# Statistical Report

*Committee*

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## Contents

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## 0.1 The Human Freedom Index

"The Human Freedom Index presents the state of human freedom in the world based on a broad measure that encompasses personal, civil, and economic freedom."

The report is co-published by the Cato Institute, the Fraser Institute, and the Liberales Institut at the Friedrich Naumann Foundation for Freedom. For more details on the Human Freedom Index Project, see https://www.cato.org/human-freedom-index-new.

## 0.2 Project Topic

The Human Index freedom is constructed of 162 counties that combines economic freedom measurements with personal freedom measurements. The index aims to understand the degree of freedom people are able to enjoy classic civil liberties from the countries that were surveyed. We will investigate the correlations between personal and economic freedom to see if one can be a predictor for the other, and specifically examine the subcategories of the two indeces.

## 0.3 Personal Freedom

- Rule of Law (rol)
- Security and Safety (safety)
- Movement (movement)

- Religion (religion)
- Association, Assembly, and Civil Society (assembly)
- Expression and Information (expression)
- Identity and Relationships (relationships)

## 0.4 Economic Freedom

- Size of Government (govsize)
- Legal System and Property Rights (legalsystems)
- Access to Sound Money (money)
- Freedom to Trade Internationally (trade)
- Regulation of Credit, Labor, and Business (regulation)

## 0.5 Summary of Personal Freedom Index

The personal freedom sub-index is comprised of 34 numerical variables divided into six categories. The indicators are rated on a sale of 1 to 10, with 10 representing the most freedom.

