1) remove the 8 campagins remove 40,000, 56,000, 80,000, and 100,000

After removing, 7340 campaigns left.

2) For the tests need the histogram of the variables

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3) change the scale type back to 0-7

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Description automatically generated

Correlation coefficient graph

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Description automatically generated with low confidence

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|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Mean | Std.Dev | Skew | Kurt |
| [1] | DV: Donation Amount | 11020 | 44312 | 18.76 | 515 |
| [2] | Campaign Goal | 43904 | 127925 | 8.15 | 93.57 |
| [3] | Tax Deductibility | 0.95 | 0.21 | -4.29 | 16.39 |
| [4] | Campaign Duration | 112 | 110 | 1.36 | 0.53 |
| [5] | Campaign Video | 0.346 | 0.476 | 0.646 | -1.58 |
| [6] | Number of images | 3.01 | 1.56 | -0.004 | -1.52 |
| [7] | Words of campaign | 138 | 67 | 0.024 | -1.04 |
| [8] | Creator Type | 0.65 | 0.94 | 2.78 | 11.32 |
| [9] | Scale Type | 5.64 | 1.17 | -1.69 | -4.04 |
| [10] | Sector Type | 1.02 | 1.25 | 1.23 | 1.53 |
| [11] | Start Year category | 3.23 | 1.37 | -0.76 | -0.098 |
| [12] | Campaign frequency | 12.98 | 26.98 | 3.18 | 9.80 |
| [13] | Future tense % | 0.01 | 0.02 | 1.88 | 2.46 |
| [14] | Avg custom amount | 146.6 | 756 | 18.74 | 500 |

Statistics

Statistics

Table1 correlation Matrix and descriptive statistics

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Mean | Std.Dev | Min | Max | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] | [11] | [12] | [13] |
| [1] | DV: Donation Amount | 11020 | 44312 | 10 | 1602948 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| [2] | Campaign Goal | 43904 | 127925 | 100 | 2000000 | 0.57 | 1 |  |  |  |  |  |  |  |  |  |  |  |
| [3] | Tax Deductibility | 0.95 | 0.21 | 0 | 1 | 0.02 | -0.05 | 1 |  |  |  |  |  |  |  |  |  |  |
| [4] | Campaign Duration | 112 | 110 | 2 | 365 | 0.25 | 0.41 | -0.013 | 1 |  |  |  |  |  |  |  |  |  |
| [5] | Campaign Video | 0.346 | 0.476 | 0 | 1 | 0.051 | 0.041 | 0.0029 | 0.032 | 1 |  |  |  |  |  |  |  |  |
| [6] | Number of images | 3.01 | 1.56 | 0 | 5 | 0.069 | 0.069 | -0.025 | 0.07 | 0.039 | 1 |  |  |  |  |  |  |  |
| [7] | Words of campaign | 138 | 67 | 1 | 294 | 0.23 | 0.25 | -0.033 | 0.056 | 0.009 | 0.12 | 1 |  |  |  |  |  |  |
| [8] | Creator Type | 0.65 | 0.94 | 0 | 7 | -0.17 | -0.47 | 0.1 | -0.25 | 0.081 | -0.023 | -0.24 | 1 |  |  |  |  |  |
| [9] | Scale Type | 5.64 | 1.17 | 0 | 7 | 0.021 | -0.053 | 0.28 | 0.0066 | -0.003 | -0.11 | -0.044 | 0.15 | 1 |  |  |  |  |
| [10] | Sector Type | 1.02 | 1.25 | 0 | 7 | 0.021 | 0.1 | -0.04 | 0.042 | 0.005 | -0.016 | 0.11 | -0.13 | -0.068 | 1 |  |  |  |
| [11] | Start Year | 3.23 | 1.37 | 0 | 5 | -0.058 | -0.16 | -0.061 | -0.17 | -0.029 | -0.12 | -0.043 | 0.16 | 0.012 | -0.036 | 1 |  |  |
| [12] | Campaign frequency | 12.98 | 26.98 | 1 | 134 | -0.2 | -0.36 | 0.11 | -0.18 | -0.088 | -0.14 | -0.15 | 0.29 | 0.2 | -0.12 | 0.31 | 1 |  |
| [13] | Future tense % | 0.01 | 0.02 | 0.0 | 0.129 | 0.13 | 0.28 | -0.094 | 0.097 | -0.006 | 0.081 | 0.15 | -0.52 | -0.097 | 0.0008 | -0.077 | -0.18 | 1 |
| [14] | Avg custom amount | 146.6 | 756 | 0.0 | 27500 | 0.25 | 0.55 | -0.12 | 0.24 | -0.055 | 0.038 | 0.25 | -0.86 | -0.14 | 0.12 | -0.12 | -0.31 | 0.53 |

