**Appendix to “Jurisdiction Size and Local Government Policy Expenditure: Assessing the Effect of Municipal Amalgamation” by Jens Blom-Hansen, Kurt Houlberg, Søren Serritzlew, and Daniel Treisman,**

All data are register data from the Danish government’s statistical office, *Statistics Denmark*. They include local expenditure data, which stem from the municipalities’ accounting system, a uniform system specified by the Danish Ministry of the Interior, controlled by independent auditors and reported to Statistics Denmark. In addition Statistics Denmark collects demographic and socioeconomic data on all municipalities.

**Table A1: Measurement of variables**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| VARIABLES | Measurement | Mean | Std. Dev. | Min | Max |
| Day care  | Municipal net current expenditures for day care per 0-5 year old. Following account numbers are used pre-reform:5.10, 5.11, 5.12, 5.1, 5.14 (estimated share for the 0-5 year old), 5.17, 5.18 & 5.19and post-reform:5.25.10, 5.25.11, 5.25.12, 5.25.1, 5.25.14 (estimated share for the 0-5 year old), 5.25.17, 5.25.18, 5.25.19, 3.22.09 & 3.22.16 | 65519 | 9520 | 41895 | 101188 |
| Schools | Municipal net current expenditures for public primary and lower secondary schools per 6-16 year old, including compulsory grants for pupils in private schools. Following account numbers are used pre-reform:2.32, 3.01, 3.02, 3.03, 3.04, 3.05, 3.07, 3.08, 3.10, 3.12, 3.49, 5.14 (estimated share for the 6+ year old), 5.15 & 5.16and post-reform:3.22.01, 3.22.02, 3.22.03, 3.22.04, 3.22.05, 3.22.06, 3.22.07, 3.22.08, 3.22.10, 3.22.12, 3.22.14, 3.22.18, 5.25.14 (estimated share for the 6+ year old), 5.25.15 & 5.25.16 | 73689 | 8672 | 58424 | 106757 |
| Elder care | Municipal net current expenditures for elder care per 65+ year old. Following account numbers are used pre-reform:5.32, 5.34, 5.54 (group 02-07,20,91,93), 5.92, 5.94 (grp. 11) and post-reform:5.32.32 (excluding grp. 002, 003), 5.32.33 (excluding grp. 004 (til 2012: grp. 003)), 5.32.34, 5.32.35 (excluding grp. 001-004, 008, 091), 5.32.37, 5.22.07 (grp. 008 (from 2012)), 5.57.76 | 47487 | 7107 | 11422 | 70643 |
| Children with special needs | Municipal net current expenditures for children and young people with special needs per 0-22 year old. Following account numbers are used pre-reform:5.20, 5.21, 5.23 & 5.24and post-reform:5.25.20, 5.25.21, 5.25.23, 5.25.24 & 5.22.07 (grp. 002-005 (from 2012)) | 8129 | 2684 | 310 | 22097 |
| Roads | Municipal net current expenditures for road maintenance per capita, excluding snow clearing. Income from parking bills are not included from 2008 and onward (registrated separately in the accounting system from 2008). Following account numbers are used pre-reform:2.01, 2.03, 2.05, 2.09 & 2.11and post-reform:2.22.01, 2.22.03, 2.22.05, 2.22.11 & 2.22.12 | 946 | 318 | 181 | 3167 |
| Culture | Municipal net current expenditures for culture and leisure activities per capita (including parks, sport centers and grants for cinemas and theatres and local clubs). Following account numbers are used pre-reform:0.20, 0.21, 0.22, 0.23, 0.24, 0.30, 0.31, 0.32, 0.33, 0.34, 0.35, 3.50, 3.60, 3.61, 3.62, 3.63, 3.64 & 3.70 – 3.78and post-reform:0.28.20, 0.28.31, 0.28.35, 3.32.50, 3.35.60, 3. 35.61, 3.35.62, 3.35.63, 3.35.64 & 3.38.70 – 3.38.78 | 2104 | 595 | 973 | 4839 |
| Administration | Municipal net current expenditures for administration per capita. Expenditures for administrative and political organization in main account 6 Administration and common tasks. More specifically the final accounts for account numbers 6.42.40, 6.42.41, 6.42.42, 6.45.50, 6.45.51, 6.45.53, 6.45.54, 6.45.55, 6.48.60, 6.48.61, 6.48.62, 6.48.63, 6.48.66, 6.48.67 & 6.48.68. Expenditures for elections, staff pensions and wagefunds not included. Expenditures for amalgamation committees in 2006 not included. | 5632 | 1067 | 3368 | 13418 |
| Labor market activities | Municipal net current expenditures for labor market activities per capita (including income transfers, excluding services for insured unemployed). Following account numbers are used pre-reform:3.45, 5.01, 5.04, 5.05, 5.41, 5.60, 5.61, 5.65, 5.67, 5.68, 5.69, 5.71, 5.91, 5.92, 5.98and post-reform:3.30.45, 3.38.77, 5.46.60, 5.46.61, 5.46.65, 5.48.67, 5. 48.68, 5. 48.69, 5.48.70, 5.57.71, 5.57.72, 5.57.73, 5.57.74, 5.57.75, 5.57.76, 5.57.77, 5.58.80 (excluding grp. 004, 005), 5.58.81, 5.68.90, 5.68.97, 5.68.98 | 8734 | 2291 | 3245 | 17109 |
| Total expenditures | Total net expenditures in the eight policy areas above calculated per capita | 43051 | 4001 | 34250 | 56641 |
