5 Census Regressions

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Contents

2011 ~ 1971, largest set of 5 census CoBs

- Rich CoBs: Irish Republic, Old Commonwealth, Europe
- Poor: Africa New Commonweath, India, Pakistan, South-East Asia New Commonwealth, Caribbean , Other New Commonwealth, Rest of World

All zones, rich vs poor

Formula: *xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 + ea1971 + popPerAcre71*

```
$poor

Call:
lm(formula = xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
    Min      1Q  Median      3Q     Max
-1.5570 -0.0638 -0.0294  0.0176  3.8252

Coefficients:
                       Estimate Std. Error t value   Pr(>|t|)
(Intercept)          -0.4580613  0.0939088  -4.878 0.00000110 ***
xij1971               0.2176894  0.0114437  19.023    < 2e-16 ***
w1971q                0.2245212  0.0165356  13.578    < 2e-16 ***
migshareMinusOwn1971 -0.0030303  0.0016705  -1.814     0.0697 .
ea1971                0.0051971  0.0009883   5.259 0.00000015 ***
popPerAcre71          0.0054108  0.0002847  19.006    < 2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.2033 on 5748 degrees of freedom
Multiple R-squared:  0.2801,    Adjusted R-squared:  0.2794
F-statistic: 447.2 on 5 and 5748 DF,  p-value: < 2.2e-16


$rich

Call:
lm(formula = xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
     Min       1Q   Median       3Q      Max
-0.50044 -0.05466 -0.02023  0.02398  1.38406

Coefficients:
                       Estimate Std. Error t value Pr(>|t|)
(Intercept)          -0.8611596  0.0846393 -10.174  < 2e-16 ***
xij1971               0.3301123  0.0279327  11.818  < 2e-16 ***
w1971q               -0.0597011  0.0375359  -1.591    0.112
migshareMinusOwn1971  0.0112910  0.0014219   7.941 3.02e-15 ***
ea1971                0.0094533  0.0008912  10.608  < 2e-16 ***
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```
popPerAcre71          0.0043203  0.0002787  15.501  < 2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.1199 on 2460 degrees of freedom
Multiple R-squared:  0.3085,    Adjusted R-squared:  0.307
F-statistic: 219.4 on 5 and 2460 DF,  p-value: < 2.2e-16
```

Urban zones, rich vs poor

```
$poor

Call:
lm(formula = xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
    Min      1Q  Median      3Q     Max
-1.7725 -0.1189 -0.0655  0.0355  3.8113

Coefficients:
                      Estimate Std. Error t value         Pr(>|t|)
(Intercept)          -0.4790267  0.1928491  -2.484          0.01306 *
xij1971               0.2548016  0.0188334  13.529          < 2e-16 ***
w1971q                0.2514717  0.0267639   9.396          < 2e-16 ***
migshareMinusOwn1971 -0.0087108  0.0031389  -2.775          0.00556 **
ea1971                0.0058474  0.0020185   2.897          0.00380 **
popPerAcre71          0.0040439  0.0005829   6.938 0.00000000000515 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.2971 on 2297 degrees of freedom
Multiple R-squared:  0.2462,    Adjusted R-squared:  0.2446
F-statistic: 150.1 on 5 and 2297 DF,  p-value: < 2.2e-16


$rich

Call:
lm(formula = xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
     Min       1Q   Median       3Q      Max
-0.41876 -0.09028 -0.03904  0.03470  1.37732

Coefficients:
                      Estimate Std. Error t value Pr(>|t|)
(Intercept)          -1.3871802  0.1666698  -8.323 2.86e-16 ***
xij1971               0.2673534  0.0467098   5.724 1.38e-08 ***
w1971q               -0.0462407  0.0630366  -0.734    0.463
migshareMinusOwn1971  0.0144355  0.0024935   5.789 9.50e-09 ***
ea1971                0.0150879  0.0017460   8.641  < 2e-16 ***
```

```
popPerAcre71          0.0045714  0.0005235   8.732  < 2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.168 on 981 degrees of freedom
Multiple R-squared:  0.2467,    Adjusted R-squared:  0.2429
F-statistic: 64.26 on 5 and 981 DF,  p-value: < 2.2e-16
```

