# Scotland 3 census regressions 2011 ~ 1991

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## [1] all CoB, all zones, formula: xij11 ~ xij91 + w91q

Call:

lm(formula = lmfunction, data = inputdata)

Residuals:

Min 1Q Median 3Q Max

-5.2486 -0.0573 -0.0319 0.0089 5.3309

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.033380 0.001790 18.65 <2e-16 \*\*\*

xij91 0.386247 0.006945 55.62 <2e-16 \*\*\*

w91q 0.332781 0.009493 35.06 <2e-16 \*\*\*

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Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.1961 on 18081 degrees of freedom

Multiple R-squared: 0.3228, Adjusted R-squared: 0.3227

F-statistic: 4310 on 2 and 18081 DF, p-value: < 2.2e-16

## [1] Europe, all zones, formula: xij11 ~ xij91 + w91q

Call:

lm(formula = lmfunction, data = inputdata)

Residuals:

Min 1Q Median 3Q Max

-2.27203 -0.05215 -0.02161 0.01714 2.26675

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.014303 0.002786 5.133 2.95e-07 \*\*\*

xij91 0.378469 0.012032 31.455 < 2e-16 \*\*\*

w91q 0.502542 0.018870 26.632 < 2e-16 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.1547 on 5751 degrees of freedom

Multiple R-squared: 0.4056, Adjusted R-squared: 0.4054

F-statistic: 1962 on 2 and 5751 DF, p-value: < 2.2e-16

## [1] Rich, all zones, formula: xij11 ~ xij91 + w91q

Call:

lm(formula = lmfunction, data = inputdata)

Residuals:

Min 1Q Median 3Q Max

-3.4949 -0.0615 -0.0343 0.0107 5.3663

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.061970 0.002311 26.81 <2e-16 \*\*\*

xij91 0.325092 0.009034 35.99 <2e-16 \*\*\*

w91q 0.163716 0.011497 14.24 <2e-16 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.1721 on 8217 degrees of freedom

Multiple R-squared: 0.2369, Adjusted R-squared: 0.2367

F-statistic: 1276 on 2 and 8217 DF, p-value: < 2.2e-16

## [1] Poor, all zones, formula: xij11 ~ xij91 + w91q

Call:

lm(formula = lmfunction, data = inputdata)

Residuals:

Min 1Q Median 3Q Max

-1.7481 -0.0563 -0.0224 0.0131 4.0715

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.007241 0.002595 2.79 0.00528 \*\*

xij91 0.409672 0.010044 40.79 < 2e-16 \*\*\*

w91q 0.516781 0.014602 35.39 < 2e-16 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.2079 on 9861 degrees of freedom

Multiple R-squared: 0.398, Adjusted R-squared: 0.3979

F-statistic: 3260 on 2 and 9861 DF, p-value: < 2.2e-16

## [1] all CoB, URBAN zones, formula: xij11 ~ xij91 + w91q

Call:

lm(formula = lmfunction, data = inputdata)

Residuals:

Min 1Q Median 3Q Max

-2.5445 -0.0871 -0.0411 0.0220 4.0228

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.037870 0.003961 9.562 <2e-16 \*\*\*

xij91 0.424986 0.012159 34.953 <2e-16 \*\*\*

w91q 0.512131 0.017868 28.662 <2e-16 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.2572 on 7235 degrees of freedom

Multiple R-squared: 0.389, Adjusted R-squared: 0.3889

F-statistic: 2303 on 2 and 7235 DF, p-value: < 2.2e-16

## [1] Europe, URBAN zones, formula: xij11 ~ xij91 + w91q

Call:

lm(formula = lmfunction, data = inputdata)

Residuals:

Min 1Q Median 3Q Max

-2.58435 -0.08024 -0.03650 0.02261 2.20147

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.027097 0.006324 4.285 1.9e-05 \*\*\*

xij91 0.428279 0.022745 18.830 < 2e-16 \*\*\*

w91q 0.558679 0.034097 16.385 < 2e-16 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.2143 on 2300 degrees of freedom