| Small island | Dummy for 5 small island municipalities | .053 | .223 | 0 | 1 |
| Dispersal of settlement | Measures the average time it will take a citizen to reach 2000 fellow citizens. The criterion is part of the post reform Equalization Scheme. Source: Ministry of the Interior. Data not available for 2003-2006 and assumed unchanged from 2003 to 2007.  | 2.418 | 1.700 | .412 | 16.383 |
| Socioeconomic expenditure needs | Socioeconomic needs per capita according to the objective criterions in the Equalization Scheme. All years calculated on the basis of criteria and weights in the 2010 equalisation system. Due to the reform of the equalisation scheme in 2007 data for a number of the criterions are not available for 2003-2006 and assumed unchanged from 2003 to 2007. | 16144 | 4128 | 7720 | 31689 |
| Fiscal pressure | Total demographic and socioeconomic expenditure needs relative to the financial base of the municipality. Expenditure needs are calculated according to the objective criterions in the Equalization Scheme. Financial base is a weighted measure of tax base (income tax and property tax), taxes from companies, other taxes, interest and payment of loans (Houlberg 2011).Measured as an indicator measuring the within year position of the individual municipality relative to a national average set at 100. Due to changes in the Equalization Scheme the indicator cannot be compared across years and therefore measures the within year position of the municipality relative to the national average. | 100.4 | 5.749 | 73.0 | 113.2 |
| Party fragmentation  | $\frac{1}{\sum\_{n}^{i}x\_{i}^{2}}$ , n=the number of parties in the municipality and x=the party’s share of seats in the council. | 3.555 | .723 | 1.920 | 6.785 |
| Share of socialist seats in the council | The number of socialist councillors in the council as a percentage of the number of seats in the council. | 43.405 | 13.805 | 6.667 | 78.947 |
| Amalgamated (dummy) | Dummy assigned the value 1 to all 66 amalgamated municipalities (0 for 29 non-amalgamated municipalities) | .694 | .461 | 0 | 1 |
| Spending per unit supplied: day-care | Net current expenditure per child enrolled in municipal day care | 81095 | 11392 | 54724 | 125804 |
| Units supplied: day-care | No. of children enrolled in municipal day care as a percentage of 0-5 year old | 80.795 | 3.504 | 63.485 | 96.663 |
| Spending per unit supplied: schools | Net current expenditure per child enrolled in primary and lower secondary schools (public and private) | 83049 | 9986 | 64014 | 125334 |
| Units supplied: schools | No. of children enrolled in primary and lower secondary schools as a percentage of the population | 12.821 | 1.242 | 8.728 | 16.786 |
| Spending per unit supplied: elder care | Net current expenditure per housing unit for elderly and number of hours of home care for recipients of home care. Units weighted by an average yearly cost per housing unit of DKK 400,000 and an average cost of DKK 400 per hour of home care. 2007 data not available | 1958.1 | 516.4 | 496.8 | 4739.3 |
| Units supplied: elder care | No of housing units for elderly and number of hours of home care for recipients of home care per 65+ year old. Weights see above | 25.681 | 7.629 | 8.318 | 50.585 |
| Spending per unit supplied: children with special needs | Net current expenditure per child 0-22 year old removed from their family | 903416 | 246488 | 156134 | 2181396 |
| Units supplied: children with special needs | Number of children removed from their family per 1000 0-22 year old | 9.450 | 3.527 | 1.988 | 27.660 |
| Spending per unit supplied: roads | Net current expenditure (for road maintenance) per kilometer municipal road | 110790 | 105662 | 17621 | 699678 |
| Units supplied: roads | Kilometers of municipal roads per capita | 15.543 | 10.901 | 1.347 | 76.627 |
| Spending per unit supplied: labor market | Net current expenditure per citizen on welfare (excluding old age pension). Full year equivalents. Figures before and after 2007 are not fully comparable due to changes in registers and definitions. | 59550 | 12747 | 23807 | 91083 |
| Units supplied: labor market | Citizens on welfare (excluding old age pension) as a percentage of the population | 14.752 | 2.675 | 7.185 | 23.762 |

N=1140 for all variables, except for no. of children enrolled in schools (N=1139) and housing units for elderly and number of recipients of home (N=1039). All economic figures are based on final accounts and calculated in 2014 prices.

