Static Time-Series Regression Results

Non-Heteroskedasticity Corrected Monthly Models

Model 1

```
Call:
lm(formula = ld_unemployment ~ ld_MassTransit + ld_LandPassTerm +
    ld_Transport + covid, data = df)

Residuals:
     Min       1Q   Median       3Q      Max
-0.19343 -0.02514 -0.00296  0.01820  1.20316

Coefficients:
                 Estimate Std. Error t value Pr(>|t|)
(Intercept)     -0.001564   0.006065  -0.258    0.797
ld_MassTransit  -0.043572   0.061098  -0.713    0.476
ld_LandPassTerm -0.050647   0.050694  -0.999    0.319
ld_Transport     0.118312   0.101894   1.161    0.247
covid            0.002560   0.015218   0.168    0.867

Residual standard error: 0.08706 on 241 degrees of freedom
Multiple R-squared:  0.00681,   Adjusted R-squared:  -0.009674
F-statistic: 0.4131 on 4 and 241 DF,  p-value: 0.7991
```

Model 2

```
Call:
lm(formula = ld_unemployment ~ ld_MassTransit + ld_LandPassTerm +
    ld_Transport + ld_OthTransMod + ld_Bus + ld_Rail + covid,
```

```
    data = df)

Residuals:
      Min        1Q    Median        3Q       Max
-0.151526 -0.028799 -0.003696  0.025976  0.300438

Coefficients:
                  Estimate Std. Error t value Pr(>|t|)
(Intercept)     -0.0009295  0.0033625  -0.276 0.782452
ld_MassTransit  -0.0245936  0.0339627  -0.724 0.469693
ld_LandPassTerm  0.0215834  0.0285669   0.756 0.450672
ld_Transport     0.1466146  0.0579586   2.530 0.012065 *
ld_OthTransMod   0.1077753  0.0678783   1.588 0.113665
ld_Bus           0.2952973  0.0816699   3.616 0.000366 ***
ld_Rail         -0.7761429  0.0586028 -13.244  < 2e-16 ***
covid           -0.0030737  0.0084299  -0.365 0.715722
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.04821 on 238 degrees of freedom
Multiple R-squared:  0.6993,    Adjusted R-squared:  0.6905
F-statistic: 79.07 on 7 and 238 DF,  p-value: < 2.2e-16
```

Model 3

```
Call:
lm(formula = ld_unemployment ~ ld_MassTransit + ld_LandPassTerm +
    ld_Transport + ld_OthTransMod + ld_Bus + ld_Rail + ld_TransEmply +
    covid, data = df)

Residuals:
      Min        1Q    Median        3Q       Max
-0.152126 -0.027798 -0.003382  0.025520  0.294239

Coefficients:
                  Estimate Std. Error t value Pr(>|t|)
(Intercept)     -0.0005842  0.0033589  -0.174 0.862066
ld_MassTransit  -0.0217933  0.0339014  -0.643 0.520947
ld_LandPassTerm  0.0245134  0.0285365   0.859 0.391198
ld_Transport     0.1522599  0.0578851   2.630 0.009088 **
ld_OthTransMod  -0.0347165  0.1125233  -0.309 0.757952
```

```
ld_Bus             0.3720437  0.0947244    3.928 0.000113 ***
ld_Rail           -0.7074500  0.0727403   -9.726  < 2e-16 ***
ld_TransEmply     -0.1175234  0.0741521   -1.585 0.114323
covid             -0.0031529  0.0084034   -0.375 0.707852
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.04805 on 237 degrees of freedom
Multiple R-squared:  0.7025,    Adjusted R-squared:  0.6924
F-statistic: 69.94 on 8 and 237 DF,  p-value: < 2.2e-16
```

Heteroskedastascity Corrected SE Monthly Models

Model 1

```
                     Estimate  Std. Error     t value  Pr(>|t|)
(Intercept)      -0.001564428 0.002547633 -0.61407116 0.5397475
ld_MassTransit   -0.043571617 0.038554202 -1.13013926 0.2595411
ld_LandPassTerm  -0.050647406 0.054279624 -0.93308321 0.3517109
ld_Transport      0.118312142 0.093741889  1.26210538 0.2081309
covid             0.002559984 0.033258376  0.07697262 0.9387092
```