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   2.167   6.025   6.932   6.985   8.142   9.399
```

## 0.6 Summary of Economic Freedom Index

The economic freedom sub-index is comprised of 42 numerical variables divided into five categories. The indicators are rated on a sale of 1 to 10, with 10 representing the most freedom.
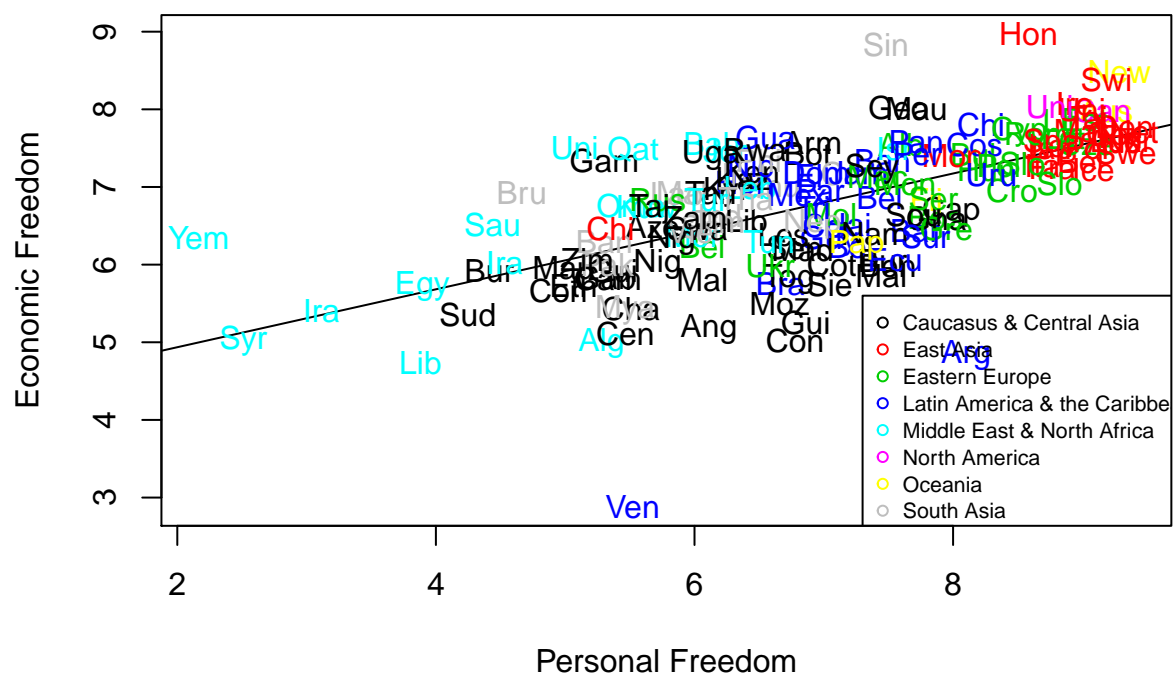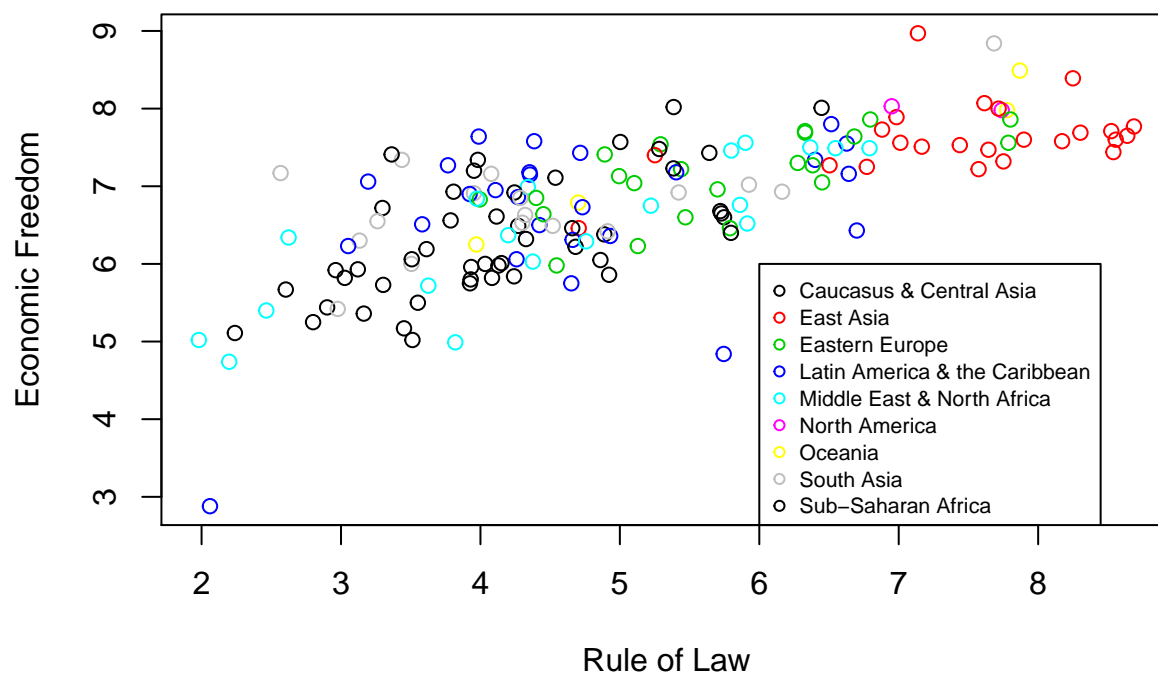
```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   2.880   6.260   6.905   6.795   7.468   8.970
```

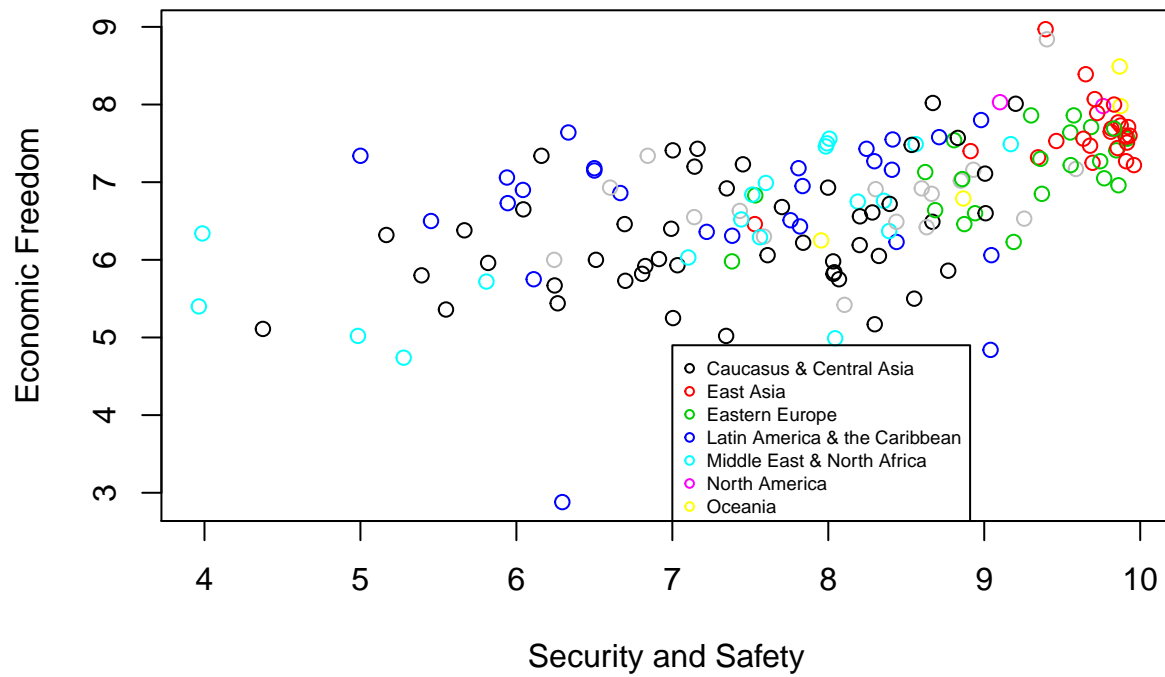## 0.7 Economic Freedom vs. Personal Freedom



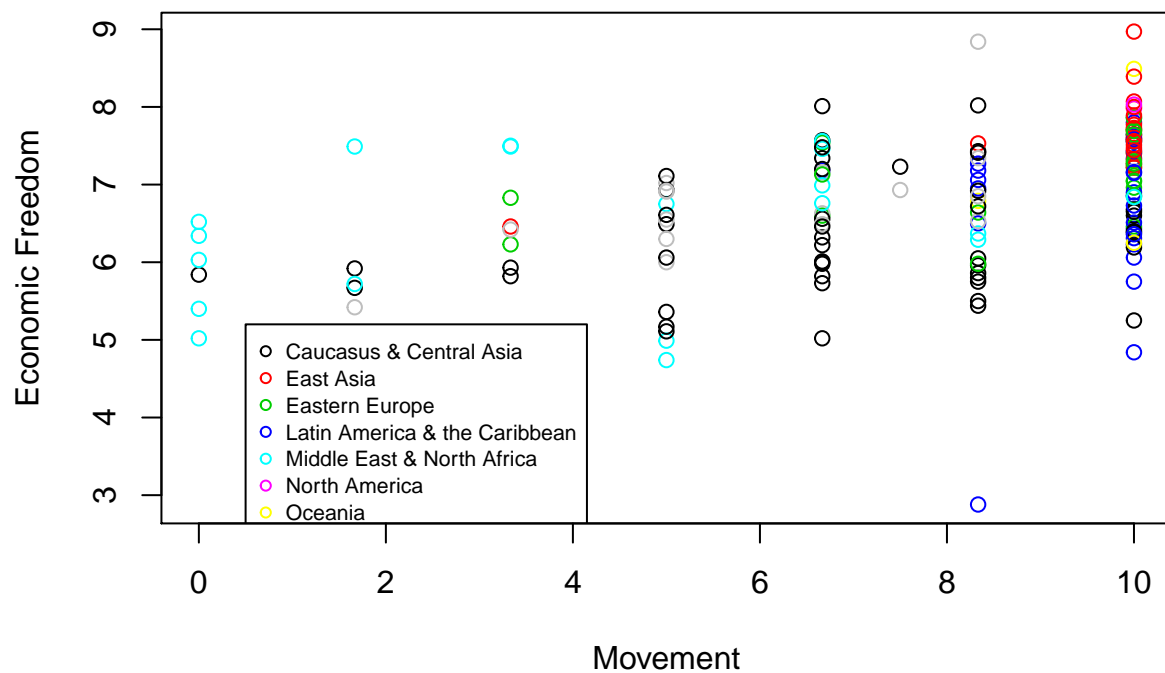There is a clear positive correlation