 **Table A2. Single year estimates for spending per unit and no. of units supplied in six policy areas. Units supplied measured as a proportion of the no. of citizens in the target group, except for schools where the total population serve as the base.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Day-care (per 0-5 year old) | Schools (per 6-16 year old) | Elder care(per 65+ year old) | Children with special needs (per 0-22 year old) | Roads(per capita) | Labor market activities (per capita) |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
|  | Spending per unit supplied | No. of units supplied | Spending per unit supplied | No. of units supplied | Spending per unit supplied | No. of units supplied | Spending per unit supplied | No. of units supplied | Spending per unit supplied | No. of units supplied | Spending per unit supplied | No. of units supplied |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Amalgamated (dummy) | -2,493.35 | -0.74 | -2,189.48 | 0.02 | -157.20 | 2.47 | 26,061.84 | 1.33 | -60,120.80\*\*\* | 0.95 | 1,722.36\* | -0.13 |
|  | (2,512.66) | (0.68) | (2,536.55) | (0.27) | (122.26) | (2.06) | (61,314.62) | (0.85) | (21,379.80) | (1.24) | (1,029.33) | (0.27) |
| **DiD estimators** |  |  |  |  |  |  |  |  |  |  |  |  |
| Amalgamated \* 2004 | 425.34 | -0.10 | 1,606.02\*\* | -0.08 | 21.99 | -1.24 | 32,603.91 | -0.16 | 5,619.99 | -0.28 | 18.11 | -0.06 |
|  | (924.62) | (0.49) | (682.68) | (0.06) | (44.80) | (0.80) | (41,438.58) | (0.24) | (6,581.36) | (0.20) | (257.88) | (0.08) |
| Amalgamated \* 2005 | -1,919.60 | 0.68 | 4,400.17\*\*\* | -0.04 | -16.64 | -1.35 | -879.05 | 0.33 | -3,687.17 | -0.51 | 335.31 | 0.08 |
|  | (1,229.51) | (0.82) | (1,527.43) | (0.11) | (74.41) | (1.14) | (52,268.01) | (0.28) | (9,374.05) | (0.33) | (613.41) | (0.18) |
| Amalgamated \* 2006 | -1,702.10 | 0.87 | 3,254.65\*\* | -0.03 | 8.73 | -0.84 | 66,619.17 | -0.38 | 45,204.93\*\*\* | 0.13 | 107.31 | 0.28 |
|  | (1,458.56) | (0.75) | (1,296.26) | (0.13) | (74.60) | (1.22) | (74,289.17) | (0.55) | (15,315.11) | (0.43) | (688.27) | (0.19) |
| Amalgamated \* 2007 | -3,174.12\* | 0.70 | 1,351.47 | -0.12 |  |  | -23,996.02 | 0.60 | -8,723.77 | 1.54\*\* | -195.69 | 0.83\*\*\* |
|  | (1,692.60) | (0.69) | (1,569.99) | (0.17) |  |  | (56,834.08) | (0.53) | (12,679.20) | (0.76) | (811.25) | (0.25) |
| Amalgamated \* 2008 | -1,766.59 | 0.59 | 1,069.58 | -0.12 | 31.85 | -3.26\*\* | -14,022.49 | 0.87 | -8,669.94 | 1.56\*\* | 375.74 | 0.93\*\*\* |
|  | (1,941.29) | (0.97) | (1,593.12) | (0.18) | (101.83) | (1.52) | (69,538.94) | (0.75) | (13,120.86) | (0.78) | (897.42) | (0.29) |
| Amalgamated \* 2009 | -132.11 | 0.24 | 2,601.84 | -0.26 | 0.29 | -3.32\*\* | -9,338.09 | 1.10 | 1,329.69 | 1.20 | -356.81 | 1.14\*\*\* |
|  | (1,718.50) | (0.83) | (1,697.93) | (0.22) | (110.83) | (1.50) | (67,631.36) | (0.73) | (12,909.25) | (0.85) | (994.70) | (0.31) |
| Amalgamated \* 2010 | 445.91 | 0.13 | 1,721.99 | -0.10 | -25.36 | -3.02\* | -51,699.01 | 0.99 | 2,765.33 | 1.73\*\* | -1,550.78 | 1.17\*\*\* |
|  | (1,932.00) | (0.73) | (2,111.48) | (0.21) | (128.50) | (1.61) | (59,006.48) | (0.74) | (14,148.27) | (0.85) | (960.67) | (0.28) |
| Amalgamated \* 2011 | 948.38 | 0.24 | 2,465.10 | -0.21 | 27.95 | -2.80\* | -47,085.48 | 1.42\*\* | -12,164.29 | 2.27\*\* | -1,002.85 | 1.36\*\*\* |
|  | (1,730.30) | (0.88) | (2,196.66) | (0.23) | (118.79) | (1.69) | (62,816.43) | (0.65) | (10,257.26) | (0.87) | (999.85) | (0.29) |
