Question 3

Vincent Reinshagen[a]

[a]*Stellenbosch University, Stellenbosch, South Africa*

Abstract

In this project, I will conduct a comprehensive analysis to evaluate the extent of support extended by various countries to Ukraine. Specifically, I will explore how countries' donation behaviors diverge depending on their membership status within the European Union (EU).

1. Introduction

To start, I will perform two regression analyses: one on allocation and another on commitment, aiming to explore how these variables are influenced by a country's EU membership status.

```
##
## Call:
## lm(formula = alloc$Total.bilateral.allocations...billion. ~ alloc$EU.member)
##
## Residuals:
##    Min     1Q Median     3Q    Max
## -6.939 -3.672 -2.865 -1.023 64.918
##
## Coefficients:
##                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)        6.941      3.432   2.023   0.0502 .
## alloc$EU.member   -3.655      4.177  -0.875   0.3870
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
```

Corresponding author: Vincent Reinshagen
Email address: vreinshagen@outlook.de (Vincent Reinshagen)
Contributions:
The authors would like to thank no institution for money donated to this project. Thank you sincerely.

```
## Residual standard error: 12.37 on 38 degrees of freedom
##   (1 observation deleted due to missingness)
## Multiple R-squared:  0.01976,    Adjusted R-squared:  -0.006041
## F-statistic: 0.7658 on 1 and 38 DF,  p-value: 0.387


##
## Call:
## lm(formula = commit$Total.bilateral.commitments...billion. ~
##     commit$EU.member)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -13.771  -5.472  -2.428  -0.461  71.367
##
## Coefficients:
##                   Estimate Std. Error t value Pr(>|t|)
## (Intercept)         13.774      4.331   3.180  0.00284 **
## commit$EU.member  -11.143      5.402  -2.063  0.04568 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 16.78 on 40 degrees of freedom
## Multiple R-squared:  0.09614,    Adjusted R-squared:  0.07354
## F-statistic: 4.254 on 1 and 40 DF,  p-value: 0.04568
```

The regression results indicate a significant decrease in both allocated and committed amounts when a country is an EU member. To explore potential reasons for this finding, the next step involves plotting data for the top donors.

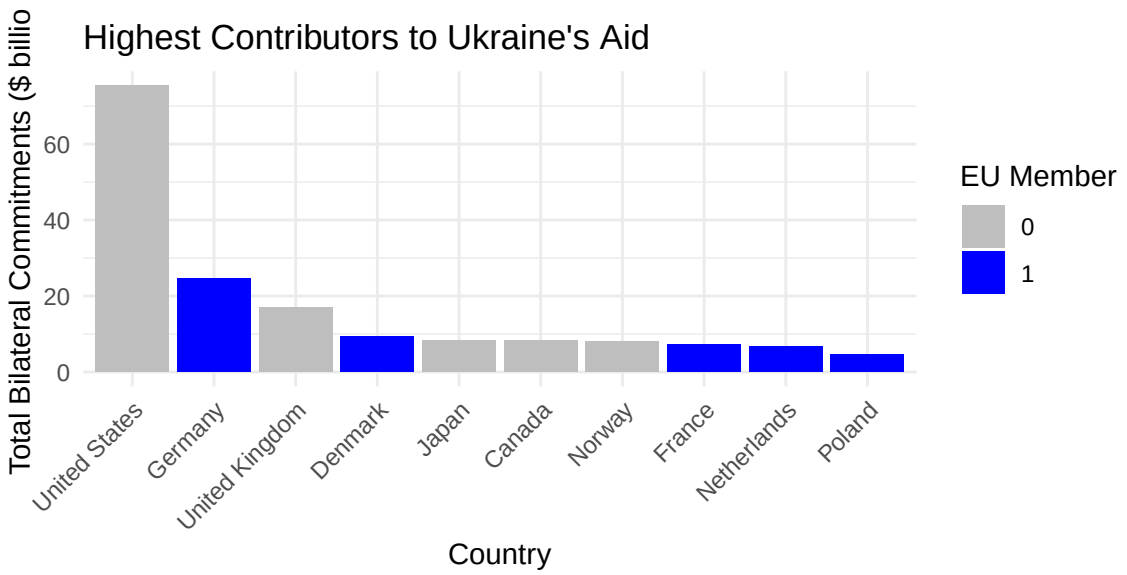

Figure 1.1: Largest contributors

The analysis reveals that the largest contributors by far are the USA and UK, both of which are non-EU members. This contrasts with the EU, which comprises many smaller countries, each unable to contribute substantial amounts individually. Consequently, being part of the EU appears to decrease the total amount given to Ukraine.