Four cities (urban zones): rich vs poor, 2011 ~ 1971

```
[1] "Glasgow"
$poor

Call:
lm(formula = xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
    Min      1Q  Median      3Q     Max
-2.8222 -0.4550 -0.2325  0.1709 17.5658

Coefficients:
                     Estimate Std. Error t value        Pr(>|t|)
(Intercept)          1.086758   0.927089   1.172           0.241
xij1971              0.121441   0.030117   4.032 0.0000599888017 ***
w1971q               0.287726   0.043466   6.620 0.0000000000625 ***
migshareMinusOwn1971  0.018087   0.016103   1.123           0.262
ea1971               -0.008200   0.009713  -0.844           0.399
popPerAcre71          0.002627   0.002959   0.888           0.375
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.101 on 883 degrees of freedom
Multiple R-squared:  0.161, Adjusted R-squared:  0.1562
F-statistic: 33.89 on 5 and 883 DF,  p-value: < 2.2e-16


$rich

Call:
lm(formula = xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
     Min       1Q   Median       3Q      Max
-1.18760 -0.29409 -0.09156  0.16281  2.50411

Coefficients:
                     Estimate Std. Error t value        Pr(>|t|)
(Intercept)          -1.960715   0.655177  -2.993        0.002949 **
xij1971               0.299639   0.057759   5.188 0.0000003492569 ***
```

```
w1971q                0.123358   0.083039   1.486        0.138239
migshareMinusOwn1971  0.064124   0.009135   7.020 0.0000000000105 ***
ea1971                0.022211   0.006920   3.210        0.001443 **
popPerAcre71          0.007824   0.002151   3.638        0.000313 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.506 on 375 degrees of freedom
Multiple R-squared:  0.3634,    Adjusted R-squared:  0.3549
F-statistic: 42.82 on 5 and 375 DF,  p-value: < 2.2e-16


[1] "Edinburgh"
$poor

Call:
lm(formula = xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
    Min      1Q  Median      3Q     Max
-3.1575 -0.6632 -0.2786  0.3625  8.4914

Coefficients:
                     Estimate Std. Error t value           Pr(>|t|)
(Intercept)          0.784304   2.589606   0.303            0.76213
xij1971              0.150446   0.051908   2.898            0.00394 **
w1971q               0.252910   0.078998   3.201            0.00147 **
migshareMinusOwn1971 -0.136328   0.032150  -4.240 0.0000271980216017 ***
ea1971               -0.001524   0.026999  -0.056            0.95501
popPerAcre71         0.043506   0.005557   7.829 0.0000000000000369 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.237 on 442 degrees of freedom
Multiple R-squared:  0.2423,    Adjusted R-squared:  0.2338
F-statistic: 28.27 on 5 and 442 DF,  p-value: < 2.2e-16


$rich

Call:
lm(formula = xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
     Min       1Q   Median       3Q      Max
-2.06458 -0.51919 -0.06946  0.32734  2.08501

Coefficients:
                     Estimate Std. Error t value   Pr(>|t|)
(Intercept)          -5.624728   2.403822  -2.340     0.0203 *
xij1971               0.359348   0.076259   4.712 0.00000479 ***
w1971q                0.007410   0.103365   0.072     0.9429
```

```
migshareMinusOwn1971  0.075684   0.030593   2.474     0.0143 *
ea1971                0.055420   0.025180   2.201     0.0290 *
popPerAcre71          0.060045   0.005701  10.533    < 2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.7776 on 186 degrees of freedom
Multiple R-squared:  0.6136,    Adjusted R-squared:  0.6032
F-statistic: 59.08 on 5 and 186 DF,  p-value: < 2.2e-16


[1] "Aberdeen"
$poor

Call:
lm(formula = xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
    Min      1Q  Median      3Q     Max
-8.5740 -2.2488 -0.4816  1.7245 20.9985

Coefficients:
                     Estimate Std. Error t value  Pr(>|t|)
(Intercept)          98.59056   28.47374   3.463  0.000792 ***
xij1971               0.36547    0.08507   4.296 0.0000407 ***
w1971q                0.18433    0.11254   1.638  0.104615
migshareMinusOwn1971  0.43933    0.68446   0.642  0.522444
ea1971               -1.00224    0.29601  -3.386  0.001019 **
popPerAcre71         -0.03585    0.06201  -0.578  0.564549
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 3.907 on 99 degrees of freedom
Multiple R-squared:  0.3669,    Adjusted R-squared:  0.335
F-statistic: 11.48 on 5 and 99 DF,  p-value: 0.000000009445


$rich

Call:
lm(formula = xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
    Min      1Q  Median      3Q     Max
-6.4285 -2.4953 -0.6343  2.2009  8.3927

Coefficients:
                     Estimate Std. Error t value Pr(>|t|)
(Intercept)          106.50383   44.52863   2.392   0.0217 *
xij1971                0.47663    0.24415   1.952   0.0581 .
w1971q                 0.13432    0.20088   0.669   0.5076
migshareMinusOwn1971   2.29811    0.92530   2.484   0.0174 *
```

```
ea1971                -1.11014    0.46298  -2.398   0.0214 *
popPerAcre71          -0.09315    0.10953  -0.850   0.4003
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 3.867 on 39 degrees of freedom
Multiple R-squared:  0.4009,    Adjusted R-squared:  0.3241
F-statistic:  5.22 on 5 and 39 DF,  p-value: 0.00092


[1] "Dundee"
$poor

Call:
lm(formula = xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
    Min      1Q  Median      3Q     Max
-9.6945 -2.5398 -0.7819  1.3155 17.3549

Coefficients:
                     Estimate Std. Error t value  Pr(>|t|)
(Intercept)          25.02895   16.20962   1.544    0.1251
xij1971               0.17296    0.08551   2.023    0.0452 *
w1971q                0.13481    0.15330   0.879    0.3808
migshareMinusOwn1971  1.14758    0.25415   4.515 0.0000142 ***
ea1971               -0.28124    0.16652  -1.689    0.0937 .
popPerAcre71          0.07588    0.06980   1.087    0.2791
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 4.356 on 127 degrees of freedom
Multiple R-squared:  0.2503,    Adjusted R-squared:  0.2208
F-statistic:  8.48 on 5 and 127 DF,  p-value: 0.0000005977


$rich

Call:
lm(formula = xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
    Min      1Q  Median      3Q     Max
-4.1148 -1.5692 -0.6079  0.9082  7.4334

Coefficients:
                     Estimate Std. Error t value   Pr(>|t|)
(Intercept)          36.06476   14.25618   2.530   0.014546 *
xij1971               0.57411    0.15980   3.593   0.000736 ***
w1971q               -0.10452    0.20997  -0.498   0.620788
migshareMinusOwn1971  1.15336    0.22967   5.022 0.00000663 ***
ea1971               -0.38219    0.14700  -2.600   0.012167 *
```

```
popPerAcre71         -0.06824    0.06141  -1.111   0.271672
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 2.587 on 51 degrees of freedom
Multiple R-squared:  0.4334,    Adjusted R-squared:  0.3779
F-statistic: 7.803 on 5 and 51 DF,  p-value: 0.00001631
```