Multiple R-squared: 0.3874, Adjusted R-squared: 0.3868

F-statistic: 727.2 on 2 and 2300 DF, p-value: < 2.2e-16

## [1] Rich, URBAN zones, formula: xij11 ~ xij91 + w91q

Call:

lm(formula = lmfunction, data = inputdata)

Residuals:

Min 1Q Median 3Q Max

-2.87850 -0.07346 -0.03073 0.02466 2.18486

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.020121 0.004948 4.066 4.89e-05 \*\*\*

xij91 0.490119 0.018664 26.260 < 2e-16 \*\*\*

w91q 0.530100 0.027992 18.937 < 2e-16 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.1933 on 3287 degrees of freedom

Multiple R-squared: 0.4162, Adjusted R-squared: 0.4159

F-statistic: 1172 on 2 and 3287 DF, p-value: < 2.2e-16

## [1] Poor, URBAN zones, formula: xij11 ~ xij91 + w91q

Call:

lm(formula = lmfunction, data = inputdata)

Residuals:

Min 1Q Median 3Q Max

-1.7405 -0.0986 -0.0485 0.0219 4.0491

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.046890 0.006024 7.783 8.96e-15 \*\*\*

xij91 0.404005 0.016254 24.855 < 2e-16 \*\*\*

w91q 0.505298 0.023789 21.240 < 2e-16 \*\*\*

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Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.2998 on 3945 degrees of freedom

Multiple R-squared: 0.3789, Adjusted R-squared: 0.3786

F-statistic: 1203 on 2 and 3945 DF, p-value: < 2.2e-16

## [1] all CoB, all zones, formula: xij11 ~ xij91 + w91q + migShareMinusOwn91 + lph91 + hsperacre91 + lpophs91 + ea\_ttwa91

Call:

lm(formula = lmfunction, data = inputdata)

Residuals:

Min 1Q Median 3Q Max

-3.7258 -0.0578 -0.0156 0.0285 5.2565

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) -0.5876062 0.0510565 -11.509 < 2e-16 \*\*\*

xij91 0.3327119 0.0067263 49.464 < 2e-16 \*\*\*

w91q 0.2181808 0.0092620 23.557 < 2e-16 \*\*\*

migShareMinusOwn91 0.0091527 0.0007069 12.948 < 2e-16 \*\*\*

lph91 0.0182253 0.0040452 4.505 6.67e-06 \*\*\*

hsperacre91 0.0110848 0.0003899 28.429 < 2e-16 \*\*\*

lpophs91 -0.1302092 0.0116268 -11.199 < 2e-16 \*\*\*

ea\_ttwa91 0.0056631 0.0004117 13.755 < 2e-16 \*\*\*

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Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.1847 on 18076 degrees of freedom

Multiple R-squared: 0.3999, Adjusted R-squared: 0.3996

F-statistic: 1721 on 7 and 18076 DF, p-value: < 2.2e-16

## [1] Europe, all zones, formula: xij11 ~ xij91 + w91q + migShareMinusOwn91 + lph91 + hsperacre91 + lpophs91 + ea\_ttwa91

Call:

lm(formula = lmfunction, data = inputdata)

Residuals:

Min 1Q Median 3Q Max

-1.92079 -0.05543 -0.01063 0.03595 2.04107

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) -0.8286111 0.0699672 -11.843 < 2e-16 \*\*\*

xij91 0.3226636 0.0110451 29.213 < 2e-16 \*\*\*

w91q 0.3012033 0.0179653 16.766 < 2e-16 \*\*\*

migShareMinusOwn91 0.0096456 0.0009264 10.411 < 2e-16 \*\*\*

lph91 0.0278195 0.0054317 5.122 3.13e-07 \*\*\*

hsperacre91 0.0108912 0.0005309 20.516 < 2e-16 \*\*\*

lpophs91 -0.1403086 0.0155393 -9.029 < 2e-16 \*\*\*

ea\_ttwa91 0.0072515 0.0005622 12.899 < 2e-16 \*\*\*

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Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.1392 on 5746 degrees of freedom

