Online Appendix[*] to

Do Agglomeration Economies Reduce the Sensitivity of Firm Location to Tax Differentials?

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A Online Appendix

A.1 A Specific Model for Footloose Startups

While the model of expected profits in equation (1) of our paper may be intuitive and general, it is not rooted in a formal representation of the firm's optimization problem. We now derive a profit function formally, drawing on a model proposed by Crozet, Mayer and Mucchielli (2004). This will lead to a particular specification of the profit function that can be viewed as an alternative to equation (1), thus offering a complementary framework for the exploration of our basic research question.

We assume identical consumer preferences across locations j but allow for variations in income and price elasticities of demand across sectors i. A generalized Cobb-Douglas utility function then implies the following expression for quantity demanded Q_{ij}:

$$Q_{ij} = \frac{\phi_i m_j^{\gamma_i}}{p_{ij}^{\delta_i}},$$

where ϕ_i is the sectoral expenditure share, m_j is relevant income at location j, p_{ij} is the price, γ_i is the income elasticity, and $\delta_i > 1$ is the price elasticity of demand.

Symmetry among firms of any sector at a particular location implies that quantity demanded, and thus equilibrium output per firm, are equalized: $q_{ij} = \frac{Q_{ij}}{N_{ij}}$, where N_{ij} is the number of active firms in sector i at location j.

Firms are assumed to be price takers in factor markets. Their unit costs are modeled as

[*] This Appendix is based on Sections 3.2 and 5.3 in the working paper version published as CEPR Discussion Paper No. 6606, December 2007.

follows:

$$c_{ij} = \left(w_{ij}\left(1+t_j^w\right)\right)^{\theta_i^w}\left(k\left(1+t_j^k\right)\right)^{\theta_i^k}\left(r_j\left(1+t_j^r\right)\right)^{\theta_i^r} N_{ij}^{(\theta^N+A_i)}, \tag{A.1}$$

where w_{ij} is the wage rate (which may vary across locations and industries), k is the capital rental price (assumed constant across locations and industries), r_j is land rental price (which may vary across locations), t_j^w is the payroll tax rate (to the extent that it is borne by employers), t_j^k is the capital tax rate, t_j^r is the property tax rate, A_i again captures agglomeration economies, and the θs are parameters. θ_i^w, θ_i^k, and θ_i^r represent input shares of labor, capital and land. The exponent on N_{ij}, $(\theta^N + A_i)$, implies that firms in more agglomerated sectors will benefit more from proximity to own-sector firms than firms in less agglomerated sectors.

Profits of a representative firm can be written as $\pi_{ij} = (1-t_j^\pi)(p_{ij} - c_{ij})\, q_{ij}$, where t_j^π is the corporate income (i.e. profit) tax rate. Profit maximization with a large number of firms competing in quantities, and consideration of a multiplicative stochastic term ν_{fij}, implies the following firm-level profit function:[1]

$$\begin{aligned}\pi_{fij} \quad = \quad & \left(1-t_j^\pi\right)\phi_i m_j^{\gamma_i}\left(\left(w_{ij}(1+t_j^w)\right)^{\theta_i^w}\right)^{1-\delta_i}\left(\left(k(1+t_j^k)\right)^{\theta_i^k}\right)^{1-\delta_i}\left(\left(r_j(1+t_j^r)\right)^{\theta_i^r}\right)^{1-\delta_i} \\ & N_{ij}^{\left((\theta^N+A_i)(\delta_i-1)-2\right)}\nu_{fij}.\end{aligned}$$

In logs, this becomes:

$$\begin{aligned}\ln(\pi_{fij}) \quad = \quad & \ln(1-t_j^\pi) + \ln\phi_i + \gamma_i \ln m_j \\ & + ((1-\delta_i)\theta_i^w)\ln w_{ij} + ((1-\delta_i)\theta_i^w)\ln(1+t_j^w) \\ & + ((1-\delta_i)\theta_i^k)\ln k + ((1-\delta_i)\theta_i^k)\ln(1+t_j^k) \\ & + ((1-\delta_i)\,\theta_i^r)\ln r_j + ((1-\delta_i)\theta_i^r)\ln(1+t_j^r) \\ & + \left((\theta^N + A_i)\,(\delta_i - 1) - 2\right)\ln N_{ij} \\ & + \ln \nu_{fij}.\end{aligned} \tag{A.2}$$

