> long\_term <- c("lETH1","lLTC1","gg\_btc", "transact\_count", "totalcoin",

+ "sum\_vendor", "future", "cy\_at")

> str <- create\_regress\_str(dep\_var, indep\_vars,long\_term)

> print(str)

[1] "btc\_lg ~ lBTC1 + lBTC2 + lBTC3 + lBTC4 + lBTC5 + lBTC6 + lBTC7 + lBTC8 + eth\_lg + lETH1 + lETH2 + lETH3 + lETH4 + lETH5 + lETH6 + lETH7 + lETH8 + ltc\_lg + lLTC1 + lLTC2 + lLTC3 + lLTC4 + lLTC5 + lLTC6 + lLTC7 + lLTC8 + lETH1 + lLTC1 + gg\_btc + transact\_count + totalcoin + sum\_vendor + future + cy\_at"

> regress <- lm(str, data=tsdata)

> results <- summary(regress)

> print(results)

Call:

lm(formula = str, data = tsdata)

Residuals:

Min 1Q Median 3Q Max

-0.34990 -0.07406 -0.00306 0.07844 0.30575

Coefficients:

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

(Intercept) 2.561e+00 1.055e-01 24.285 < 2e-16 \*\*\*

lBTC1 5.998e-05 1.576e-05 3.806 0.000151 \*\*\*

lBTC2 -9.320e-06 2.402e-05 -0.388 0.698060

lBTC3 -1.884e-05 2.515e-05 -0.749 0.453997

lBTC4 2.734e-05 2.608e-05 1.048 0.294824

lBTC5 3.195e-06 2.492e-05 0.128 0.898005

lBTC6 -1.306e-05 2.656e-05 -0.492 0.623128

lBTC7 1.068e-05 2.651e-05 0.403 0.687140

lBTC8 3.975e-05 1.713e-05 2.321 0.020539 \*

eth\_lg 6.500e-02 6.681e-03 9.728 < 2e-16 \*\*\*

lETH1 5.593e-04 2.428e-04 2.304 0.021493 \*

lETH2 -2.449e-04 3.616e-04 -0.677 0.498461

lETH3 1.434e-04 3.657e-04 0.392 0.695099

lETH4 -2.819e-04 3.622e-04 -0.778 0.436571

lETH5 -4.379e-05 3.616e-04 -0.121 0.903634

lETH6 2.144e-04 3.635e-04 0.590 0.555539

lETH7 -3.196e-04 3.638e-04 -0.879 0.379879

lETH8 -3.375e-04 2.461e-04 -1.371 0.170631

ltc\_lg 2.718e-01 1.265e-02 21.479 < 2e-16 \*\*\*

lLTC1 -3.039e-03 9.301e-04 -3.267 0.001130 \*\*

lLTC2 8.708e-04 1.235e-03 0.705 0.481008

lLTC3 -5.084e-04 1.209e-03 -0.420 0.674255

lLTC4 -2.565e-04 1.203e-03 -0.213 0.831190

lLTC5 9.758e-04 1.203e-03 0.811 0.417602

lLTC6 -4.992e-04 1.187e-03 -0.421 0.674133

lLTC7 4.247e-04 1.197e-03 0.355 0.722832

lLTC8 -1.060e-03 8.280e-04 -1.280 0.200855

gg\_btc 1.969e-03 2.468e-04 7.978 4.84e-15 \*\*\*

transact\_count 1.116e-06 1.026e-07 10.884 < 2e-16 \*\*\*

totalcoin -3.275e-05 7.409e-06 -4.420 1.12e-05 \*\*\*

sum\_vendor 3.935e-04 1.316e-05 29.911 < 2e-16 \*\*\*

future -2.038e-05 4.494e-06 -4.536 6.57e-06 \*\*\*

cy\_at 4.068e-04 1.861e-04 2.186 0.029116 \*

---

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

Residual standard error: 0.1123 on 842 degrees of freedom

(309 observations deleted due to missingness)