Multiple R-squared: 0.5188, Adjusted R-squared: 0.5182

F-statistic: 885.1 on 7 and 5746 DF, p-value: < 2.2e-16

## [1] Rich, all zones, formula: xij11 ~ xij91 + w91q + migShareMinusOwn91 + lph91 + hsperacre91 + lpophs91 + ea\_ttwa91

Call:

lm(formula = lmfunction, data = inputdata)

Residuals:

Min 1Q Median 3Q Max

-2.5204 -0.0575 -0.0117 0.0359 5.2437

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) -1.2565380 0.0613545 -20.480 < 2e-16 \*\*\*

xij91 0.2490488 0.0080331 31.003 < 2e-16 \*\*\*

w91q 0.0725949 0.0101463 7.155 9.10e-13 \*\*\*

migShareMinusOwn91 0.0129233 0.0008337 15.501 < 2e-16 \*\*\*

lph91 0.0625359 0.0048529 12.886 < 2e-16 \*\*\*

hsperacre91 0.0128229 0.0004625 27.728 < 2e-16 \*\*\*

lpophs91 -0.1061139 0.0139531 -7.605 3.16e-14 \*\*\*

ea\_ttwa91 0.0078888 0.0004957 15.913 < 2e-16 \*\*\*

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Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.1495 on 8212 degrees of freedom

Multiple R-squared: 0.4247, Adjusted R-squared: 0.4242

F-statistic: 865.9 on 7 and 8212 DF, p-value: < 2.2e-16

## [1] Poor, all zones, formula: xij11 ~ xij91 + w91q + migShareMinusOwn91 + lph91 + hsperacre91 + lpophs91 + ea\_ttwa91

Call:

lm(formula = lmfunction, data = inputdata)

Residuals:

Min 1Q Median 3Q Max

-1.5286 -0.0582 -0.0162 0.0257 4.0693

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) -0.0119277 0.0757408 -0.157 0.874869

xij91 0.3930432 0.0100809 38.989 < 2e-16 \*\*\*

w91q 0.4130557 0.0152075 27.161 < 2e-16 \*\*\*

migShareMinusOwn91 0.0027944 0.0010725 2.605 0.009189 \*\*

lph91 -0.0221297 0.0060078 -3.684 0.000231 \*\*\*

hsperacre91 0.0080678 0.0005891 13.696 < 2e-16 \*\*\*

lpophs91 -0.1462252 0.0172578 -8.473 < 2e-16 \*\*\*

ea\_ttwa91 0.0040438 0.0006098 6.632 3.49e-11 \*\*\*

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Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.2023 on 9856 degrees of freedom

Multiple R-squared: 0.4303, Adjusted R-squared: 0.4299

F-statistic: 1063 on 7 and 9856 DF, p-value: < 2.2e-16

## [1] all CoB, URBAN zones, formula: xij11 ~ xij91 + w91q + migShareMinusOwn91 + lph91 + hsperacre91 + lpophs91 + ea\_ttwa91

Call:

lm(formula = lmfunction, data = inputdata)

Residuals:

Min 1Q Median 3Q Max

-2.3780 -0.0841 -0.0243 0.0426 3.9828

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) -0.4940654 0.0978644 -5.048 4.56e-07 \*\*\*

xij91 0.4006773 0.0118885 33.703 < 2e-16 \*\*\*

w91q 0.3703430 0.0178941 20.696 < 2e-16 \*\*\*

migShareMinusOwn91 0.0069086 0.0012256 5.637 1.80e-08 \*\*\*

lph91 -0.0113363 0.0079690 -1.423 0.155

hsperacre91 0.0045870 0.0007476 6.135 8.94e-10 \*\*\*

lpophs91 -0.3376630 0.0244800 -13.793 < 2e-16 \*\*\*

ea\_ttwa91 0.0102375 0.0008697 11.771 < 2e-16 \*\*\*

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Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.2447 on 7230 degrees of freedom

