Toy Example: Contract Financing

Dataset

project_id	quarter	delay	size	cf	post	treat	delay_ind
A	Q1	0	small	1	0	1	0
A	Q2	0	small	1	0	1	0
A	Q3	0	small	1	1	1	0
A	Q4	7	small	1	1	1	1
B	Q1	0	small	1	0	1	0
B	Q2	10	small	1	0	1	1
B	Q3	20	small	1	1	1	1
B	Q4	0	small	1	1	1	0
C	Q1	8	small	0	0	1	1
C	Q2	0	small	0	0	1	0
C	Q3	0	small	0	1	1	0
C	Q4	12	small	0	1	1	1
D	Q1	0	large	0	0	0	0
D	Q2	5	large	0	0	0	1
D	Q3	0	large	0	1	0	0
D	Q4	0	large	0	1	0	0
E	Q1	0	large	1	0	0	0
E	Q2	10	large	1	0	0	1
E	Q3	0	large	1	1	0	0
E	Q4	12	large	1	1	0	1
F	Q1	0	large	0	0	0	0
F	Q2	0	large	0	0	0	0
F	Q3	0	large	0	1	0	0
F	Q4	3	large	0	1	0	1

Logistic Regression

```
## binomial - logit link
##
## delay_ind ~ treat + post + cf + post:cf + treat:cf + treat:post +
##     treat:post:cf | 0
##
## Estimates:
##                 Estimate Std. error z value Pr(> |z|)
## treat          1.369e-15  1.414e+00   0.000     1.000
## post          -1.099e+00  1.155e+00  -0.951     0.341
## cf             1.042e-15  1.414e+00   0.000     1.000
## post:cf        1.099e+00  2.309e+00   0.476     0.634
## treat:cf      -1.099e+00  2.309e+00  -0.476     0.634
## treat:post     1.099e+00  2.309e+00   0.476     0.634
## treat:post:cf  6.831e-15  3.416e+00   0.000     1.000
```

```
##
## residual deviance= 31.178,
## null deviance= 31.755,
## n= 24, l= []
##
## Number of Fisher Scoring Iterations: 4
```

Non-zero Linear Regression

```
##
## Call:
##    felm(formula = delay ~ treat + post + cf + post:cf + treat:cf +      treat:post + treat:post:cf |
##
## Residuals:
##    Min     1Q Median     3Q    Max
##   -6.5    0.0    0.0    0.0    6.5
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)      5.000      9.192   0.544    0.683
## treat            3.000     13.000   0.231    0.856
## post            -2.000     13.000  -0.154    0.903
## cf               5.000     13.000   0.385    0.766
## post:cf          4.000     18.385   0.218    0.864
## treat:cf        -3.000     18.385  -0.163    0.897
## treat:post       6.000     18.385   0.326    0.799
## treat:post:cf   -4.500     25.174  -0.179    0.887
##
## Residual standard error: 9.192 on 1 degrees of freedom
## Multiple R-squared(full model): 0.5644   Adjusted R-squared: -2.485
## Multiple R-squared(proj model): 0.5644   Adjusted R-squared: -2.485
## F-statistic(full model):0.1851 on 7 and 1 DF, p-value: 0.9469
## F-statistic(proj model): 0.1851 on 7 and 1 DF, p-value: 0.9469
```

Full sample Linear Regression

```
##
## Call:
##    felm(formula = delay ~ treat + post + cf + post:cf + treat:cf +      treat:post + treat:post:cf |
##
## Residuals:
##    Min     1Q Median     3Q    Max
## -6.750 -2.875 -1.000  3.812 13.250
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)      1.250      3.045   0.411    0.687
## treat            2.750      5.273   0.521    0.609
## post            -0.500      4.306  -0.116    0.909
## cf               3.750      5.273   0.711    0.487
## post:cf          1.500      7.458   0.201    0.843
## treat:cf        -5.250      7.458  -0.704    0.492
## treat:post       2.500      7.458   0.335    0.742
```

```
## treat:post:cf    0.750     10.547   0.071    0.944
##
## Residual standard error: 6.089 on 16 degrees of freedom
## Multiple R-squared(full model): 0.1756   Adjusted R-squared: -0.1851
## Multiple R-squared(proj model): 0.1756   Adjusted R-squared: -0.1851
## F-statistic(full model):0.4869 on 7 and 16 DF, p-value: 0.8304
## F-statistic(proj model): 0.4869 on 7 and 16 DF, p-value: 0.8304
```