Smaller list of CoBs for rich/poor: europe, old commonweath for rich and India, Pakistan for poor

All zones, rich vs poor (four CoBs)

Formula: *xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 + ea1971 + popPerAcre71*

```
$poor

Call:
lm(formula = xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
     Min       1Q   Median       3Q      Max
-1.91045 -0.06387 -0.03044  0.01848  3.13514

Coefficients:
                      Estimate Std. Error t value        Pr(>|t|)
(Intercept)          -1.2849477  0.1904609  -6.747 0.0000000000209 ***
xij1971               0.2942482  0.0157434  18.690         < 2e-16 ***
w1971q                0.2523097  0.0228581  11.038         < 2e-16 ***
migshareMinusOwn1971 -0.0185637  0.0037586  -4.939 0.0000008656029 ***
ea1971                0.0142401  0.0020106   7.082 0.0000000000021 ***
popPerAcre71          0.0050452  0.0005836   8.646         < 2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.2186 on 1638 degrees of freedom
Multiple R-squared:  0.4562,    Adjusted R-squared:  0.4545
F-statistic: 274.8 on 5 and 1638 DF,  p-value: < 2.2e-16


$rich

Call:
lm(formula = xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
     Min       1Q   Median       3Q      Max
-0.30135 -0.05728 -0.01853  0.02602  1.37385

Coefficients:
```

```
                       Estimate Std. Error t value        Pr(>|t|)
(Intercept)          -0.3652089  0.1083005  -3.372        0.000763 ***
xij1971               0.5521680  0.0416805  13.248         < 2e-16 ***
w1971q                0.2573371  0.0605014   4.253 0.0000222438549 ***
migshareMinusOwn1971  0.0052909  0.0017771   2.977        0.002952 **
ea1971                0.0037897  0.0011509   3.293        0.001013 **
popPerAcre71          0.0023240  0.0003538   6.569 0.0000000000676 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.1214 on 1638 degrees of freedom
Multiple R-squared:  0.3306,    Adjusted R-squared:  0.3285
F-statistic: 161.8 on 5 and 1638 DF,  p-value: < 2.2e-16
```

Urban zones, rich vs poor (four CoBs)

```
$poor

Call:
lm(formula = xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
     Min       1Q   Median       3Q      Max
-1.85647 -0.12970 -0.05102  0.05781  3.02521

Coefficients:
                       Estimate Std. Error t value Pr(>|t|)
(Intercept)          -2.267515   0.398660  -5.688 1.94e-08 ***
xij1971               0.321138   0.024688  13.008  < 2e-16 ***
w1971q                0.292420   0.035447   8.249 8.81e-16 ***
migshareMinusOwn1971 -0.037571   0.008124  -4.624 4.53e-06 ***
ea1971                0.025640   0.004195   6.112 1.70e-09 ***
popPerAcre71          0.003565   0.001206   2.957  0.00321 **
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.3254 on 652 degrees of freedom
Multiple R-squared:  0.4409,    Adjusted R-squared:  0.4366
F-statistic: 102.8 on 5 and 652 DF,  p-value: < 2.2e-16


$rich

Call:
lm(formula = xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
     Min       1Q   Median       3Q      Max
-0.31721 -0.08234 -0.03622  0.02985  1.37664

Coefficients:
```

```
                       Estimate Std. Error t value      Pr(>|t|)
(Intercept)          -0.3730116  0.2249479  -1.658      0.097755 .
xij1971               0.5135134  0.0798052   6.435 0.00000000024 ***
w1971q                0.4456012  0.1152890   3.865      0.000122 ***
migshareMinusOwn1971  0.0047951  0.0031193   1.537      0.124722
ea1971                0.0035794  0.0024013   1.491      0.136547
popPerAcre71          0.0024875  0.0006603   3.767      0.000180 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.1691 on 652 degrees of freedom
Multiple R-squared:  0.2771,    Adjusted R-squared:  0.2715
F-statistic: 49.98 on 5 and 652 DF,  p-value: < 2.2e-16
```

All zones, rich vs poor (1991 ~ 1971) (four CoBs)