between personal and economic freedom, with a correlation of 0.6271777.
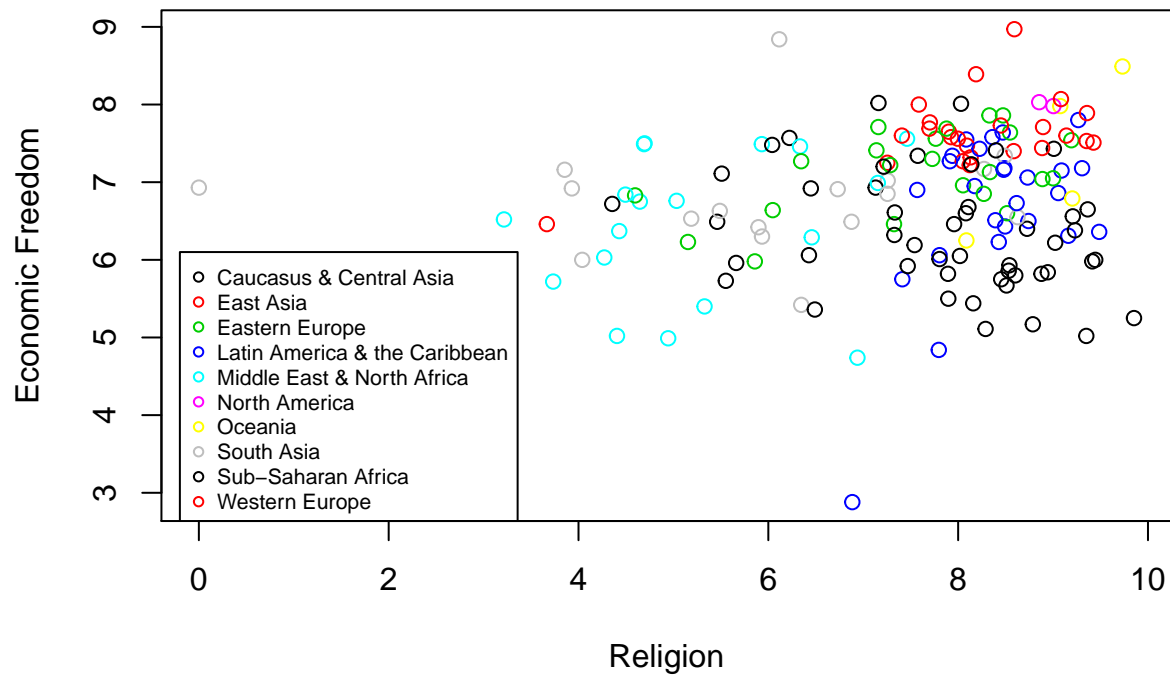
## 0.8 Economic Freedom vs. Rule of Law

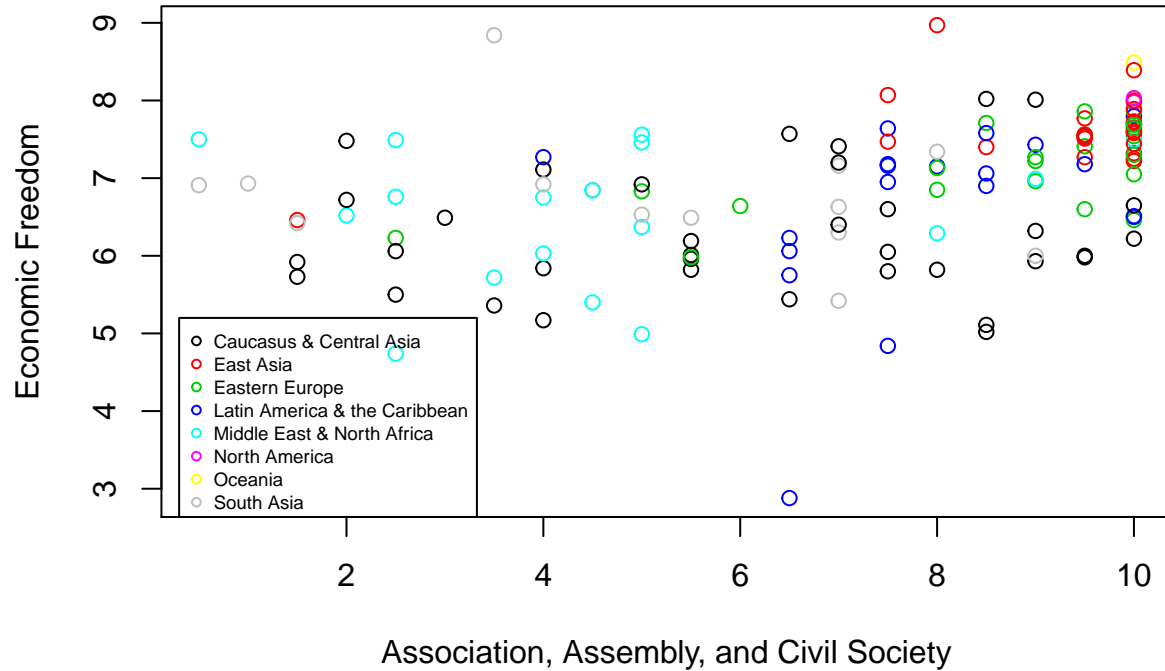## 0.9 Economic Freedom vs. Security and Safety
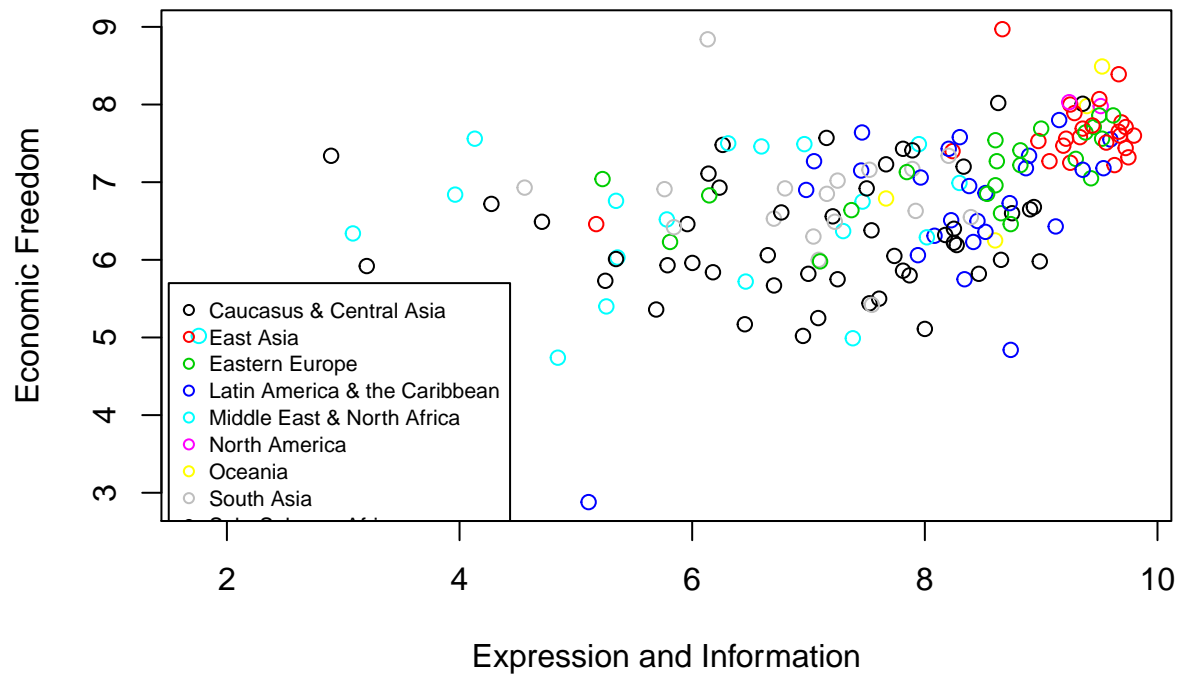


## 0.10 Economic Freedom vs. Movement