Multiple R-squared: 0.4472, Adjusted R-squared: 0.4467

F-statistic: 835.5 on 7 and 7230 DF, p-value: < 2.2e-16

## [1] Europe, URBAN zones, formula: xij11 ~ xij91 + w91q + migShareMinusOwn91 + lph91 + hsperacre91 + lpophs91 + ea\_ttwa91

Call:

lm(formula = lmfunction, data = inputdata)

Residuals:

Min 1Q Median 3Q Max

-2.11746 -0.07668 -0.01483 0.04804 1.97998

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) -1.287087 0.136853 -9.405 < 2e-16 \*\*\*

xij91 0.358652 0.020224 17.734 < 2e-16 \*\*\*

w91q 0.274033 0.031609 8.670 < 2e-16 \*\*\*

migShareMinusOwn91 0.012129 0.001585 7.653 2.88e-14 \*\*\*

lph91 0.027810 0.010797 2.576 0.0101 \*

hsperacre91 0.008369 0.001020 8.203 3.85e-16 \*\*\*

lpophs91 -0.355497 0.032822 -10.831 < 2e-16 \*\*\*

ea\_ttwa91 0.014497 0.001210 11.981 < 2e-16 \*\*\*

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Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.1857 on 2295 degrees of freedom

Multiple R-squared: 0.541, Adjusted R-squared: 0.5396

F-statistic: 386.4 on 7 and 2295 DF, p-value: < 2.2e-16

## [1] Rich, URBAN zones, formula: xij11 ~ xij91 + w91q + migShareMinusOwn91 + lph91 + hsperacre91 + lpophs91 + ea\_ttwa91

Call:

lm(formula = lmfunction, data = inputdata)

Residuals:

Min 1Q Median 3Q Max

-2.33960 -0.06714 -0.01070 0.04331 1.99806

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) -1.2717381 0.1027518 -12.377 < 2e-16 \*\*\*

xij91 0.4119948 0.0166128 24.800 < 2e-16 \*\*\*

w91q 0.2587361 0.0258421 10.012 < 2e-16 \*\*\*

migShareMinusOwn91 0.0109529 0.0012011 9.119 < 2e-16 \*\*\*

lph91 0.0559711 0.0081332 6.882 7.05e-12 \*\*\*

hsperacre91 0.0082036 0.0007664 10.703 < 2e-16 \*\*\*

lpophs91 -0.3031655 0.0247738 -12.237 < 2e-16 \*\*\*

ea\_ttwa91 0.0103937 0.0009092 11.432 < 2e-16 \*\*\*

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Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.1674 on 3282 degrees of freedom

Multiple R-squared: 0.5631, Adjusted R-squared: 0.5622

F-statistic: 604.3 on 7 and 3282 DF, p-value: < 2.2e-16

## [1] Poor, URBAN zones, formula: xij11 ~ xij91 + w91q + migShareMinusOwn91 + lph91 + hsperacre91 + lpophs91 + ea\_ttwa91

Call:

lm(formula = lmfunction, data = inputdata)

Residuals:

Min 1Q Median 3Q Max

-1.6545 -0.1027 -0.0311 0.0442 3.9165

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.093433 0.155687 0.600 0.548

xij91 0.409102 0.016261 25.159 < 2e-16 \*\*\*

w91q 0.415634 0.024357 17.064 < 2e-16 \*\*\*

migShareMinusOwn91 0.002325 0.002032 1.144 0.253

lph91 -0.064891 0.012779 -5.078 3.99e-07 \*\*\*

hsperacre91 0.001554 0.001198 1.298 0.194

lpophs91 -0.373050 0.039402 -9.468 < 2e-16 \*\*\*

ea\_ttwa91 0.010648 0.001385 7.690 1.85e-14 \*\*\*

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Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.2901 on 3940 degrees of freedom

Multiple R-squared: 0.4189, Adjusted R-squared: 0.4179

F-statistic: 405.8 on 7 and 3940 DF, p-value: < 2.2e-16