Personal Project Analysis

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```
union <-read_csv("Union csv.csv")
```

```
##
## -- Column specification --------------------------------------------------------
## cols(
##   Year = col_double(),
##   one = col_double(),
##   two = col_double(),
##   three = col_double(),
##   four = col_double(),
##   five = col_double(),
##   fivepercent = col_double(),
##   midsixty = col_double(),
##   priv = col_double(),
##   pub = col_double(),
##   All = col_double()
## )
```

```
Year<-as.Date("Year", "%Y")
```

```
linear60 <-lm(midsixty ~ All, union)
summary(linear60)
```

```
##
## Call:
## lm(formula = midsixty ~ All, data = union)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -1.1421 -0.3226 -0.0942  0.3315  1.1235
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept) 39.96105    0.32664  122.34   <2e-16 ***
## All          0.47337    0.01871   25.31   <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.5487 on 41 degrees of freedom
## Multiple R-squared:  0.9398, Adjusted R-squared:  0.9384
## F-statistic: 640.4 on 1 and 41 DF,  p-value: < 2.2e-16
```

```
linearall <-lm(fivepercent ~ All, union)
summary(linearall)
```

```
##
## Call:
## lm(formula = fivepercent ~ All, data = union)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -1.5558 -0.5488  0.0148  0.4874  1.3037
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept) 28.05150    0.44646   62.83   <2e-16 ***
## All         -0.46130    0.02557  -18.04   <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.75 on 41 degrees of freedom
## Multiple R-squared:  0.8881, Adjusted R-squared:  0.8854
## F-statistic: 325.5 on 1 and 41 DF,  p-value: < 2.2e-16
```

```
linearpriv <-lm(midsixty ~ priv, union)
summary(linearpriv)
```

```
##
## Call:
## lm(formula = midsixty ~ priv, data = union)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -1.1500 -0.4111 -0.1182  0.3926  1.3925
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept) 42.87564    0.26076  164.43   <2e-16 ***
## priv         0.46426    0.02206   21.05   <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.651 on 41 degrees of freedom
## Multiple R-squared:  0.9153, Adjusted R-squared:  0.9132
## F-statistic: 443.1 on 1 and 41 DF,  p-value: < 2.2e-16
```

```
linearpriv1 <-lm(fivepercent ~ priv, union)
summary(linearpriv1)
```

```
##
## Call:
## lm(formula = fivepercent ~ priv, data = union)
##
```

```
## Residuals:
##     Min      1Q  Median      3Q     Max
## -1.8182 -0.6819  0.1216  0.5688  1.4023
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept) 25.20715    0.33180   75.97   <2e-16 ***
## priv        -0.45205    0.02806  -16.11   <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.8283 on 41 degrees of freedom
## Multiple R-squared:  0.8635, Adjusted R-squared:  0.8602
## F-statistic: 259.5 on 1 and 41 DF,  p-value: < 2.2e-16
```

```
linearpub <-lm(midsixty ~ pub, union)
summary(linearpub)
```

```
##
## Call:
## lm(formula = midsixty ~ pub, data = union)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -3.5865 -1.5514 -0.5638  1.9706  3.8803
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)  58.0652     9.1591   6.340 1.42e-07 ***
## pub          -0.2796     0.2530  -1.105    0.276
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 2.204 on 41 degrees of freedom
## Multiple R-squared:  0.02892,    Adjusted R-squared:  0.005235
## F-statistic: 1.221 on 1 and 41 DF,  p-value: 0.2756
```

```
linearpub1 <-lm(fivepercent ~ pub, union)
summary(linearpub1)
```

```
##
## Call:
## lm(formula = fivepercent ~ pub, data = union)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -3.6744 -2.1442  0.7509  1.7009  3.6957
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)   6.7527     9.0749   0.744    0.461
## pub           0.3736     0.2507   1.490    0.144
##
```

```
## Residual standard error: 2.184 on 41 degrees of freedom
## Multiple R-squared:  0.05137,    Adjusted R-squared:  0.02823
## F-statistic:  2.22 on 1 and 41 DF,  p-value: 0.1439
```

```
```