main

Introduction

```
The dictionary meaning of "Democracy" defined by Encyclopedia Britannica is "literally ruled by the pe
Measuring democracy also has been contested that there still have ongoing debates on this subject. The
Following the introduction, this research paper will proceed by presenting previous studies to provide
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Prior studies and background about Democratization

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Democratization, according to "An Agenda for Democratization" by Boutros Boutros-Ghali, the formal Se
From his On Democracy, Robert Dahl suggests three conditions that are essential to attain democratic
Africa has also been the wave of political transitions from various types of dictatorships to more op
```

Research Question

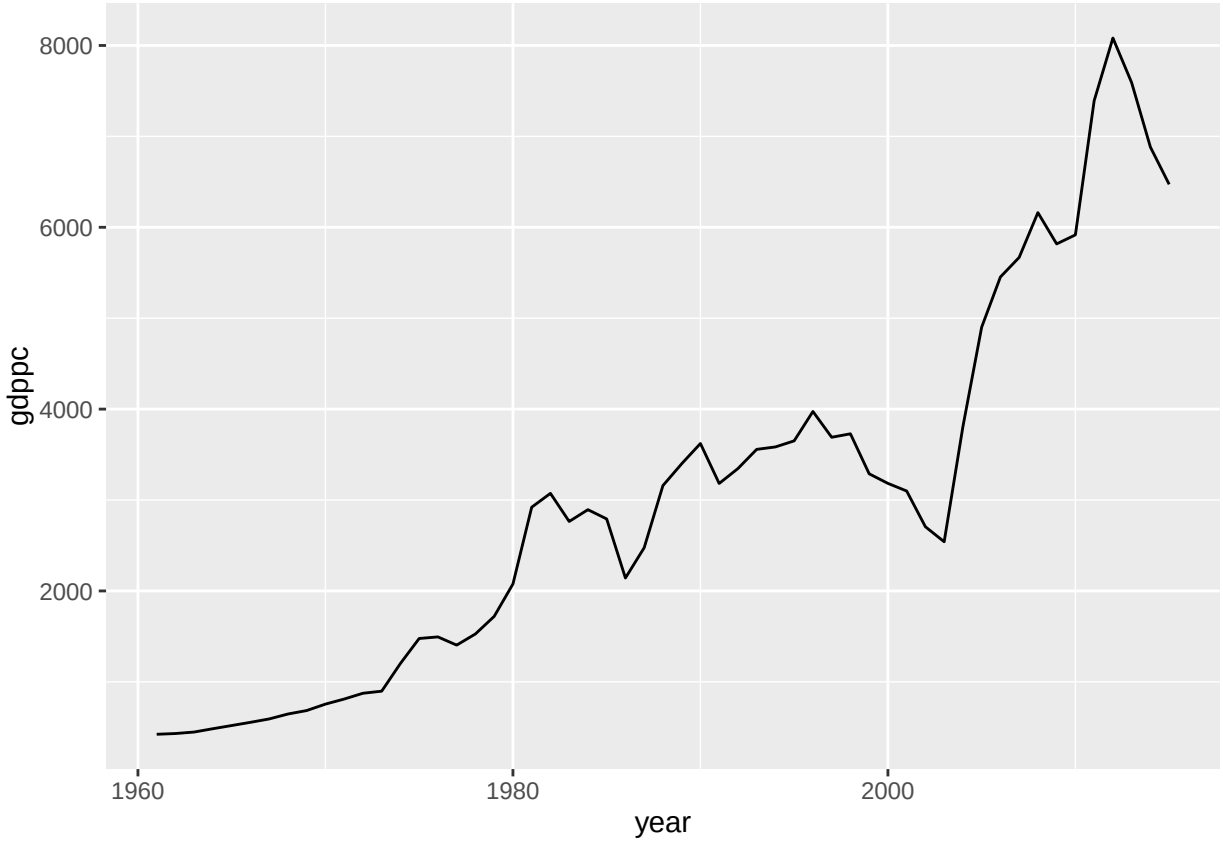
test

Data Availability

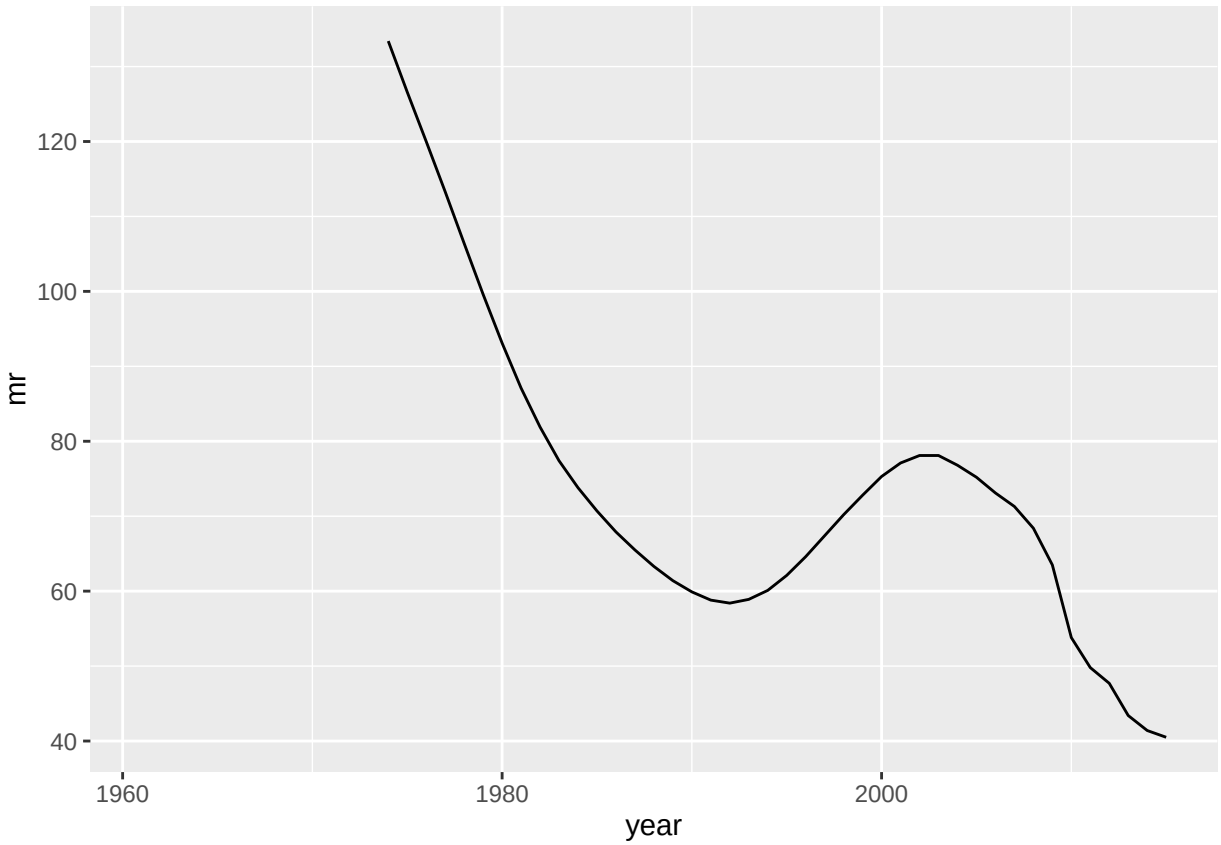
1) Measurement of Democratization 1-1) Polity 4 ?? ??http://www.systemicpeace.org/inscr/p4manualv2015.pdf 1-2)
2) Gross National Income Level
3) primary enrollment
4) Income Inequality
5) Gender Inequality in labor force
6) mortality rate under 5