Formula: *xij1991 ~ xij1971 + w1971q + migshareMinusOwn1971 + ea1971 + popPerAcre71*

```
$poor

Call:
lm(formula = xij1991 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
    Min      1Q  Median      3Q     Max
-2.3791 -0.0632 -0.0229  0.0337  5.5563

Coefficients:
                       Estimate Std. Error t value           Pr(>|t|)
(Intercept)          -1.9155577  0.2055599  -9.319            < 2e-16 ***
xij1971               0.5629846  0.0169915  33.133            < 2e-16 ***
w1971q                0.1874747  0.0246702   7.599 0.0000000000000498 ***
migshareMinusOwn1971 -0.0215735  0.0040566  -5.318 0.0000001192849767 ***
ea1971                0.0209312  0.0021700   9.646            < 2e-16 ***
popPerAcre71          0.0025406  0.0006298   4.034 0.0000573817700367 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.2359 on 1638 degrees of freedom
Multiple R-squared:  0.5881,    Adjusted R-squared:  0.5869
F-statistic: 467.8 on 5 and 1638 DF,  p-value: < 2.2e-16


$rich

Call:
lm(formula = xij1991 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
     Min       1Q   Median       3Q      Max
-0.29605 -0.03803 -0.01123  0.02041  0.83051
```

```
Coefficients:
                       Estimate Std. Error t value  Pr(>|t|)
(Intercept)          -0.5947651  0.0661048  -8.997   < 2e-16 ***
xij1971               0.6563822  0.0254410  25.800   < 2e-16 ***
w1971q                0.1529122  0.0369290   4.141 0.0000364 ***
migshareMinusOwn1971  0.0029064  0.0010847   2.679   0.00745 **
ea1971                0.0064808  0.0007025   9.226   < 2e-16 ***
popPerAcre71         -0.0002300  0.0002159  -1.065   0.28705
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.0741 on 1638 degrees of freedom
Multiple R-squared:  0.5089,    Adjusted R-squared:  0.5074
F-statistic: 339.5 on 5 and 1638 DF,  p-value: < 2.2e-16
```

Urban zones, rich vs poor (1991 ~ 1971) (four CoBs)

```
$poor

Call:
lm(formula = xij1991 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
    Min      1Q  Median      3Q     Max
-2.2975 -0.1080 -0.0326  0.0667  5.3543

Coefficients:
                       Estimate Std. Error t value Pr(>|t|)
(Intercept)          -3.444045   0.430782  -7.995 5.92e-15 ***
xij1971               0.587418   0.026678  22.019  < 2e-16 ***
w1971q                0.232419   0.038304   6.068 2.20e-09 ***
migshareMinusOwn1971 -0.040656   0.008779  -4.631 4.39e-06 ***
ea1971                0.037846   0.004533   8.349 4.14e-16 ***
popPerAcre71          0.002321   0.001303   1.781   0.0753 .
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.3516 on 652 degrees of freedom
Multiple R-squared:  0.6046,    Adjusted R-squared:  0.6015
F-statistic: 199.4 on 5 and 652 DF,  p-value: < 2.2e-16


$rich

Call:
lm(formula = xij1991 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
     Min       1Q   Median       3Q      Max
-0.24885 -0.04005 -0.00950  0.02309  0.44811
```

```
Coefficients:
                        Estimate  Std. Error t value         Pr(>|t|)
(Intercept)          -0.71936268  0.10154481  -7.084 0.00000000000364 ***
xij1971               0.58318306  0.03602524  16.188          < 2e-16 ***
w1971q                0.27131090  0.05204315   5.213 0.00000024948519 ***
migshareMinusOwn1971  0.00135232  0.00140811   0.960            0.337
ea1971                0.00772925  0.00108399   7.130 0.00000000000267 ***
popPerAcre71          0.00004041  0.00029805   0.136            0.892
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.07635 on 652 degrees of freedom
Multiple R-squared:  0.5969,    Adjusted R-squared:  0.5938
F-statistic: 193.1 on 5 and 652 DF,  p-value: < 2.2e-16
```