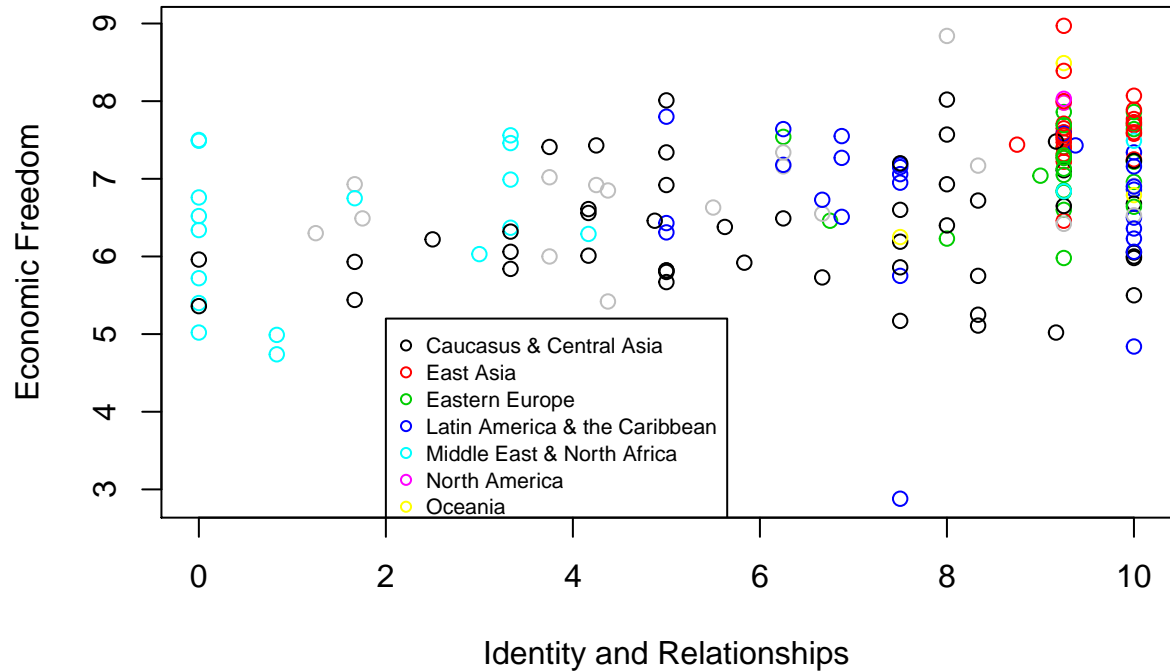## 0.11 Economic Freedom vs. Religion



## 0.12 Economic Freedom vs. Association, Assembly, and Civil Society

## 0.13 Economic Freedom vs. Expression and Information



## 0.14 Economic Freedom vs. Identity and Relationships



## 0.15 Multiple Regression of Economic Freedom and Sub-Categories of Personal Freedom

##