| Amalgamated \* 2012 | -617.39 | 0.07 | 1,830.11 | -0.17 | 13.09 | -2.64 | -29,665.11 | 1.25 | -44,606.44\*\*\* | 2.53\*\*\* | -1,018.22 | 1.49\*\*\* |
|  | (1,763.35) | (0.76) | (2,062.45) | (0.23) | (123.47) | (1.72) | (71,086.98) | (0.76) | (12,236.19) | (0.93) | (915.69) | (0.28) |
| Amalgamated \* 2013 | 1,279.05 | 0.61 | 3,463.25 | -0.27 | 78.07 | -3.43\* | -66,721.02 | 1.45\*\* | -22,718.98 | 2.25\*\*\* | -1,108.77 | 1.22\*\*\* |
|  | (1,925.68) | (0.83) | (2,292.20) | (0.29) | (112.28) | (1.74) | (65,368.60) | (0.73) | (15,535.64) | (0.84) | (979.42) | (0.26) |
| Amalgamated \* 2014 | 2,572.53 | 0.32 | 4,628.58\* | -0.35 | 105.95 | -3.69\*\* | -71,337.29 | 1.35\* | -28,236.26\*\* | 2.22\*\* | -838.94 | 0.98\*\*\* |
|  | (2,064.88) | (0.88) | (2,390.23) | (0.26) | (131.01) | (1.79) | (75,101.30) | (0.75) | (12,871.24) | (0.92) | (1,251.76) | (0.26) |
| **Control variables** |  |  |  |  |  |  |  |  |  |  |  |  |
| Small Island | 10,719.13\*\* | 0.39 | 10,284.72\*\* | -1.63\*\*\* | 140.30 | -2.03 | 301,614.17\*\*\* | 0.85 | 8,654.81 | -2.59 | -940.48 | 0.45 |
|  | (5,034.35) | (1.26) | (5,090.71) | (0.27) | (131.08) | (1.73) | (72,896.15) | (1.89) | (33,373.96) | (2.40) | (1,165.01) | (0.73) |
| Dispersal of settlement | -1,819.05\*\*\* | -0.34\*\* | -849.64\*\* | -0.07 | -11.48 | 0.16 | -63,183.23\*\*\* | 0.52\* | -23,748.03\*\*\* | 5.12\*\*\* | -1,529.69\*\*\* | 0.37\*\*\* |
|  | (603.23) | (0.16) | (388.88) | (0.05) | (21.63) | (0.32) | (10,158.36) | (0.29) | (5,399.77) | (0.49) | (172.09) | (0.12) |
| Fiscal pressure  | -990.20\*\*\* | -0.05 | -760.13\*\*\* | -0.00 | -17.97\*\*\* | 0.22\*\*\* | -8,379.57\*\*\* | 0.02 | -7,650.31\*\*\* | 0.33\*\*\* | -71.38 | 0.17\*\*\* |
|  | (113.07) | (0.03) | (124.75) | (0.01) | (5.90) | (0.08) | (2,367.07) | (0.03) | (1,117.58) | (0.06) | (49.80) | (0.02) |
| Socioec. expenditure needs | 0.60\*\*\* | -0.00\*\*\* | 0.91\*\*\* | -0.00\*\*\* | 0.02 | 0.00 | -9.46\* | 0.00\*\*\* | 4.25\*\* | 0.00\*\*\* | 0.72\*\*\* | 0.00\*\*\* |
|  | (0.16) | (0.00) | (0.18) | (0.00) | (0.01) | (0.00) | (5.15) | (0.00) | (1.67) | (0.00) | (0.11) | (0.00) |
| Party fragmentation | 880.50 | -0.06 | -51.15 | -0.03 | -38.19 | -0.09 | -2,210.91 | 0.53\*\* | -4,779.83 | -0.95\*\* | 850.94 | 0.10 |
|  | (594.50) | (0.22) | (781.82) | (0.12) | (40.65) | (0.45) | (22,522.14) | (0.26) | (6,926.73) | (0.45) | (597.97) | (0.12) |
| Share of socialist seats  | 143.13\*\*\* | 0.02 | 110.65\*\* | -0.01 | 3.20 | -0.03 | 120.96 | 0.01 | -282.09 | -0.13\*\*\* | 52.31\* | 0.04\*\*\* |
|  | (42.51) | (0.01) | (54.59) | (0.01) | (2.59) | (0.03) | (1,046.13) | (0.01) | (421.50) | (0.03) | (30.05) | (0.01) |
| **Year dummies** |  |  |  |  |  |  |  |  |  |  |  |  |
| 2004 | -1,212.67 | 1.38\*\*\* | -749.33 | 0.15\*\*\* | 43.13 | -0.27 | -35,933.94 | 0.16 | -3,746.14 | 0.27 | 2,800.95\*\*\* | 0.11 |
|  | (842.85) | (0.44) | (611.58) | (0.05) | (30.10) | (0.51) | (37,797.94) | (0.20) | (6,369.35) | (0.19) | (223.34) | (0.07) |
| 2005 | -1,496.60 | 2.29\*\*\* | -3,645.53\*\* | 0.12 | 55.08 | 0.33 | -2,039.22 | -0.25 | -205.55 | 0.58\* | 7,622.13\*\*\* | -0.93\*\*\* |
|  | (1,042.61) | (0.77) | (1,420.74) | (0.10) | (66.89) | (0.95) | (49,526.90) | (0.21) | (8,756.70) | (0.30) | (521.34) | (0.16) |
| 2006 | 875.93 | 3.19\*\*\* | -3,249.29\*\*\* | 0.13 | -11.43 | 0.36 | -26,353.95 | 0.20 | -62,860.59\*\*\* | 0.19 | 13,958.62\*\*\* | -2.63\*\*\* |
|  | (1,332.54) | (0.69) | (1,218.15) | (0.12) | (66.12) | (1.03) | (68,945.17) | (0.47) | (14,060.97) | (0.40) | (591.98) | (0.16) |