Four cities (urban zones), rich vs poor (four CoBs)

```
[1] "Glasgow"
$poor

Call:
lm(formula = xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
    Min      1Q  Median      3Q     Max
-4.7575 -0.3868 -0.1196  0.1946  6.5559

Coefficients:
                      Estimate Std. Error t value        Pr(>|t|)
(Intercept)          -4.883911   1.490850  -3.276        0.001204 **
xij1971               0.287872   0.041086   7.007 0.0000000000229 ***
w1971q                0.397883   0.059329   6.706 0.0000000001340 ***
migshareMinusOwn1971 -0.079346   0.038450  -2.064        0.040095 *
ea1971                0.058199   0.015696   3.708        0.000258 ***
popPerAcre71         -0.000781   0.004770  -0.164        0.870079
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.948 on 248 degrees of freedom
Multiple R-squared:  0.4357,    Adjusted R-squared:  0.4243
F-statistic: 38.29 on 5 and 248 DF,  p-value: < 2.2e-16


$rich

Call:
lm(formula = xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
     Min       1Q   Median       3Q      Max
-1.28927 -0.28232 -0.09341  0.18642  2.45021
```

```
Coefficients:
                      Estimate Std. Error t value     Pr(>|t|)
(Intercept)           0.198476   0.944541   0.210      0.83374
xij1971               0.309549   0.085907   3.603      0.00038 ***
w1971q                0.317862   0.117620   2.702      0.00736 **
migshareMinusOwn1971  0.067597   0.012052   5.609 0.0000000542 ***
ea1971               -0.002732   0.010182  -0.268      0.78868
popPerAcre71          0.005637   0.002878   1.959      0.05128 .
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.5388 on 248 degrees of freedom
Multiple R-squared:  0.3704,    Adjusted R-squared:  0.3577
F-statistic: 29.18 on 5 and 248 DF,  p-value: < 2.2e-16


[1] "Edinburgh"
$poor

Call:
lm(formula = xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
    Min      1Q  Median      3Q     Max
-2.3537 -0.7521 -0.2850  0.5779  7.7842

Coefficients:
                     Estimate Std. Error t value   Pr(>|t|)
(Intercept)          -7.17003    5.24306  -1.368     0.1740
xij1971               0.04013    0.10557   0.380     0.7045
w1971q                0.15219    0.16998   0.895     0.3724
migshareMinusOwn1971 -0.15547    0.07892  -1.970     0.0511 .
ea1971                0.08329    0.05427   1.535     0.1274
popPerAcre71          0.06018    0.01214   4.957 0.00000234 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.3 on 122 degrees of freedom
Multiple R-squared:  0.2707,    Adjusted R-squared:  0.2408
F-statistic: 9.055 on 5 and 122 DF,  p-value: 0.0000002414


$rich

Call:
lm(formula = xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
     Min       1Q   Median       3Q      Max
-2.18191 -0.49161 -0.01888  0.35652  2.00844
```

```
Coefficients:
                     Estimate Std. Error t value          Pr(>|t|)
(Intercept)          -0.66717    3.15085  -0.212             0.833
xij1971               0.40607    0.09416   4.313 0.000032922192488 ***
w1971q               -0.03500    0.12702  -0.276             0.783
migshareMinusOwn1971  0.05423    0.03889   1.394             0.166
ea1971                0.00445    0.03308   0.135             0.893
popPerAcre71          0.05754    0.00703   8.184 0.000000000000304 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.7711 on 122 degrees of freedom
Multiple R-squared:  0.6116,    Adjusted R-squared:  0.5957
F-statistic: 38.43 on 5 and 122 DF,  p-value: < 2.2e-16


[1] "Aberdeen"
$poor

Call:
lm(formula = xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
    Min      1Q  Median      3Q     Max
-5.8242 -1.3968 -0.4569  2.1782  4.2250

Coefficients:
                     Estimate Std. Error t value   Pr(>|t|)
(Intercept)          52.61024   40.86291   1.287      0.210
xij1971               0.58018    0.09270   6.259 0.00000181 ***
w1971q                0.32139    0.13123   2.449      0.022 *
migshareMinusOwn1971 -0.72726    0.89258  -0.815      0.423
ea1971               -0.51445    0.42480  -1.211      0.238
popPerAcre71         -0.10517    0.09154  -1.149      0.262
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 3.013 on 24 degrees of freedom
Multiple R-squared:  0.7194,    Adjusted R-squared:  0.661
F-statistic: 12.31 on 5 and 24 DF,  p-value: 0.000005502


$rich

Call:
lm(formula = xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
    Min      1Q  Median      3Q     Max
-5.3980 -2.2734 -0.9693  1.9414  8.8724

Coefficients:
```

```
                     Estimate Std. Error t value Pr(>|t|)
(Intercept)          122.7734    60.0315   2.045   0.0520 .
xij1971                0.6504     0.3845   1.692   0.1036
w1971q                -0.2968     0.3697  -0.803   0.4300
migshareMinusOwn1971   1.8599     1.1624   1.600   0.1227
ea1971                -1.2620     0.6244  -2.021   0.0546 .
popPerAcre71          -0.0434     0.1400  -0.310   0.7593
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 4.14 on 24 degrees of freedom
Multiple R-squared:  0.3058,    Adjusted R-squared:  0.1612
F-statistic: 2.114 on 5 and 24 DF,  p-value: 0.09847


[1] "Dundee"
$poor

Call:
lm(formula = xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
    Min      1Q  Median      3Q     Max
-6.3826 -2.1082 -0.7448  1.2104  9.3164

Coefficients:
                     Estimate Std. Error t value Pr(>|t|)
(Intercept)          -23.2373    25.8249  -0.900   0.3749
xij1971                0.2197     0.1251   1.756   0.0887 .
w1971q                -0.0158     0.2273  -0.070   0.9450
migshareMinusOwn1971   1.1823     0.4436   2.665   0.0120 *
ea1971                 0.2249     0.2625   0.857   0.3980
popPerAcre71           0.2003     0.1230   1.629   0.1132
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 3.638 on 32 degrees of freedom
Multiple R-squared:  0.3846,    Adjusted R-squared:  0.2884
F-statistic: 3.999 on 5 and 32 DF,  p-value: 0.006242


$rich

Call:
lm(formula = xij2011 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
    Min      1Q  Median      3Q     Max
-4.1631 -1.5103 -0.7039  0.6832  6.8686

Coefficients:
                      Estimate Std. Error t value Pr(>|t|)
```

```
(Intercept)          39.283439  16.196378   2.425  0.02111 *
xij1971               0.550585   0.192817   2.855  0.00748 **
w1971q               -0.242771   0.259522  -0.935  0.35656
migshareMinusOwn1971  0.928270   0.260134   3.568  0.00116 **
ea1971               -0.410255   0.167874  -2.444  0.02023 *
popPerAcre71         -0.008487   0.068965  -0.123  0.90283
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 2.359 on 32 degrees of freedom
Multiple R-squared:  0.4165,    Adjusted R-squared:  0.3253
F-statistic: 4.568 on 5 and 32 DF,  p-value: 0.002953
```