Multiple R-squared: 0.9922, Adjusted R-squared: 0.9919

F-statistic: 3328 on 32 and 842 DF, p-value: < 2.2e-16

# repeat regression eliminating one variable at a time for "elim" either by

# 1. TESTING: enter variables until "-1" is entered in console for testing

# 2. Calling choose\_elim\_variable() to eliminate completely through variables

Call:

lm(formula = str, data = tsdata)

Residuals:

Min 1Q Median 3Q Max

-0.32505 -0.07307 -0.00206 0.07957 0.30499

Coefficients:

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

(Intercept) 2.557e+00 1.040e-01 24.579 < 2e-16 \*\*\*

lBTC1 5.378e-05 6.408e-06 8.393 < 2e-16 \*\*\*

lBTC8 4.613e-05 7.037e-06 6.555 9.57e-11 \*\*\*

eth\_lg 6.526e-02 6.620e-03 9.858 < 2e-16 \*\*\*

lETH1 2.893e-04 8.019e-05 3.608 0.000327 \*\*\*

lETH8 -6.167e-04 8.404e-05 -7.339 4.99e-13 \*\*\*

ltc\_lg 2.761e-01 1.217e-02 22.695 < 2e-16 \*\*\*

lLTC1 -2.680e-03 4.458e-04 -6.011 2.71e-09 \*\*\*

lLTC8 -5.887e-04 2.942e-04 -2.001 0.045710 \*

gg\_btc 1.951e-03 2.430e-04 8.025 3.31e-15 \*\*\*

transact\_count 1.106e-06 9.927e-08 11.142 < 2e-16 \*\*\*

totalcoin -3.238e-05 7.337e-06 -4.413 1.15e-05 \*\*\*

sum\_vendor 3.935e-04 1.299e-05 30.296 < 2e-16 \*\*\*

future -1.758e-05 3.987e-06 -4.410 1.16e-05 \*\*\*

cy\_at 4.291e-04 1.832e-04 2.342 0.019431 \*

---

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

Residual standard error: 0.1115 on 860 degrees of freedom

(309 observations deleted due to missingness)

Multiple R-squared: 0.9921, Adjusted R-squared: 0.992

F-statistic: 7709 on 14 and 860 DF, p-value: < 2.2e-16

Wald test

|  |
| --- |
| Long Run Elasticities:  Coeff Std-Errors t-stat prob  (Intercept) -47540.92 0.1040292 24.57912 1.822815e-101  lETH1 -5.378861 8.018795e-05 3.607739 0.0003266967  lLTC1 49.83031 0.0004458295 -6.011442 2.714945e-09 |
| "btc\_lg ~ lBTC1 + lBTC8 + eth\_lg + lETH1 + lETH8 + ltc\_lg + lLTC1 + lLTC8 + ecm1"  lm(formula = str, data = tsdata)  Residuals:  Min 1Q Median 3Q Max  -0.73497 -0.13104 -0.01245 0.11329 0.50496  Coefficients:  Estimate Std. Error t value Pr(>|t|)  (Intercept) 4.111e+01 1.110e+02 0.370 0.71129  lBTC1 1.304e-04 1.067e-05 12.222 < 2e-16 \*\*\*  lBTC8 4.968e-05 1.253e-05 3.966 7.85e-05 \*\*\*  eth\_lg 2.375e-01 1.491e-02 15.928 < 2e-16 \*\*\*  lETH1 -4.206e-04 1.380e-04 -3.049 0.00236 \*\*  lETH8 1.816e-04 1.301e-04 1.396 0.16305  ltc\_lg 2.630e-01 1.152e-01 2.283 0.02267 \*  lLTC1 -4.967e-03 5.281e-04 -9.406 < 2e-16 \*\*\*  lLTC8 -5.879e-04 5.246e-04 -1.121 0.26277  ecm1 -7.514e-04 2.335e-03 -0.322 0.74774  ---  Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1  Residual standard error: 0.2023 on 951 degrees of freedom  (223 observations deleted due to missingness)  Multiple R-squared: 0.9732, Adjusted R-squared: 0.973  F-statistic: 3838 on 9 and 951 DF, p-value: < 2.2e-16 |
| |  | | --- | |  | |