| 2007 | 3,443.47\*\* | 4.71\*\*\* | 1,541.79 | 0.12 |  |  | 137,465.17\*\*\* | -0.02 | 2,994.05 | 0.88 | 15,338.00\*\*\* | -2.93\*\*\* |
|  | (1,467.74) | (0.60) | (1,417.22) | (0.15) |  |  | (49,466.02) | (0.41) | (11,916.09) | (0.72) | (703.92) | (0.23) |
| 2008 | 2,879.03 | 5.87\*\*\* | 3,148.06\*\* | -0.00 | 421.29\*\*\* | -6.23\*\*\* | 175,592.79\*\*\* | 0.05 | 1,248.64 | 0.97 | 19,474.52\*\*\* | -3.46\*\*\* |
|  | (1,755.74) | (0.88) | (1,433.68) | (0.16) | (88.17) | (1.31) | (63,077.19) | (0.66) | (12,343.41) | (0.70) | (748.59) | (0.27) |
| 2009 | 4,856.29\*\*\* | 5.25\*\*\* | 5,205.08\*\*\* | -0.15 | 466.06\*\*\* | -6.87\*\*\* | 225,249.44\*\*\* | -0.11 | -9,776.64 | 1.31\* | 18,982.67\*\*\* | -2.74\*\*\* |
|  | (1,556.31) | (0.75) | (1,515.97) | (0.19) | (99.21) | (1.30) | (60,857.15) | (0.61) | (12,095.46) | (0.79) | (836.55) | (0.28) |
| 2010 | 1,545.18 | 6.56\*\*\* | 5,295.74\*\* | -0.40\*\* | 555.02\*\*\* | -8.83\*\*\* | 271,370.85\*\*\* | -0.26 | -14,500.91 | 1.87\*\* | 19,996.97\*\*\* | -2.25\*\*\* |
|  | (1,852.73) | (0.67) | (2,044.57) | (0.19) | (126.83) | (1.49) | (53,759.26) | (0.66) | (13,950.71) | (0.86) | (1,068.06) | (0.26) |
| 2011 | -1,650.29 | 5.82\*\*\* | 2,074.39 | -0.49\*\* | 453.07\*\*\* | -9.96\*\*\* | 202,674.80\*\*\* | -0.45 | -1,245.78 | 1.77\* | 27,214.57\*\*\* | -2.53\*\*\* |
|  | (1,649.10) | (0.81) | (2,116.35) | (0.20) | (115.28) | (1.55) | (56,610.92) | (0.56) | (9,801.91) | (0.90) | (1,127.66) | (0.27) |
| 2012 | -239.69 | 5.84\*\*\* | 610.74 | -0.52\*\* | 543.31\*\*\* | -10.68\*\*\* | 198,485.30\*\*\* | -0.46 | 30,483.66\*\* | 1.49 | 30,713.75\*\*\* | -3.01\*\*\* |
|  | (1,655.39) | (0.65) | (1,927.62) | (0.21) | (119.66) | (1.59) | (65,555.06) | (0.67) | (12,377.86) | (0.97) | (996.60) | (0.25) |
| 2013 | -1,139.14 | 5.19\*\*\* | -2,230.78 | -0.55\*\* | 505.17\*\*\* | -10.98\*\*\* | 282,490.54\*\*\* | -0.89 | 16,923.31 | 2.03\*\* | 34,982.66\*\*\* | -3.11\*\*\* |
|  | (1,767.73) | (0.72) | (2,157.25) | (0.27) | (111.21) | (1.63) | (58,964.36) | (0.61) | (15,845.95) | (0.85) | (1,035.98) | (0.24) |
| 2014 | -946.74 | 4.63\*\*\* | -574.05 | -0.57\*\* | 556.45\*\*\* | -11.54\*\*\* | 287,537.40\*\*\* | -0.69 | 20,056.93 | 2.19\*\* | 37,858.44\*\*\* | -3.59\*\*\* |
|  | (1,912.16) | (0.75) | (2,265.27) | (0.23) | (121.15) | (1.65) | (69,464.06) | (0.63) | (12,789.70) | (0.93) | (1,308.02) | (0.23) |
| Constant | 166,768.35\*\*\* | 86.75\*\*\* | 140,892.82\*\*\* | 16.33\*\*\* | 3,184.16\*\*\* | 10.56 | 1,888,660.50\*\*\* | -5.50\* | 944,494.51\*\*\* | -27.52\*\*\* | 33,621.64\*\*\* | -8.83\*\*\* |
|  | (9,666.19) | (2.65) | (12,872.97) | (1.38) | (559.04) | (7.55) | (223,355.35) | (3.24) | (103,067.67) | (5.61) | (4,875.12) | (1.67) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Observations | 1,140 | 1,140 | 1,139 | 1,139 | 1,039 | 1,039 | 1,140 | 1,140 | 1,140 | 1,140 | 1,140 | 1,140 |
| Adj. R2 | 0.654 | 0.492 | 0.547 | 0.486 | 0.370 | 0.573 | 0.369 | 0.525 | 0.714 | 0.891 | 0.921 | 0.823 |

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A3. Single year estimates of total exp. Robustness test of amalgamations with the smallest average pre-reform size**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) |
|  | All amalgamations included | Only amalgamations with an average pre-reform size < 10,000 inhabitants included | Only amalgamations with an average pre-reform size < 12,000 inhabitants included | Only amalgamations with an average pre-reform size < 15,000 inhabitants included |