We can thus write the following estimable equation:

$$\begin{aligned}\ln(\pi_{fij}) \quad = \quad & \beta_0 + \beta_{1i} + \beta_2\ln(1-t_j^\pi) + \beta_{3i}\ln w_{ij} + \beta_{4i}\ln r_j + \beta_{5i}\ln(1+t_j^k) \\ & + \beta_{6i}\ln(1+t_j^w) + \beta_{7i}\ln N_{ij} + \beta_{8i}\,(A_i * \ln N_{ij}) + \beta_{9i}\ln m_j + \ln\nu_{fij},\end{aligned} \tag{A.3}$$

where the ϕ_i are absorbed by sector fixed effects (β_{1i}), and property taxes t_j^r are dropped as they do not play a role in our empirical setting.[2] If we assume that $\ln\nu_{fij}$ follows an i.i.d.

[1] See Crozet *et al.* (2004) for the derivation.

[2] The profit function (**??**) implies that $\beta_2 = 1$. This restriction, however, cannot be tested, because the

extreme-value type 1 distribution, equation (**??**) leads to a standard conditional logit model and can be estimated, *mutatis mutandis*, via a Poisson count model analogous to (2) in the paper.[3]

The principal difference between the baseline model (2) in the paper and the specific model (**??**) is that the latter no longer features an explicit interaction term between the corporate income tax burden and sectoral agglomeration intensity. This stems from the simple fact that a given statutory tax rate on profits reduces profits exactly proportionally irrespective of any sectoral or locational specificities. Hence, we shall compute an indirect "tax-versus-agglomeration effect" for the specific model, based on the magnitude of the estimated tax sensitivity parameter β_2 relative to the magnitude of the estimated agglomeration sensitivity parameters β_7 and β_8.

A.2 Variables Used

Here, we run our regressions for two waves of firm creations, which we pool while allowing for separate intercepts. Counts of new firms set up over the period 1999-2000 are assigned to control variables for 1998, and counts of new firms set up over the period 2001-2002 are assigned to control variables for 2001. By way of an additional robustness test, we estimate the model alternatively at the three-digit and four-digit levels of sectoral aggregation.

Estimation of model (**??**) requires a subset of the variables used in the baseline model, measured in logs. An important difference is that we need to identify the relevant tax rates. We have therefore collected statutory tax rates on representative tax payers for taxes on corporate income (t_j^π), capital (t_j^k) and personal income (t_j^w).[4]

Since these statutory tax rates may be sensitive to our definition of representative tax payers, we alternatively estimate the specific model using a *tax index* defined as a revenue-weighted average of consolidated municipal and cantonal profit and capital taxes. The index is calculated separately for 1998 and for 2001. Corporate income tax schedules are progressive

coefficients of a multinomial choice model are identified only up to a multiplicative scale factor. Strictly, (**??**) also implies that $\beta_{3i} = \beta_{6i}$, i.e. that the effect of a percentage change in wages is equivalent to that of a percentage change in the tax on wages. We shall not impose this restriction, because (a) we observe taxes on personal income (whose incidence on firms' wage bills we cannot measure) and (b) our data for wages and for personal income taxes are at different spatial scales. Moreover, for expositional simplicity we shall report results with β_{5i}, β_{6i}, β_{7i}, and β_{8i} each constrained to be equal across sectors, i.e. we assume the effects of taxes on factor inputs and the main effect of N_{ij} (which we shall represent by the empirical variable *sector proximity*) to be the same across sectors. To the extent that they are possible, estimations with sector-level effects of these variables yield qualitatively equivalent results to those reported below. Given the very limited time variation in our data, sector-level identification of β_{7i}, and β_{8i} is not feasible.

