273	-0.043	0.011	0.038
	(6.307)	(1.143)	(0.430)	(0.049)	(0.007)	(0.050)
Ystad	-15.314**	-6.044***	0.083	-0.079	0.012	0.028
	(7.646)	(1.385)	(0.521)	(0.057)	(0.012)	(0.057)
Trelleborg	-17.274	-9.564***	-2.103**	-0.038	-0.003	-0.187*
	(12.555)	(2.274)	(0.855)	(0.098)	(0.015)	(0.099)
Intercept	-137.174	-324.252***	-126.215***	-18.480*	1.545	9.639
	(664.430)	(120.362)	(45.244)	(10.231)	(1.530)	(10.855)
R^2	0.464	0.744	0.232	-	-	-
F-test	11.03	37.70	3.85	-	-	-
	(0.000)	(0.000)	(0.000)			
Log-L	-	-	-	-839.203	-134.166	-656.314
LR-test	-	-	-	175.64	1328.89	70.86
				(0.000)	(0.000)	(0.000)