Different decade comparisons 1: 91 vs 71

All zones, rich vs poor: 1991 ~1971

Formula: *xij1991 ~ xij1971 + w1971q + migshareMinusOwn1971 + ea1971 + popPerAcre71*

```
$poor

Call:
lm(formula = xij1991 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
    Min      1Q  Median      3Q     Max
-2.1923 -0.0559 -0.0210  0.0295  5.9136

Coefficients:
                      Estimate Std. Error t value        Pr(>|t|)
(Intercept)          -0.9697095  0.0818626 -11.846         < 2e-16 ***
xij1971               0.5059140  0.0099757  50.715         < 2e-16 ***
w1971q                0.1769328  0.0144145  12.275         < 2e-16 ***
migshareMinusOwn1971 -0.0033404  0.0014562  -2.294          0.0218 *
ea1971                0.0106092  0.0008615  12.315         < 2e-16 ***
popPerAcre71          0.0016504  0.0002482   6.651 0.0000000000319 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.1772 on 5748 degrees of freedom
Multiple R-squared:  0.4971,    Adjusted R-squared:  0.4967
F-statistic:  1137 on 5 and 5748 DF,  p-value: < 2.2e-16


$rich

Call:
lm(formula = xij1991 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
     Min       1Q   Median       3Q      Max
```

```
-0.69426 -0.03797 -0.01020  0.02382  0.84215

Coefficients:
                       Estimate Std. Error t value Pr(>|t|)
(Intercept)          -0.7721318  0.0520423 -14.837  < 2e-16 ***
xij1971               0.5976348  0.0171750  34.797  < 2e-16 ***
w1971q                0.0428126  0.0230797   1.855 0.063718 .
migshareMinusOwn1971  0.0018906  0.0008743   2.163 0.030674 *
ea1971                0.0085357  0.0005480  15.577  < 2e-16 ***
popPerAcre71          0.0006250  0.0001714   3.647 0.000271 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.07371 on 2460 degrees of freedom
Multiple R-squared:  0.5965,    Adjusted R-squared:  0.5957
F-statistic: 727.4 on 5 and 2460 DF,  p-value: < 2.2e-16
```

Urban zones, rich vs poor: 1991 ~ 1971

```
$poor

Call:
lm(formula = xij1991 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
    Min      1Q  Median      3Q     Max
-2.1290 -0.0725 -0.0240  0.0427  5.9366

Coefficients:
                       Estimate Std. Error t value Pr(>|t|)
(Intercept)          -1.3407280  0.1512263  -8.866  < 2e-16 ***
xij1971               0.4992363  0.0147686  33.804  < 2e-16 ***
w1971q                0.1846074  0.0209874   8.796  < 2e-16 ***
migshareMinusOwn1971 -0.0035378  0.0024614  -1.437  0.15077
ea1971                0.0146958  0.0015828   9.285  < 2e-16 ***
popPerAcre71          0.0013714  0.0004571   3.000  0.00272 **
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.233 on 2297 degrees of freedom
Multiple R-squared:  0.5306,    Adjusted R-squared:  0.5296
F-statistic: 519.4 on 5 and 2297 DF,  p-value: < 2.2e-16


$rich

Call:
lm(formula = xij1991 ~ xij1971 + w1971q + migshareMinusOwn1971 +
    ea1971 + popPerAcre71, data = x)

Residuals:
     Min       1Q   Median       3Q      Max
```

```
-0.63638 -0.04613 -0.01132  0.03270  0.62012

Coefficients:
                       Estimate Std. Error t value Pr(>|t|)
(Intercept)          -1.0984876  0.0846585 -12.976  < 2e-16 ***
xij1971               0.5555618  0.0237258  23.416  < 2e-16 ***
w1971q                0.0573311  0.0320189   1.791  0.07368 .
migshareMinusOwn1971  0.0005705  0.0012665   0.450  0.65251
ea1971                0.0121313  0.0008869  13.679  < 2e-16 ***
popPerAcre71          0.0007612  0.0002659   2.863  0.00429 **
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.08533 on 981 degrees of freedom
Multiple R-squared:  0.6512,    Adjusted R-squared:  0.6495
F-statistic: 366.4 on 5 and 981 DF,  p-value: < 2.2e-16
```

Different decade comparisons 2: 11 vs 91

All zones, rich vs poor (11 ~ 91) (four CoBs)

Formula: *xij2011 ~ xij1991 + w1991q + migshareMinusOwn1991 + ea1991 + popPerAcre91*

```
$poor

Call:
lm(formula = xij2011 ~ xij1991 + w1991q + migshareMinusOwn1991 +
    ea1991 + popPerAcre91, data = x)

Residuals:
     Min       1Q   Median       3Q      Max
-1.20271 -0.04130 -0.01488  0.00683  2.36020

Coefficients:
                         Estimate  Std. Error t value    Pr(>|t|)
(Intercept)           0.03690980  0.05248461   0.703       0.482
xij1991               0.50537975  0.01450447  34.843     < 2e-16 ***
w1991q                0.28039545  0.02181692  12.852     < 2e-16 ***
migshareMinusOwn1991 -0.00001418  0.00194421  -0.007       0.994
ea1991               -0.00034401  0.00059044  -0.583       0.560
popPerAcre91          0.00273706  0.00055532   4.929 0.000000911 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.1616 on 1638 degrees of freedom
Multiple R-squared:  0.7026,    Adjusted R-squared:  0.7017
F-statistic:   774 on 5 and 1638 DF,  p-value: < 2.2e-16


$rich

Call:
lm(formula = xij2011 ~ xij1991 + w1991q + migshareMinusOwn1991 +
```

```
    ea1991 + popPerAcre91, data = x)

Residuals:
     Min       1Q   Median       3Q      Max
-0.51207 -0.04242 -0.00967  0.02241  1.25583

Coefficients:
                      Estimate Std. Error t value    Pr(>|t|)
(Intercept)           0.0034358  0.0352315   0.098       0.922
xij1991               0.6323386  0.0325456  19.429     < 2e-16 ***
w1991q                0.3866611  0.0460201   8.402     < 2e-16 ***
migshareMinusOwn1991  0.0063217  0.0012353   5.118 0.000000346 ***
ea1991               -0.0004844  0.0004082  -1.187       0.236
popPerAcre91          0.0030902  0.0003620   8.538     < 2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.1027 on 1638 degrees of freedom
Multiple R-squared:  0.5212,    Adjusted R-squared:  0.5197
F-statistic: 356.6 on 5 and 1638 DF,  p-value: < 2.2e-16
```