[3] Silva and Tenreyro (2006) show that the Poisson estimator is particularly well suited to log-linear regression specifications that are derived from multiplicative models with potentially heteroskedastic error terms.

[4] Based on fiscal statistics for Switzerland, we define representative profitability as 9 percent of own capital, we take a representative capital stock as 176,000 and 181,000 Swiss francs respectively in 1998 and 2001, and we consider canton-averaged income tax rates on a household with two children and a taxable annual income of 73,000 and 75,000 Swiss francs respectively in 1998 and 2001. One Swiss franc traded for 0.63 US dollars on average over our sample period.

in most municipalities. Hence, we collected statutory corporate income tax rates for three representative levels of profitability (2, 9 and 32 percent, based on observed distributions of profitability levels in Swiss firm-level statistics), and took the mean of these three rates as an index for the corporate income tax. As capital taxes are generally proportional, we collected statutory capital tax rates for a firm with the median capital base. To compute the *tax index*, we normalized the profit-tax index and the capital tax rates by subtracting the mean and dividing by the standard deviation for each of the two sample years, and we weighted them by the respective importance in terms of tax revenue. Hence, the *tax index* has mean zero by construction.

Our measure of N_{ij} is what we call *sector proximity*: the period-industry-municipality specific inversely distance weighted number of existing firms across all Swiss municipalities.

The remaining explanatory variables are as explained in the paper, with the difference that here we compute them for two time periods separately.

A.3 Results

A.3.1 Parameter estimates

[Table A1 about here]

The first panel of Table A1 reports our estimates of the specific model (**??**), with all coefficients constrained to be equal across sectors (allowing us to report them in the table). Here too, we find that high corporate taxes deter firm births, with an effect of the corporate income tax rate that is statistically significantly negative across the three regression runs. Note that the positive coefficient estimated on ln(1-t_j^π) implies that the effect of the tax rate is negative.

The effects of *income tax* and *capital tax* are also estimated to be negative. The effect of capital taxes appears considerably weaker than that of corporate and personal income taxes. This can probably be explained by the fact that capital taxes play a relatively minor role in the Swiss fiscal system, accounting for a mere three percent of consolidated tax revenues at the sub-federal level (whereas corporate income taxes represent some twelve percent and personal income taxes about two thirds of total sub-federal revenues).

Conversely, agglomeration effects, measured here as the coefficient on the interaction between *sector proximity* and the *EG index*, are positive and statistically significant (although with robust standard errors statistical significance is found only at the three-digit level of sectoral aggregation). The remaining controls perform in line with expectations: a large *area*, high *sector proximity* and high *market potential* raise the number of new firms, while a high average *wage* appears to be detrimental. The estimated coefficients on *property price* are not statistically significant, which is suggestive of a dual role played by this variable, both as a factor price (which deters firm births) and as a positive but imperfect correlate of unmeasured locational attractions (which promote firm births), thus supporting inclusion of municipality fixed effects to test the sensitivity of our parameters of main interest.

We then carry out a number of robustness tests on the regressions reported in the first panel of Table A1.

In the second panel of Table A1, we show results for the same specification but estimated via zero-inflated Poisson. The estimated coefficients are stable, and the precision of the estimates is increased. In particular, we now find that the interaction between *sector proximity* and the *EG index* is statistically significant at all levels of sectoral aggregation also when based on robust standard errors. Overall, therefore, even the constrained version of our specific model (in the sense that estimated coefficients are forced to be equal across sectors) performs well.

[Table A2 about here]

The first panel of Table A2 reports estimates of a specification that allows for sector-specific coefficients on *wage*, *property price* and *market potential* and thereby gets closer to expression (**??**).[5] Once more, our main results stand: high corporate and personal income taxes depress firm births, whereas firms in highly agglomerated sectors, measured by the *EG index*, choose locations with high *sector proximity*. Our qualitative results also hold once we force the coefficients on area to unity, as in fact suggested by the empirical model. These estimates are reported in the second panel of Table A2.[6]

[Table A3 about here]

As another robustness test, we again introduce municipality fixed effects. This no longer allows us to identify the effect of the tax variables, but it serves as a check on the interaction between *sector proximity* and the *EG index* in a specification that controls for all potential municipality-level determinants of firm births. Table A3 displays the results. We once more find positive estimates on the interaction of interest, with robust statistical significance, however, found only at the three-digit level of sectoral aggregation.