|  | Total expenditures per capita | Total expenditures per capita | Total expenditures per capita | Total expenditures per capita |
|  |  |  |  |  |
| Amalgamated (dummy) | -105.30 | 452.32 | 108.96 | 15.26 |
|  | (640.76) | (813.64) | (753.66) | (720.67) |
| **DiD estimators** |  |  |  |  |
| Amalgamated \* 2004 | 54.69 | 131.62 | 155.79 | 163.69 |
|  | (215.78) | (272.86) | (233.90) | (227.14) |
| Amalgamated \* 2005 | 386.47 | 631.11\* | 658.78\*\* | 566.00\* |
|  | (283.01) | (359.80) | (302.98) | (297.43) |
| Amalgamated \* 2006 | 574.09\* | 689.13 | 845.67\*\* | 809.77\*\* |
|  | (335.43) | (525.70) | (386.08) | (361.68) |
| Amalgamated \* 2007 | 230.29 | 137.04 | 362.48 | 277.45 |
|  | (404.19) | (573.78) | (487.61) | (448.98) |
| Amalgamated \* 2008 | 209.92 | 456.40 | 546.04 | 387.15 |
|  | (428.99) | (634.68) | (506.09) | (467.22) |
| Amalgamated \* 2009 | 222.53 | 300.26 | 640.09 | 448.17 |
|  | (470.28) | (719.09) | (530.70) | (504.94) |
| Amalgamated \* 2010 | 156.04 | 271.90 | 695.02 | 461.23 |
|  | (567.82) | (749.72) | (620.96) | (597.56) |
| Amalgamated \* 2011 | 464.87 | 418.45 | 1,065.03 | 790.04 |
|  | (639.61) | (830.54) | (708.95) | (690.65) |
| Amalgamated \* 2012 | 421.04 | 458.69 | 723.86 | 566.58 |
|  | (549.16) | (778.07) | (631.63) | (606.80) |
| Amalgamated \* 2013 | 961.97 | 1,142.50 | 1,313.11\*\* | 1,132.02\* |
|  | (599.57) | (755.34) | (647.99) | (632.88) |
| Amalgamated \* 2014 | 873.96 | 821.10 | 1,062.41 | 962.44 |
|  | (589.70) | (764.41) | (645.76) | (622.55) |
| **Control variables** |  |  |  |  |
| Small Island | 3,997.76\*\*\* | 3,516.30\*\*\* | 3,750.40\*\*\* | 3,758.59\*\*\* |
|  | (957.94) | (1,067.64) | (965.59) | (940.42) |
| Dispersal of settlement | 25.62 | -14.78 | 9.08 | 23.11 |
|  | (96.31) | (86.41) | (89.62) | (95.26) |
| Fiscal pressure  | -239.80\*\*\* | -247.00\*\*\* | -259.22\*\*\* | -256.28\*\*\* |
|  | (30.23) | (41.06) | (37.02) | (35.12) |
| Socioec. expenditure needs | 0.64\*\*\* | 0.69\*\*\* | 0.67\*\*\* | 0.67\*\*\* |
|  | (0.04) | (0.06) | (0.05) | (0.04) |
| Party fragmentation | 231.67 | 308.19 | 324.63 | 282.44 |
|  | (167.08) | (264.44) | (204.84) | (196.11) |
| Share of socialist seats  | 22.72 | 6.13 | 15.46 | 15.35 |
|  | (15.40) | (24.85) | (18.85) | (17.50) |
| **Year dummies** |  |  |  |  |
| 2004 | 848.16\*\*\* | 849.73\*\*\* | 839.09\*\*\* | 841.36\*\*\* |
|  | (202.81) | (209.58) | (209.82) | (208.35) |
| 2005 | 959.74\*\*\* | 940.21\*\*\* | 925.12\*\*\* | 941.52\*\*\* |
|  | (258.26) | (265.89) | (265.98) | (262.84) |
| 2006 | 550.50\* | 531.15\* | 535.72\* | 547.44\* |
|  | (304.35) | (311.45) | (316.55) | (312.29) |
| 2007 | 2,625.98\*\*\* | 2,611.00\*\*\* | 2,634.96\*\*\* | 2,642.28\*\*\* |
|  | (360.74) | (389.48) | (384.52) | (377.33) |
| 2008 | 3,289.26\*\*\* | 3,266.90\*\*\* | 3,293.75\*\*\* | 3,300.71\*\*\* |
|  | (385.51) | (409.18) | (399.98) | (393.62) |
| 2009 | 4,126.35\*\*\* | 4,089.77\*\*\* | 4,110.28\*\*\* | 4,119.15\*\*\* |
|  | (415.87) | (428.02) | (421.21) | (418.84) |
| 2010 | 3,943.54\*\*\* | 3,962.19\*\*\* | 3,927.58\*\*\* | 3,956.68\*\*\* |
|  | (546.51) | (588.12) | (568.17) | (563.14) |
| 2011 | 3,480.80\*\*\* | 3,521.37\*\*\* | 3,490.54\*\*\* | 3,518.01\*\*\* |
|  | (609.79) | (659.81) | (634.33) | (629.55) |
| 2012 | 3,888.38\*\*\* | 3,930.02\*\*\* | 3,913.27\*\*\* | 3,937.62\*\*\* |
|  | (509.94) | (566.21) | (534.42) | (528.86) |
| 2013 | 3,573.18\*\*\* | 3,609.20\*\*\* | 3,576.34\*\*\* | 3,604.42\*\*\* |
|  | (562.87) | (601.22) | (578.05) | (574.45) |
| 2014 | 3,825.05\*\*\* | 3,874.94\*\*\* | 3,832.48\*\*\* | 3,862.11\*\*\* |