Urban zones, rich vs poor (11 ~ 91) (four CoBs)

```
$poor

Call:
lm(formula = xij2011 ~ xij1991 + w1991q + migshareMinusOwn1991 +
    ea1991 + popPerAcre91, data = x)

Residuals:
     Min       1Q   Median       3Q      Max
-1.20727 -0.08209 -0.04470  0.02109  2.32660

Coefficients:
                      Estimate Std. Error t value Pr(>|t|)
(Intercept)           0.0585358  0.0945610   0.619    0.536
xij1991               0.5079197  0.0227829  22.294  < 2e-16 ***
w1991q                0.2841272  0.0342057   8.306 5.71e-16 ***
migshareMinusOwn1991 -0.0018939  0.0038619  -0.490    0.624
ea1991                0.0000266  0.0010741   0.025    0.980
popPerAcre91          0.0003926  0.0012487   0.314    0.753
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.2456 on 652 degrees of freedom
Multiple R-squared:  0.6814,    Adjusted R-squared:  0.679
F-statistic: 278.9 on 5 and 652 DF,  p-value: < 2.2e-16


$rich

Call:
lm(formula = xij2011 ~ xij1991 + w1991q + migshareMinusOwn1991 +
```

```
    ea1991 + popPerAcre91, data = x)

Residuals:
     Min       1Q   Median       3Q      Max
-0.37772 -0.06470 -0.02324  0.02897  1.24319

Coefficients:
                      Estimate Std. Error t value     Pr(>|t|)
(Intercept)           0.0725921  0.0592779   1.225     0.221166
xij1991               0.7841318  0.0668153  11.736      < 2e-16 ***
w1991q                0.4982269  0.0868010   5.740 0.0000000145 ***
migshareMinusOwn1991  0.0070165  0.0020062   3.497     0.000502 ***
ea1991               -0.0017658  0.0007073  -2.497     0.012783 *
popPerAcre91          0.0027902  0.0007284   3.831     0.000140 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.1388 on 652 degrees of freedom
Multiple R-squared:  0.513, Adjusted R-squared:  0.5093
F-statistic: 137.4 on 5 and 652 DF,  p-value: < 2.2e-16
```