[5]We report results for interactions of these three variables with dummies for one-digit sectors. We show test statistics for the joint significance of each set of coefficients rather than listing all the individual estimates. Interactions with dummies for more disaggregated sectors do not substantially alter our results. We have also found our findings to be robust to sector-by-sector estimation of the tax variables.

[6]We furthermore find the results not to be substantively affected if instead of Poisson we employ the zero-inflated Poisson estimator for these regression runs.

[Table A4 about here]

Finally, we replace our statutory corporate tax variables with the *tax index* for corporate income and capital taxes as used in the baseline model. To use the *tax index*, while loosening the link to the specific model, has the advantage of capturing the full tax schedules better than statutory taxes for particular types of firms and households. These results are reported in Table A4 (which apart from the modified tax variables corresponds to the specification reported on in Table A1). We find statistically significant deterrent effects of corporate and personal income taxes across the board. All remaining coefficients, including those on the agglomeration variables, are very similar to those obtained in the estimations based on statutory tax rates (Table A1). We therefore conclude that our results are not driven by any particular - and inevitably somewhat arbitrary - empirical representation of the relevant corporate and personal tax burdens.

A.3.2 Tax-versus-agglomeration effect

The specific model implies that the elasticity of profits, and thus of new firm counts, with respect to corporate income taxes is constant. Hence, unlike our baseline specification (1) in the paper, the specific model (**??**) does not feature an explicit interaction between taxes and agglomeration forces. However, the agglomeration force, i.e. the effect on profits of a large N_{ij}, will be sector specific. According to equation (**??**), the total agglomeration effect on profits is $\frac{\partial \ln \pi_i}{\partial \ln N_i} = \beta_7 + \beta_8\ A_i$, which varies across sectors via the different agglomeration intensities A_i.[7] Having estimated the parameters of equation (**??**), we will thus be able to compute how the sensitivity of profits with respect to the local corporate tax index (β_2) varies relative to the elasticity of profit with respect to the number of proximate own-sector firms:

$$\text{Tax-Versus-Agglomeration Effect} = \frac{\widehat{\beta}_2}{\widehat{\beta}_7 + \widehat{\beta}_8 A_i},$$

where circumflexes denote estimated values.

[Figure A1 about here]

An illustration of this effect, based on the three-digit unconstrained Poisson results of Table A2, is provided in Figure A1. Confidence intervals are computed using the delta method, based alternatively on unadjusted and on robust Poisson standard errors. The illustration shows that the relative importance of tax differentials is some 2.5 times stronger for the least

[7] Recall that we constrain β_{7i}, and β_{8i} in (**??**) to be equal across sectors, as our data would not allow us to identify them separately at the sector level.

agglomerated sectors than for the most agglomerated sectors.[8] We again find, therefore, that the intensity of agglomeration affects the relative importance of tax differentials in determining firms' location choices to a quantitatively non-trivial extent.

References

[1] Crozet, M., Mayer, T. and Mucchielli, J. (2004). 'How do firms agglomerate? a study of FDI in France', *Regional Science and Urban Economics*, vol. 34(1), pp. 27-54.

[2] Santos Silva, J.M.C. and Tenreyro, S. (2006). 'The log of gravity', *Review of Economics and Statistics*, vol. 88(4), pp. 641-658.

[8]The *EG index* in our sample for these estimations ranges from -0.050 to 0.279.