Model 2

```
                      Estimate  Std. Error     t value      Pr(>|t|)
(Intercept)      -0.0009295132 0.002471577 -0.3760811 7.071916e-01
ld_MassTransit   -0.0245935812 0.031047444 -0.7921290 4.290743e-01
ld_LandPassTerm   0.0215834222 0.024251617  0.8899787 3.743760e-01
ld_Transport      0.1466145640 0.054837204  2.6736331 8.023048e-03
ld_OthTransMod    0.1077753067 0.068222012  1.5797732 1.154869e-01
ld_Bus            0.2952973482 0.093973280  3.1423544 1.888563e-03
ld_Rail          -0.7761428995 0.158770710 -4.8884514 1.869648e-06
covid            -0.0030736829 0.008427947 -0.3647013 7.156583e-01
```

Model 3

```
                      Estimate  Std. Error     t value      Pr(>|t|)
(Intercept)      -0.0005842299 0.002528382 -0.2310687 8.174608e-01
ld_MassTransit   -0.0217933005 0.030160841 -0.7225694 4.706569e-01
ld_LandPassTerm   0.0245134228 0.024993395  0.9807960 3.276935e-01
```

```
ld_Transport      0.1522598944 0.057868567   2.6311330 9.068270e-03
ld_OthTransMod   -0.0347165176 0.116245811  -0.2986475 7.654707e-01
ld_Bus            0.3720436789 0.135132878   2.7531692 6.359286e-03
ld_Rail          -0.7074500331 0.129683377  -5.4552098 1.228649e-07
ld_TransEmply    -0.1175233848 0.088748696  -1.3242266 1.867034e-01
covid            -0.0031529104 0.008433724  -0.3738456 7.088534e-01
```

Non-Heteroskedasticity Corrected Quarterly Models

Model 1

```
Call:
lm(formula = ld_unemployment_qtr ~ ld_MassTransit_qtr + ld_Transport_qtr +
    ld_LandPassTerm_qtr + covid, data = df)

Residuals:
     Min       1Q   Median       3Q      Max
-0.41232 -0.05058 -0.01528  0.02666  1.14837

Coefficients:
                    Estimate Std. Error t value Pr(>|t|)
(Intercept)        -0.006356   0.019495  -0.326    0.745
ld_MassTransit_qtr  0.023372   0.275448   0.085    0.933
ld_Transport_qtr    0.253569   0.222293   1.141    0.258
ld_LandPassTerm_qtr -0.235856   0.145885  -1.617    0.110
covid               0.013234   0.046784   0.283    0.778

Residual standard error: 0.1572 on 75 degrees of freedom
Multiple R-squared:  0.04684,   Adjusted R-squared:  -0.003996
F-statistic: 0.9214 on 4 and 75 DF,  p-value: 0.4561
```

Model 2

```
Call:
lm(formula = ld_unemployment_qtr ~ ld_MassTransit_qtr + ld_Transport_qtr +
    ld_LandPassTerm_qtr + ld_bus_qtr + ld_rail_qtr + ld_OtherTransMod_qtr +
    covid, data = df)
```

```
Residuals:
    Min       1Q   Median       3Q      Max
-0.08447 -0.03620 -0.01368  0.02997  0.17440

Coefficients:
                     Estimate Std. Error t value Pr(>|t|)
(Intercept)         -0.001791   0.007154  -0.250   0.8030
ld_MassTransit_qtr   0.112987   0.104508   1.081   0.2832
ld_Transport_qtr     0.120418   0.084560   1.424   0.1588
ld_LandPassTerm_qtr -0.003341   0.054142  -0.062   0.9510
ld_bus_qtr           0.660840   0.321573   2.055   0.0435 *
ld_rail_qtr         -0.950488   0.161106  -5.900 1.09e-07 ***
ld_OtherTransMod_qtr -0.035886  0.110319  -0.325   0.7459
covid               -0.011860   0.017196  -0.690   0.4926
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.05721 on 72 degrees of freedom
Multiple R-squared:  0.8789,    Adjusted R-squared:  0.8671
F-statistic: 74.62 on 7 and 72 DF,  p-value: < 2.2e-16
```