Cities, rich vs poor (11 ~ 91) (four CoBs)

```
[1] "Glasgow"
$poor

Call:
lm(formula = xij2011 ~ xij1991 + w1991q + migshareMinusOwn1991 +
    ea1991 + popPerAcre91, data = x)

Residuals:
    Min      1Q  Median      3Q     Max
-2.1860 -0.2650 -0.1022  0.0951  4.2684

Coefficients:
                      Estimate Std. Error t value    Pr(>|t|)
(Intercept)           0.831742   0.337960   2.461      0.0145 *
xij1991               0.501491   0.033473  14.982     < 2e-16 ***
w1991q                0.287235   0.050494   5.688 0.000000036 ***
migshareMinusOwn1991 -0.010216   0.017571  -0.581      0.5615
ea1991               -0.005996   0.003938  -1.523      0.1291
popPerAcre91         -0.009483   0.005238  -1.810      0.0715 .
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.6917 on 248 degrees of freedom
Multiple R-squared:  0.6996,    Adjusted R-squared:  0.6935
F-statistic: 115.5 on 5 and 248 DF,  p-value: < 2.2e-16


$rich

Call:
```

```
lm(formula = xij2011 ~ xij1991 + w1991q + migshareMinusOwn1991 +
    ea1991 + popPerAcre91, data = x)

Residuals:
     Min       1Q   Median       3Q      Max
-0.97273 -0.30246 -0.08238  0.15235  2.46127

Coefficients:
                     Estimate Std. Error t value     Pr(>|t|)
(Intercept)          0.610399   0.267342   2.283       0.0233 *
xij1991              0.456464   0.081444   5.605 0.0000000554 ***
w1991q               0.117826   0.104651   1.126       0.2613
migshareMinusOwn1991 0.057104   0.009092   6.281 0.0000000015 ***
ea1991              -0.007496   0.003309  -2.266       0.0243 *
popPerAcre91         0.006986   0.004134   1.690       0.0923 .
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.5022 on 248 degrees of freedom
Multiple R-squared:  0.453, Adjusted R-squared:  0.442
F-statistic: 41.08 on 5 and 248 DF,  p-value: < 2.2e-16


[1] "Edinburgh"
$poor

Call:
lm(formula = xij2011 ~ xij1991 + w1991q + migshareMinusOwn1991 +
    ea1991 + popPerAcre91, data = x)

Residuals:
    Min      1Q  Median      3Q     Max
-2.0561 -0.6377 -0.2608  0.3460  8.8439

Coefficients:
                    Estimate Std. Error t value Pr(>|t|)
(Intercept)          1.89230    2.44930   0.773  0.44126
xij1991              0.36305    0.11167   3.251  0.00149 **
w1991q               0.38031    0.17146   2.218  0.02841 *
migshareMinusOwn1991 -0.10243    0.04199  -2.439  0.01615 *
ea1991               -0.01785    0.02662  -0.670  0.50394
popPerAcre91         0.03717    0.01369   2.715  0.00758 **
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.268 on 122 degrees of freedom
Multiple R-squared:  0.3062,    Adjusted R-squared:  0.2778
F-statistic: 10.77 on 5 and 122 DF,  p-value: 0.00000001361


$rich

Call:
lm(formula = xij2011 ~ xij1991 + w1991q + migshareMinusOwn1991 +
```

```
    ea1991 + popPerAcre91, data = x)

Residuals:
     Min       1Q   Median       3Q      Max
-2.24023 -0.42810 -0.06799  0.31257  2.42536

Coefficients:
                     Estimate Std. Error t value      Pr(>|t|)
(Intercept)          3.121316   1.465402   2.130        0.0352 *
xij1991              0.620888   0.099189   6.260 0.00000000597 ***
w1991q               0.020934   0.133784   0.156        0.8759
migshareMinusOwn1991 0.039660   0.032578   1.217        0.2258
ea1991              -0.037786   0.016003  -2.361        0.0198 *
popPerAcre91         0.037995   0.008309   4.573 0.00001163425 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.7403 on 122 degrees of freedom
Multiple R-squared:  0.642, Adjusted R-squared:  0.6274
F-statistic: 43.76 on 5 and 122 DF,  p-value: < 2.2e-16


[1] "Aberdeen"
$poor

Call:
lm(formula = xij2011 ~ xij1991 + w1991q + migshareMinusOwn1991 +
    ea1991 + popPerAcre91, data = x)

Residuals:
    Min      1Q  Median      3Q     Max
-6.2645 -1.7236 -0.4206  1.8566  5.7276

Coefficients:
                    Estimate Std. Error t value Pr(>|t|)
(Intercept)          37.7331    25.2763   1.493 0.148513
xij1991               0.5852     0.1504   3.891 0.000694 ***
w1991q                0.3020     0.1515   1.993 0.057725 .
migshareMinusOwn1991  0.2871     0.4462   0.643 0.526054
ea1991               -0.3853     0.2656  -1.450 0.159934
popPerAcre91         -0.1387     0.1207  -1.149 0.261683
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 3.263 on 24 degrees of freedom
Multiple R-squared:  0.6709,    Adjusted R-squared:  0.6024
F-statistic: 9.787 on 5 and 24 DF,  p-value: 0.00003398


$rich

Call:
lm(formula = xij2011 ~ xij1991 + w1991q + migshareMinusOwn1991 +
    ea1991 + popPerAcre91, data = x)
```

```
Residuals:
    Min      1Q  Median      3Q     Max
-5.9707 -2.3897 -0.5096  1.1727  6.5049

Coefficients:
                     Estimate Std. Error t value Pr(>|t|)
(Intercept)          106.02680   36.76766   2.884  0.00817 **
xij1991                0.58860    0.32489   1.812  0.08257 .
w1991q                 0.04538    0.20530   0.221  0.82691
migshareMinusOwn1991   1.20587    0.44957   2.682  0.01303 *
ea1991                -1.12632    0.38968  -2.890  0.00804 **
popPerAcre91          -0.15509    0.15842  -0.979  0.33736
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 3.35 on 24 degrees of freedom
Multiple R-squared:  0.5455,    Adjusted R-squared:  0.4508
F-statistic: 5.761 on 5 and 24 DF,  p-value: 0.001248


[1] "Dundee"
$poor

Call:
lm(formula = xij2011 ~ xij1991 + w1991q + migshareMinusOwn1991 +
    ea1991 + popPerAcre91, data = x)

Residuals:
    Min      1Q  Median      3Q     Max
-3.7804 -1.6078 -0.1434  1.1806  4.7913

Coefficients:
                    Estimate Std. Error t value      Pr(>|t|)
(Intercept)          5.79852    5.98017   0.970        0.3395
xij1991              0.72086    0.09045   7.970 0.00000000426 ***
w1991q               0.18778    0.16963   1.107        0.2765
migshareMinusOwn1991 0.26377    0.12303   2.144        0.0397 *
ea1991              -0.06370    0.06314  -1.009        0.3206
popPerAcre91        -0.07095    0.07415  -0.957        0.3458
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 2.352 on 32 degrees of freedom
Multiple R-squared:  0.7427,    Adjusted R-squared:  0.7025
F-statistic: 18.47 on 5 and 32 DF,  p-value: 0.00000001311


$rich

Call:
lm(formula = xij2011 ~ xij1991 + w1991q + migshareMinusOwn1991 +
    ea1991 + popPerAcre91, data = x)
```

```
Residuals:
    Min      1Q  Median      3Q     Max
-4.1289 -1.9572 -0.4537  1.5384  7.3628

Coefficients:
                     Estimate Std. Error t value Pr(>|t|)
(Intercept)           8.62086    6.55589   1.315   0.1979
xij1991               0.32325    0.19306   1.674   0.1038
w1991q               -0.06765    0.28725  -0.235   0.8153
migshareMinusOwn1991  0.35242    0.14837   2.375   0.0237 *
ea1991               -0.08318    0.07233  -1.150   0.2586
popPerAcre91          0.07530    0.07878   0.956   0.3463
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 2.741 on 32 degrees of freedom
Multiple R-squared:  0.2118,    Adjusted R-squared:  0.08863
F-statistic:  1.72 on 5 and 32 DF,  p-value: 0.1585
```