```
## Call:
## lm(formula = data$economicfreedom ~ data$rol + data$religion +
##     data$expression + data$safety + data$relationships + data$movement +
##     data$assembly)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -2.82288 -0.34787 -0.01219  0.37809  1.32904
##
## Coefficients:
##                     Estimate Std. Error t value Pr(>|t|)
## (Intercept)         4.039267   0.450908   8.958 3.32e-15 ***
## data$rol            0.301251   0.051946   5.799 4.92e-08 ***
## data$religion      -0.005481   0.046958  -0.117   0.9073
## data$expression    -0.008769   0.079106  -0.111   0.9119
## data$safety         0.121946   0.062657   1.946   0.0538 .
## data$relationships -0.006516   0.023991  -0.272   0.7864
## data$movement       0.044263   0.029082   1.522   0.1305
## data$assembly       0.005833   0.039250   0.149   0.8821
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.6266 on 128 degrees of freedom
##   (26 observations deleted due to missingness)
## Multiple R-squared:  0.5607, Adjusted R-squared:  0.5367
## F-statistic: 23.34 on 7 and 128 DF,  p-value: < 2.2e-16
```

## 0.16 Correlation Between Rule of Law and Sub-Categories of Personal Freedom

```
##      [,1]            [,2]
## [1,] "Gov Size"      "-0.328255694438231"
## [2,] "Legal Systems" "0.90449332414679"
## [3,] "Money"         "0.522755354935322"
## [4,] "Trade"         "0.67804130214078"
## [5,] "Regulation"    "0.685274991389977"
```

## 0.17 Summary of Overal Human Freedom Index

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   3.766   6.246   6.824   6.890   7.772   8.887
```

## 0.18 Conclusion

There is a significant relation between economic and personal freedom; one can be predicted using the other. From the summary of the regression, we were able to conclude that Rule of Law is the most signifant in the prediction of economic freedom. Therefore, we examined the correlation between the rule of law index and the subcategories of economic freedom.