VIF Test

The new regression result.

Without log transformation

Actual\_Donation\_Amount 1.2069810104277907

Campaign\_Goal 1.2731889485381112

NPO\_Ipc\_Status\_For\_Tax\_Deductibility 1.2932281175938398

Campaign\_Duration 1.1275970472247532

Campaign\_Video 1.0283229581800035

Campaign\_Image\_Number 1.0738031761560938

Number\_of\_words\_describing\_campaign 1.0692821721720043

Creator\_Type 1.2310732197235983

Scale\_type 1.3367183466211825

Sector\_type 1.0347177336477438

Campaign\_Start\_Year\_category 1.1170697801630953

Campaign\_frequency 1.2204803850363526

Future\_tense\_percentage 1.164962392150795

Avg\_custom\_amount 1.0419935221668806

Base model

A screenshot of a computer

Description automatically generated

Last version:

Residual standard error: 1.5875834139825278

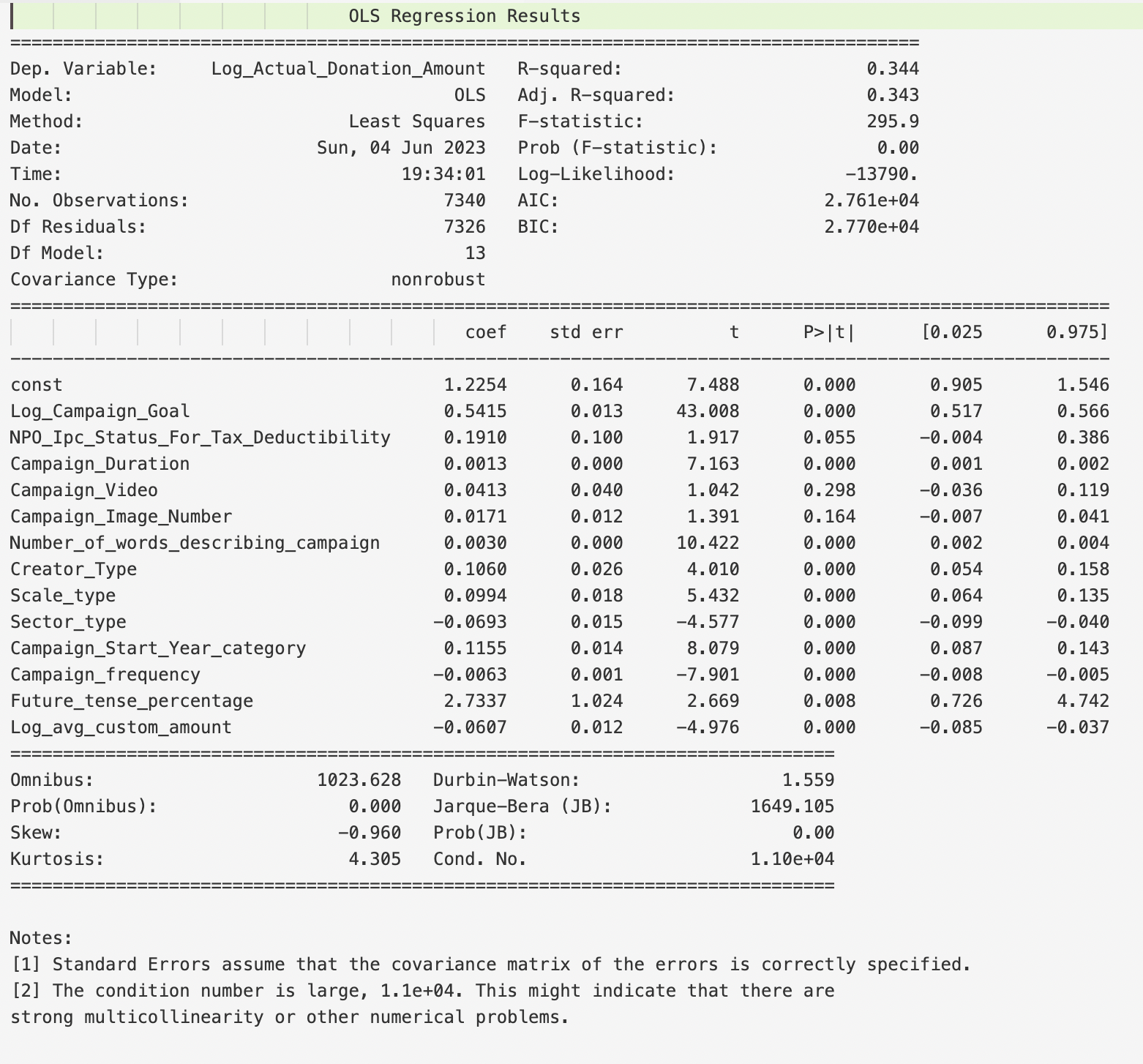
Predicted R2: 0.3395480186514015

Updated version:

Residual standard error: 1.5878672351853094

Predicted R2: 0.3397208163273283

Base model + Future\_tense\_percentage + Log\_avg\_custom\_amount



Last version:

Residual standard error: 1.5849140549661294

Predicted R2: 0.3415543555034526

Updated version:

Residual standard error: 1.5852994462791985

Predicted R2: 0.3416402561605735

Model 3 = Model 2 + Future\_tense\_percentage\_X\_Log\_avg\_custom\_amount

A screenshot of a computer

Description automatically generated

Last version:

Residual standard error: 1.58213757230085

Predicted R2: 0.34366431775478046

Update version:

Residual standard error: 1.5824571200765034

Predicted R2: 0.3438009724576291

Robustness test 1

A screenshot of a computer

Description automatically generated with medium confidence

Last version:

Residual standard error: 1.2615295245458051

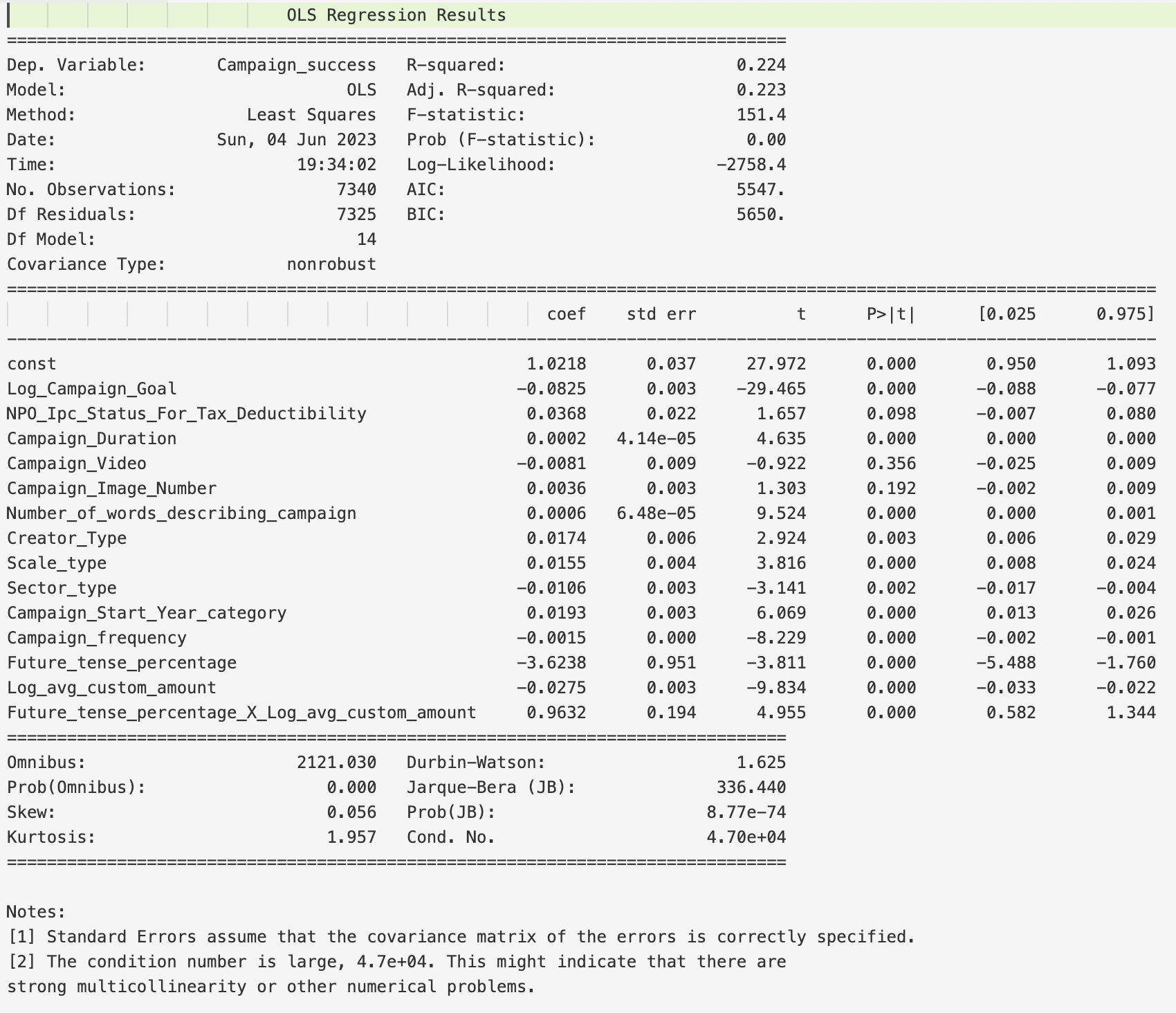
Predicted R2: 0.272537461813088

Updated version:

Residual standard error: 1.2618518825091873

Predicted R2: 0.27263395026733495

Robustness test 2



Last version:

Residual standard error: 0.3526142393655064

Predicted R2: 0.221949339097257

New version:

Residual standard error: 0.3527073943804329

Predicted R2: 0.2212827844686216

The result below are all based on Model 3

4) do 3 seperate residual plot of each IV, and the interaction varible

5) for current residual plot, do pixel and make nicer

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Description automatically generated

A picture containing text, diagram, screenshot, line

Description automatically generated

6) for the qq plot, extend axis, and do in the same pixel form

I am not sure what is the meaning of “do in the same pixel form”. You can have a look first, can make further change if need.

A picture containing diagram, plot, line, text

Description automatically generated

A blue line with a red line

Description automatically generated with low confidence

7) use minitab again to flag for large residuals in Y and in indepedent variables

I am not sure the meaning of this part, I filter the campaingns whose absolute residual more than 2

Here, there are 368 campaigns whose absolute residual more than 2

After removing the out liers A screenshot of a computer

Description automatically generated

A picture containing text, diagram, line, screenshot

Description automatically generated

A picture containing diagram, plot, line

Description automatically generated

A picture containing text, line, plot, diagram

Description automatically generated