|  | (550.46) | (590.00) | (566.52) | (563.94) |
| Constant | 51,948.30\*\*\* | 52,303.42\*\*\* | 53,396.84\*\*\* | 53,161.93\*\*\* |
|  | (2,966.03) | (4,195.05) | (3,656.93) | (3,428.39) |
|  |  |  |  |  |
| Observations | 1,140 | 504 | 732 | 828 |
| Adj. R2 | 0.804 | 0.826 | 0.834 | 0.837 |
| Number of municipalities: |  |  |  |  |
| - amalgamated | 66 | 13 | 32 | 40 |
| - not amalgamated | 29 | 29 | 29 | 29 |

Robust standard errors in parentheses (clustered at each municipality)

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A4. Split-file analyses for amalgamated municipalities with relatively heterogeneous pre-reform spending levels (upper part of table) and relatively homogenous pre-reform spending levels (lower part of table) within each of the eight policy areas.**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| **Expenditure heterogeneity >= median** | Day-care  | Schools  | Elder care | Children with special needs  | Roads | Culture | Admini-stration | Labor market activities  | Total expenditures  |
| Median used for split | .062 | .042 | .064 | .172 | .218 | .173 | .084 | .105 | .031 |
|  |  |  |  |  |  |  |  |  |  |
| Amalgamated (dummy) | -1,381.60 | -1,197.27 | -1,609.97 | 987.47\* | 127.32 | -64.12 | 179.82 | -90.70 | 499.56 |
|  | (2,184.00) | (2,454.00) | (1,645.39) | (533.81) | (89.61) | (126.78) | (306.00) | (270.93) | (753.20) |
| **DiD estimator** |  |  |  |  |  |  |  |  |  |
| Postreform \* amalgamated | -7.87 | -425.21 | 817.43 | 581.61 | -134.71\*\* | 49.99 | -450.96\*\* | 862.57\*\*\* | 1.47 |
|  | (1,189.40) | (1,281.63) | (1,123.03) | (382.97) | (59.63) | (68.44) | (202.17) | (205.99) | (477.58) |
| **Time dummy** |  |  |  |  |  |  |  |  |  |
| Postreform | 4,992.42\*\*\* | 1,809.45 | -6,092.09\*\*\* | 1,674.82\*\*\* | 205.10\*\*\* | -159.87\*\* | 616.37\*\*\* | 1,491.71\*\*\* | 2,939.43\*\*\* |
|  | (938.78) | (1,128.32) | (900.32) | (323.74) | (53.59) | (61.84) | (197.41) | (176.77) | (414.76) |
| **Control variables** |  |  |  |  |  |  |  |  |  |
| Small Island | 7,316.81\* | 7,572.15\*\*\* | -4,376.31 | 1,735.12 | 391.00\*\*\* | -40.59 | 2,400.73\*\*\* | -128.09 | 3,768.16\*\*\* |
|  | (4,112.27) | (2,251.52) | (3,683.39) | (1,767.85) | (107.14) | (224.75) | (498.62) | (565.96) | (1,129.30) |
| Dispersal of settlement | -1,627.47\*\*\* | -1,057.37\*\*\* | 662.27\* | -135.84 | 27.94\*\* | -128.32\*\*\* | 119.19\*\* | -53.99 | -34.61 |
|  | (551.66) | (346.47) | (349.19) | (182.90) | (12.98) | (46.78) | (51.19) | (67.72) | (109.83) |
| Fiscal pressure  | -886.17\*\*\* | -702.14\*\*\* | -142.03 | -47.88 | -5.79 | -53.73\*\*\* | -56.29\*\*\* | 88.13\*\*\* | -281.42\*\*\* |
|  | (125.44) | (153.06) | (94.93) | (35.63) | (5.72) | (11.61) | (19.75) | (18.02) | (43.67) |
| Socioec. expenditure needs | 0.32\* | 0.57\*\* | 0.59\*\*\* | 0.32\*\*\* | 0.02\* | 0.07\*\*\* | 0.06\*\* | 0.26\*\*\* | 0.64\*\*\* |
|  | (0.18) | (0.21) | (0.18) | (0.06) | (0.01) | (0.02) | (0.03) | (0.04) | (0.07) |
| Party fragmentation | 335.38 | 119.49 | -195.84 | 379.75 | 3.65 | -19.21 | 105.23 | 283.45\* | 600.34\* |
|  | (677.27) | (1,339.18) | (1,070.52) | (243.73) | (59.11) | (75.44) | (178.19) | (153.74) | (312.34) |
| Share of socialist seats  | 85.39 | 77.48 | -35.39 | 7.21 | -6.77\*\* | -5.40 | -6.31 | 34.27\*\*\* | 18.04 |
|  | (57.35) | (59.99) | (64.66) | (19.11) | (2.61) | (4.39) | (10.97) | (8.10) | (23.81) |
| Constant | 146,349.26\*\*\* | 133,032.26\*\*\* | 58,343.22\*\*\* | 4,117.61 | 1,267.62\*\* | 7,139.72\*\*\* | 9,428.02\*\*\* | -8,098.74\*\*\* | 55,486.12\*\*\* |