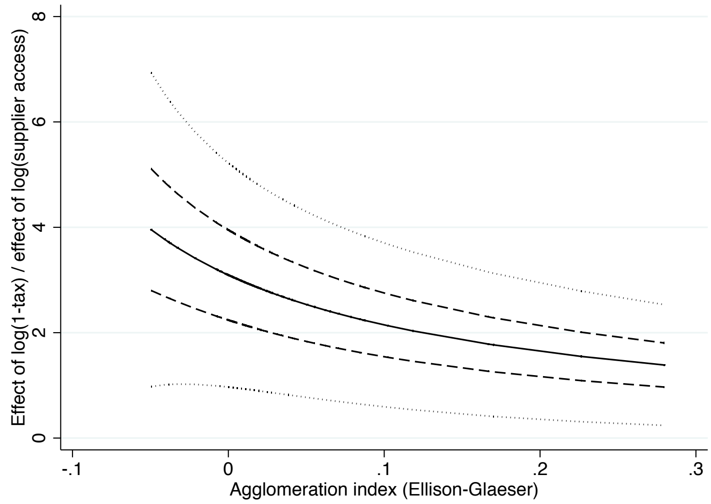

Fig. A1: Tax-Versus-Agglomeration Effect in the Specific Model. (–) point estimate; (---) 95% confidence interval from unadjusted standard errors; (···) 95% confidence interval from robust standard errors.

Notes: The graph illustrates the relative effect of taxes compared to the impact of supplier access as a function of the degree of agglomeration at the NACE three-digit sector level. The underlying computations are based on the coefficients in Table A2.

Table A1: Specific Model, Sector Fixed Effects, Statutory Tax Rates

Dependent variable = number of new firms per municipality and sector

	Poisson			Zero-Inflated Poisson		
NACE sectors:	**2 digit**	**3 digit**	**4 digit**	**2 digit**	**3 digit**	**4 digit**
Log (1 - corporate income tax)	**1.539**	**1.468**	**1.314**	**1.427**	**1.587**	**1.437**
	(0.232)***	(0.232)***	(0.233)***	(0.242)***	(0.250)***	(0.263)***
	*(0.706)***	*(0.593)****	*(0.478)****	*(0.745)**	*(0.584)****	*(0.513)****
Log wage	-3.516	-3.520	-3.594	-3.665	-3.565	-3.636
	(0.117)***	(0.117)***	(0.118)***	(0.122)***	(0.121)***	(0.123)***
	*(0.364)****	*(0.307)****	*(0.283)****	*(0.301)****	*(0.212)****	*(0.189)****
Log property price	0.066	0.024	-0.061	0.065	-0.022	-0.108
	(0.077)	(0.077)	(0.077)	(0.081)	(0.084)	(0.088)
	(0.284)	*(0.212)*	*(0.175)*	*(0.153)*	*(0.129)*	*(0.122)*
Log (1 + capital tax)	-0.189	-0.141	-0.092	-0.160	-0.110	-0.127
	(0.078)**	(0.078)*	(0.079)	(0.082)*	-0.087	-0.091
	*(0.102)**	*(0.091)*	*(0.099)*	*(0.166)*	*(0.145)*	*-(0.132)*
Log (1 + income tax)	-1.133	-1.129	-1.135	-1.162	-1.157	-1.151
	(0.035)***	(0.035)***	(0.036)***	(0.037)***	(0.039)***	(0.040)***
	*(0.098)****	*(0.074)****	*(0.068)****	*(0.112)****	*(0.089)****	*(0.078)****
Log sector proximity	**0.575**	**0.517**	**0.493**	**0.569**	**0.501**	**0.470**
	(0.013)***	(0.010)***	(0.009)***	(0.013)***	(0.011)***	(0.010)***
	*(0.054)****	*(0.033)****	*(0.025)****	*(0.027)****	*(0.018)****	*(0.016)****
Log (sector proximity) * EG index	**1.461**	**2.173**	**1.034**	**2.318**	**2.389**	**1.220**
	(0.542)***	(0.277)***	(0.195)***	(0.585)***	(0.284)***	(0.197)***
	(1.881)	*(1.188)**	*(0.908)*	*(1.064)***	*(0.566)****	*(0.380)****
Log market potential	0.215	0.297	0.335	0.250	0.387	0.459
	(0.027)***	(0.025)***	(0.023)***	(0.028)***	(0.027)***	(0.027)***
	*(0.098)***	*(0.062)****	*(0.048)****	*(0.059)****	*(0.044)****	*(0.040)****
Log area	1.134	1.132	1.136	1.119	1.097	1.080
	(0.007)***	(0.007)***	(0.007)***	(0.007)***	(0.008)***	(0.008)***
	*(0.011)****	*(0.011)****	*(0.011)****	*(0.015)****	*(0.013)****	*(0.014)****
Dummy for 2001	-0.220	-0.219	-0.205	-0.216	-0.201	-0.183
	(0.013)***	(0.013)***	(0.013)***	(0.014)***	(0.014)***	(0.015)***
	*(0.035)****	*(0.033)****	*(0.029)****	*(0.032)****	*(0.026)****	*(0.025)****
Log likelihood	-13'906	-23'795	-31'485	-13'971	-24'018	-31'876
No. of sectors	41	133	242	41	133	242
No. of observations	17'261	55'993	101'669	17'261	55'993	101'669