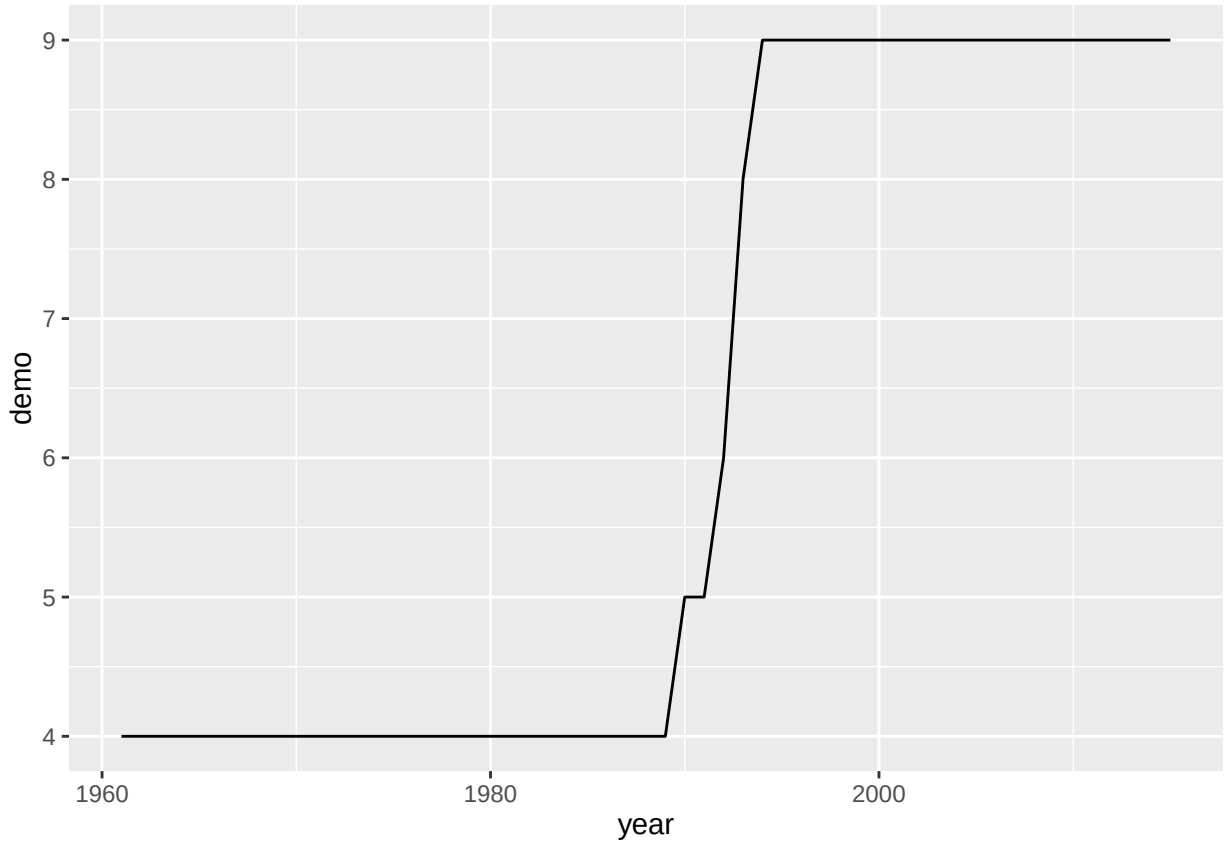
Data Cleaning

Data Analysis




```
## Warning: Removed 13 rows containing missing values (geom_path).
```


mr
120
100
80
60
40
1960
1980
2000
year


demo
9
8
7
6
5
4
1960
1980
2000
year

##

```
## Call:
## lm(formula = demo ~ gdppc + gini + pe + mr + gi, data = df)
##
## Residuals:
## ALL 6 residuals are 0: no residual degrees of freedom!
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  7.431e+01         NA      NA       NA
## gdppc       -6.454e-04         NA      NA       NA
## gini        -6.580e-02         NA      NA       NA
## pe           2.305e-07         NA      NA       NA
## mr          -2.099e-01         NA      NA       NA
## gi          -7.554e+01         NA      NA       NA
##
## Residual standard error: NaN on 0 degrees of freedom
##   (49 observations deleted due to missingness)
## Multiple R-squared:      1,  Adjusted R-squared:    NaN
## F-statistic:   NaN on 5 and 0 DF,  p-value: NA
```

```
##
## Call:
## lm(formula = gdppc ~ demo + pe + mr + gini, data = df)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -1083.16  -324.19    47.27   182.82  1161.78
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  2.794e+03  3.332e+03   0.839   0.4338
## demo         6.733e+02  2.060e+02   3.269   0.0171 *
## pe          -1.295e-03  4.089e-04  -3.166   0.0194 *
## mr          -3.533e+01  1.469e+01  -2.405   0.0530 .
## gini         1.334e+02  4.327e+01   3.083   0.0216 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 727 on 6 degrees of freedom
##   (44 observations deleted due to missingness)
## Multiple R-squared:  0.9035, Adjusted R-squared:  0.8392
## F-statistic: 14.04 on 4 and 6 DF,  p-value: 0.003334
```

```
##
## Call:
## lm(formula = demo ~ gdppc + pe + mr + gi, data = df)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -1.53909 -0.16387  0.03986  0.18542  0.82555
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  6.331e+01  2.563e+01   2.470   0.0295 *
## gdppc       -7.301e-04  3.935e-04  -1.855   0.0883 .
```

```
## pe           5.341e-08  4.925e-07   0.108   0.9154
## mr          -1.540e-01  1.040e-01  -1.480   0.1646
## gi          -6.803e+01  2.242e+01  -3.034   0.0104 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.6706 on 12 degrees of freedom
##   (38 observations deleted due to missingness)
## Multiple R-squared:  0.9372, Adjusted R-squared:  0.9162
## F-statistic: 44.74 on 4 and 12 DF,  p-value: 4.076e-07
```

```
##
## % Table created by stargazer v.5.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvar
## % Date and time: Thu, Dec 01, 2016 - 15:49:51
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{1}{c}{\textit{Dependent variable:}} \\
## \cline{2-2}
## \\[-1.8ex] & demo \\
## \hline \\[-1.8ex]
##  gdppc & $-$0.001$^{*}$ \\
##   & (0.0004) \\
##   & \\
##  pe & 0.00000 \\
##   & (0.00000) \\
##   & \\
##  mr & $-$0.154 \\
##   & (0.104) \\
##   & \\
##  gi & $-$68.027$^{**}$ \\
##   & (22.421) \\
##   & \\
##  Constant & 63.307$^{**}$ \\
##   & (25.627) \\
##   & \\
## \hline \\[-1.8ex]
## Observations & 17 \\
## R$^{2}$ & 0.937 \\
## Adjusted R$^{2}$ & 0.916 \\
## Residual Std. Error & 0.671 (df = 12) \\
## F Statistic & 44.745$^{***}$ (df = 4; 12) \\
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{1}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}
```

Discussion

gdppc suffered from endogeneity # Conclusion