|  | (11,471.74) | (15,272.73) | (10,992.31) | (3,422.77) | (514.72) | (1,066.88) | (1,972.73) | (1,756.21) | (4,209.47) |
|  |  |  |  |  |  |  |  |  |  |
| Observations | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 |
| Adj. R2 | 0.704 | 0.630 | 0.368 | 0.498 | 0.371 | 0.643 | 0.601 | 0.857 | 0.817 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| **Expenditure heterogeneity < median** | Day-care  | Schools  | Elder care | Children with special needs  | Roads | Culture | Admini-stration | Labor market activities  | Total expenditures  |
|  |  |  |  |  |  |  |  |  |  |
| Amalgamated (dummy) | -980.97 | 1,191.05 | -2,522.28\* | 1,672.49\*\*\* | 132.27 | -44.24 | 344.23 | 130.72 | 667.08 |
|  | (2,100.34) | (2,137.65) | (1,496.14) | (550.92) | (87.18) | (116.45) | (311.17) | (214.29) | (687.94) |
| **DiD estimator** |  |  |  |  |  |  |  |  |  |
| Postreform \* amalgamated | -1,045.51 | 138.00 | -840.35 | 559.99 | -205.59\*\*\* | 99.92 | -448.13\*\* | 744.73\*\*\* | 251.00 |
|  | (1,224.48) | (1,334.91) | (1,034.50) | (417.55) | (58.40) | (70.27) | (187.63) | (247.72) | (473.16) |
| **Time dummy** |  |  |  |  |  |  |  |  |  |
| Postreform | 5,464.74\*\*\* | 2,128.95\* | -5,916.46\*\*\* | 1,479.70\*\*\* | 242.69\*\*\* | -168.09\*\*\* | 737.19\*\*\* | 1,541.60\*\*\* | 3,139.57\*\*\* |
|  | (1,059.62) | (1,123.27) | (981.12) | (332.63) | (49.79) | (58.87) | (186.19) | (167.26) | (413.35) |
| **Control variables** |  |  |  |  |  |  |  |  |  |
| Small Island | 9,108.78\*\* | 16,656.56\*\*\* | -4,673.57 | 3,512.90\* | 374.80\*\* | -312.20 | 2,016.03\*\* | 173.23 | 4,180.21\*\*\* |
|  | (3,827.27) | (4,529.77) | (3,792.61) | (1,890.87) | (155.79) | (362.69) | (811.79) | (380.45) | (1,302.72) |
| Dispersal of settlement | -1,474.20\*\*\* | -1,533.09\*\*\* | 613.26\* | -239.27 | 25.43\*\* | -102.89\*\* | 102.28 | -100.55 | -50.03 |
|  | (447.35) | (384.46) | (354.82) | (240.47) | (11.92) | (40.38) | (75.35) | (76.67) | (120.69) |
| Fiscal pressure  | -1,125.48\*\*\* | -857.57\*\*\* | -86.45 | -26.77 | -13.25\*\* | -53.06\*\*\* | -74.82\*\*\* | 104.59\*\*\* | -289.12\*\*\* |
|  | (121.71) | (119.18) | (116.16) | (36.97) | (6.54) | (9.43) | (18.29) | (14.00) | (34.48) |
| Socioec. expenditure needs | 0.07 | 0.50\*\*\* | 0.49\*\* | 0.38\*\*\* | 0.01 | 0.07\*\*\* | 0.08\*\* | 0.33\*\*\* | 0.66\*\*\* |
|  | (0.18) | (0.17) | (0.19) | (0.06) | (0.01) | (0.02) | (0.03) | (0.04) | (0.06) |
| Party fragmentation | 12.28 | -149.96 | -887.79 | 737.10\*\* | -38.93 | -3.48 | -14.63 | 177.86 | 240.28 |
|  | (668.73) | (1,109.04) | (1,075.66) | (285.47) | (56.90) | (68.34) | (165.11) | (115.13) | (271.03) |
| Share of socialist seats  | 159.65\*\*\* | 142.61\*\*\* | -25.43 | 3.38 | -7.51\*\*\* | -6.06 | -16.43 | 20.26\*\* | 10.95 |
|  | (35.89) | (52.22) | (92.98) | (14.93) | (2.60) | (3.89) | (11.14) | (8.56) | (23.16) |
| Constant | 170,483.83\*\*\* | 146,677.89\*\*\* | 56,835.82\*\*\* | 68.81 | 2,303.36\*\*\* | 6,924.74\*\*\* | 11,809.97\*\*\* | -9,799.64\*\*\* | 57,442.39\*\*\* |
|  | (11,612.12) | (11,008.18) | (13,261.63) | (3,651.26) | (580.48) | (831.66) | (1,831.74) | (1,384.50) | (3,286.51) |
|  |  |  |  |  |  |  |  |  |  |
| Observations | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 |
| Adj. R2 | 0.821 | 0.674 | 0.428 | 0.632 | 0.376 | 0.662 | 0.577 | 0.876 | 0.857 |

Robust standard errors in parentheses (clustered at each municipality)

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1