Notes: * p<0.1, ** p<0.05, *** p<0.01; standard errors in parentheses; robust standard errors in parentheses and italics.

Table A2: Specific Model, Sector Fixed Effects, Sector-Level Coefficients, Statutory Tax Rates

Dependent variable = number of new firms per municipality and sector

	Poisson			Constrained Poisson		
NACE sectors:	**2 digit**	**3 digit**	**4 digit**	**2 digit**	**3 digit**	**4 digit**
Log (1 - corporate income tax)	**1.451**	**1.388**	**1.272**	**0.730**	**0.650**	**0.503**
	(0.233)***	(0.233)***	(0.233)***	(0.227)***	(0.227)***	(0.227)**
	*(0.690)***	*(0.578)***	*(0.467)****	*(0.635)*	*(0.553)*	*(0.391)*
Log (1 + capital tax)	-0.127	-0.081	-0.024	-0.242	-0.196	-0.140
	(0.079)	(0.079)	(0.079)	(0.077)***	(0.077)**	(0.078)*
	(0.086)	*(0.084)*	*-(0.097)*	*(0.071)****	*(0.079)***	*(0.101)*
Log (1 + income tax)	-1.153	-1.146	-1.151	-0.996	-0.994	-0.996
	(0.036)***	(0.036)***	(0.036)***	(0.034)***	(0.034)***	(0.034)***
	*(0.115)****	*(0.078)****	*(0.070)****	*(0.151)****	*(0.060)****	*(0.053)****
Log sector proximity	**0.503**	**0.475**	**0.456**	**0.537**	**0.499**	**0.474**
	(0.013)***	(0.011)***	(0.009)***	(0.013)***	(0.010)***	(0.009)***
	*(0.047)****	*(0.031)****	*(0.024)****	*(0.063)****	*(0.038)****	*(0.026)****
Log (sector proximity) * EG index	**0.128**	**1.975**	**0.827**	**-0.022**	**1.856**	**0.794**
	(0.579)	(0.294)***	(0.198)***	(0.570)	(0.292)***	(0.197)***
	(1.073)	*(1.062)**	*(0.737)*	*(1.525)*	*(1.111)**	*(1.264)*
Log area	1.135	1.132	1.135	1.000	1.000	1.000
	(0.007)***	(0.007)***	(0.007)***	-	-	-
	*(0.012)****	*(0.012)****	*(0.011)****	-	-	-
Dummy for 2001	-0.207	-0.210	-0.196	-0.221	-0.222	-0.208
	(0.013)***	(0.013)***	(0.013)***	(0.013)***	(0.013)***	(0.013)***
	*(0.033)****	*(0.031)****	*(0.028)****	*(0.040)****	*(0.028)****	*(0.028)****
Log likelihood	-13'707	-23'592	-31'272	-13'891	-23'770	-31'459
Chi2-stat Sector dummies * Wage	551.66	15.86	32.81	687.76	16.54	29.31
Chi2-stat Sector dummies * Property price	1'203.53	52.95	108.34	764.83	54.29	110.44
Chi2-stat Sector dummies * Market potential	871.07	27.56	18.63	1'137.80	25.80	17.27
No. of sectors	41	133	242	41	133	242
No. of observations	17'261	55'993	101'669	17'261	55'993	101'669

Notes: * p<0.1, ** p<0.05, *** p<0.01; standard errors in parentheses; robust standard errors in parentheses and italics for Poisson model; bootstrapped standard error were used to calculate Chi2-stat; bootstrapped standard errors in parentheses and italics for constrained Poisson. Coefficient on *log area* constrained to one in constrained regressions.