Model 3

```
Call:
lm(formula = ld_unemployment_qtr ~ ld_MassTransit_qtr + ld_Transport_qtr +
    ld_LandPassTerm_qtr + ld_bus_qtr + ld_rail_qtr + ld_OtherTransMod_qtr +
    ld_TransEmply_qtr + ld_rgdp + covid, data = df)

Residuals:
    Min       1Q   Median       3Q      Max
-0.09327 -0.03055 -0.01012  0.02635  0.15455

Coefficients:
                     Estimate Std. Error t value Pr(>|t|)
(Intercept)          0.011127   0.008239   1.350  0.18122
ld_MassTransit_qtr   0.099238   0.102025   0.973  0.33406
ld_Transport_qtr     0.141260   0.084395   1.674  0.09863 .
ld_LandPassTerm_qtr -0.044206   0.054356  -0.813  0.41882
ld_bus_qtr           0.679684   0.302368   2.248  0.02774 *
ld_rail_qtr         -0.867082   0.190350  -4.555 2.16e-05 ***
ld_OtherTransMod_qtr 0.046789   0.167583   0.279  0.78092
```

```
ld_TransEmply_qtr      0.080901   0.140720   0.575  0.56719
ld_rgdp               -2.866509   0.941846  -3.044  0.00329 **
covid                 -0.003856   0.016263  -0.237  0.81327
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1


Residual standard error: 0.05356 on 70 degrees of freedom
Multiple R-squared:  0.8968,    Adjusted R-squared:  0.8835
F-statistic: 67.57 on 9 and 70 DF,  p-value: < 2.2e-16
```

Heteroskedastascity Corrected SE Quarterly Models

Model 1

```
                       Estimate Std. Error    t value  Pr(>|t|)
(Intercept)         -0.006356284 0.01680618 -0.3782111 0.7063422
ld_MassTransit_qtr   0.023371905 0.12093743  0.1932562 0.8472808
ld_Transport_qtr     0.253569460 0.27639596  0.9174138 0.3618666
ld_LandPassTerm_qtr -0.235855905 0.22020395 -1.0710794 0.2875684
covid                0.013233624 0.06379691  0.2074336 0.8362334
```

Model 2

```
                        Estimate Std. Error    t value    Pr(>|t|)
(Intercept)          -0.001791215 0.01218964 -0.1469456 8.835856e-01
ld_MassTransit_qtr    0.112986825 0.08632593  1.3088399 1.947508e-01
ld_Transport_qtr      0.120418474 0.10528712  1.1437151 2.565302e-01
ld_LandPassTerm_qtr  -0.003341234 0.06710654 -0.0497900 9.604276e-01
ld_bus_qtr            0.660840343 0.36094781  1.8308474 7.126118e-02
ld_rail_qtr          -0.950487935 0.18999292 -5.0027546 3.856785e-06
ld_OtherTransMod_qtr -0.035886030 0.11271236 -0.3183859 7.511139e-01
covid                -0.011860280 0.01674137 -0.7084416 4.809585e-01
```

Model 3

```
                       Estimate Std. Error    t value   Pr(>|t|)
(Intercept)          0.011126898 0.01887658  0.5894553 0.557453617
ld_MassTransit_qtr   0.099237601 0.12014276  0.8259974 0.411612026
ld_Transport_qtr     0.141260030 0.12055520  1.1717457 0.245272000
ld_LandPassTerm_qtr -0.044205839 0.07309879 -0.6047410 0.547306411
```

```
ld_bus_qtr          0.679684100 0.37140988   1.8300108 0.071506083
ld_rail_qtr        -0.867082265 0.25396181  -3.4142231 0.001067632
ld_OtherTransMod_qtr 0.046788893 0.24855494   0.1882437 0.851230297
ld_TransEmply_qtr   0.080901431 0.22510927   0.3593874 0.720387200
ld_rgdp            -2.866509171 2.36080512  -1.2142083 0.228748686
covid              -0.003856009 0.01568320  -0.2458688 0.806503289
```