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	(0.233)***	(0.233)***	(0.233)***	(0.227)***	(0.227)***	(0.227)**
	*(0.690)***	*(0.578)***	*(0.467)****	*(0.635)*	*(0.553)*	*(0.391)*
Log (1 + capital tax)	-0.127	-0.081	-0.024	-0.242	-0.196	-0.140
	(0.079)	(0.079)	(0.079)	(0.077)***	(0.077)**	(0.078)*
	(0.086)	*(0.084)*	*-(0.097)*	*(0.071)****	*(0.079)***	*(0.101)*
Log (1 + income tax)	-1.153	-1.146	-1.151	-0.996	-0.994	-0.996
	(0.036)***	(0.036)***	(0.036)***	(0.034)***	(0.034)***	(0.034)***
	*(0.115)****	*(0.078)****	*(0.070)****	*(0.151)****	*(0.060)****	*(0.053)****
Log sector proximity	**0.503**	**0.475**	**0.456**	**0.537**	**0.499**	**0.474**
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	*(0.047)****	*(0.031)****	*(0.024)****	*(0.063)****	*(0.038)****	*(0.026)****
Log (sector proximity) * EG index	**0.128**	**1.975**	**0.827**	**-0.022**	**1.856**	**0.794**
	(0.579)	(0.294)***	(0.198)***	(0.570)	(0.292)***	(0.197)***
	(1.073)	*(1.062)**	*(0.737)*	*(1.525)*	*(1.111)**	*(1.264)*
Log area	1.135	1.132	1.135	1.000	1.000	1.000
	(0.007)***	(0.007)***	(0.007)***	-	-	-
	*(0.012)****	*(0.012)****	*(0.011)****	-	-	-
Dummy for 2001	-0.207	-0.210	-0.196	-0.221	-0.222	-0.208
	(0.013)***	(0.013)***	(0.013)***	(0.013)***	(0.013)***	(0.013)***
	*(0.033)****	*(0.031)****	*(0.028)****	*(0.040)****	*(0.028)****	*(0.028)****
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Chi2-stat Sector dummies * Wage	551.66	15.86	32.81	687.76	16.54	29.31
Chi2-stat Sector dummies * Property price	1'203.53	52.95	108.34	764.83	54.29	110.44
Chi2-stat Sector dummies * Market potential	871.07	27.56	18.63	1'137.80	25.80	17.27
No. of sectors	41	133	242	41	133	242
No. of observations	17'261	55'993	101'669	17'261	55'993	101'669

Notes: * p<0.1, ** p<0.05, *** p<0.01; standard errors in parentheses; robust standard errors in parentheses and italics for Poisson model; bootstrapped standard error were used to calculate Chi2-stat; bootstrapped standard errors in parentheses and italics for constrained Poisson. Coefficient on *log area* constrained to one in constrained regressions.

Table A3: Specific Model, Sector and Location Fixed Effects

Dependent variable = number of new firms per municipality and sector

Poisson estimation

NACE sectors:	**2 digit**	**3 digit**	**4 digit**
Log wage	-1.004	-0.971	-0.873
	(0.212)***	(0.214)***	(0.213)***
	*(0.523)**	*(0.396)***	*(0.327)****
Log sector proximity	**0.560**	**0.476**	**0.452**
	(0.015)***	(0.012)***	(0.010)***
	*(0.052)****	*(0.028)****	*(0.023)****
Log (sector proximity) * EG index	**0.772**	**1.997**	**0.885**
	0.538	(0.280)***	(0.191)***
	(1.060)	*(0.751)****	*(0.664)*
Dummy for 2001	-0.200	-0.196	-0.185
	(0.013)***	(0.013)***	(0.013)***
	*(0.041)****	*(0.032)****	*(0.030)****
Log likelihood	-12'267	-22'224	-29'918
No. of sectors	41	133	242
No. of observations	17'261	55'993	101'669

Notes: * p<0.1, ** p<0.05, *** p<0.01; standard errors in parentheses; robust standard errors in parentheses and italics.

Table A4: Specific Model, Sector Fixed Effects, Tax Index

Dependent variable = number of new firms per municipality and sector

	Poisson			Zero-Inflated Poisson		
NACE sectors:	**2 digit**	**3 digit**	**4 digit**	**2 digit**	**3 digit**	**4 digit**
Tax index	**-0.102**	**-0.096**	**-0.087**	**-0.097**	**-0.101**	**-0.096**
	(0.001)***	(0.009)***	(0.009)***	(0.010)***	(0.010)***	(0.010)***
	*(0.035)****	*(0.029)****	*(0.023)****	*(0.032)****	*(0.025)****	*(0.022)****
Log wage	-3.294	-3.291	-3.362	-3.424	-3.322	-3.412
	(0.117)***	(0.117)***	(0.118)***	(0.121)***	(0.121)***	(0.122)***
	*(0.366)****	*(0.304)****	*(0.284)****	*(0.302)****	*(0.216)****	*(0.190)****
Log property price	-0.072	-0.114	-0.198	-0.079	-0.159	-0.250
	(0.076)	(0.076)	(0.077)**	(0.080)	(0.084)*	(0.087)***
	(0.270)	*(0.200)*	*(0.166)*	*(0.151)*	*(0.131)*	*(0.126)***
Log income tax	-0.945	-0.940	-0.945	-0.966	-0.947	-0.946
	(0.029)***	(0.029)***	(0.029)***	(0.030)***	(0.031)***	(0.033)***
	*(0.080)****	*(0.054)****	*(0.055)****	*(0.086)****	*(0.070)****	*(0.062)****
Log sector proximity	**0.577**	**0.518**	**0.493**	**0.572**	**0.503**	**0.471**
	(0.013)***	(0.010)***	(0.009)***	(0.013)***	(0.011)***	(0.010)***
	*(0.055)****	*(0.034)****	*(0.025)****	*(0.027)****	*(0.018)****	*(0.016)****
Log (sector proximity) * EG index	**1.432**	**2.166**	**1.032**	**2.278**	**2.393**	**1.228**
	(0.542)***	(0.277)***	(0.195)***	(0.582)***	(0.284)***	(0.198)***
	(1.876)	*(1.174)**	*(0.900)*	*(1.051)***	*(0.559)****	*(0.378)****
Log market potential	0.243	0.327	0.366	0.278	0.420	0.495
	(0.027)***	(0.025)***	(0.024)***	(0.028)***	(0.027)***	(0.027)***
	*(0.103)***	*(0.065)****	*(0.049)****	*(0.058)****	*(0.044)****	*(0.040)****
Log area	1.142	1.139	1.142	1.126	1.105	1.088
	(0.007)***	(0.007)***	(0.007)***	(0.007)***	(0.008)***	(0.008)***
	*(0.011)****	*(0.011)****	*(0.012)****	*(0.015)****	*(0.013)****	*(0.013)****
Dummy for 2001	-0.214	-0.215	-0.202	-0.211	-0.199	-0.180
	(0.013)***	(0.013)***	(0.013)***	(0.013)***	(0.014)***	(0.014)***
	*(0.037)****	*(0.033)****	*(0.031)****	*(0.032)****	*(0.026)****	*(0.025)****
Log likelihood	-13'844	-23'736	-31'431	-13'914	-23'963	-31'827
No. of sectors	41	133	242	41	133	242
No. of observations	17'261	55'993	101'669	17'261	55'993	101'669

Notes: * p<0.1, ** p<0.05, *** p<0.01; standard errors in parentheses; robust standard errors in parentheses and italics.