## JBM045 Econometrics Assignment

## Youssef Bouassria, 1377221

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```
knitr::opts_chunk$set(echo = TRUE)
for(pkg in c("AER", "lmtest", "Hmisc", "dplyr", "tibble", "ivreg", "modelsummary",
"summarytools")){
  if(!require(pkg, character.only = TRUE))
    install.packages(pkg, repos = 'http://cloud.r-project.org')
    library(pkg, character.only = TRUE)
  }
}
## Loading required package: AER
## Warning: package 'AER' was built under R version 4.2.1
## Loading required package: car
## Warning: package 'car' was built under R version 4.2.1
## Loading required package: carData
## Warning: package 'carData' was built under R version 4.2.1
## Loading required package: lmtest
## Warning: package 'lmtest' was built under R version 4.2.1
## Loading required package: zoo
## Warning: package 'zoo' was built under R version 4.2.1
## Attaching package: 'zoo'
## The following objects are masked from 'package:base':
##
##
       as.Date, as.Date.numeric
## Loading required package: sandwich
```

```
## Warning: package 'sandwich' was built under R version 4.2.1
## Loading required package: survival
## Loading required package: Hmisc
## Warning: package 'Hmisc' was built under R version 4.2.1
## Loading required package: lattice
## Loading required package: Formula
## Loading required package: ggplot2
## Attaching package: 'Hmisc'
## The following objects are masked from 'package:base':
##
       format.pval, units
## Loading required package: dplyr
##
## Attaching package: 'dplyr'
## The following objects are masked from 'package:Hmisc':
##
##
       src, summarize
## The following object is masked from 'package:car':
##
##
       recode
## The following objects are masked from 'package:stats':
##
       filter, lag
## The following objects are masked from 'package:base':
##
       intersect, setdiff, setequal, union
##
## Loading required package: tibble
## Loading required package: ivreg
## Warning: package 'ivreg' was built under R version 4.2.1
```

```
## Registered S3 methods overwritten by 'ivreg':
##
    method
                         from
##
     anova.ivreg
                         AER
##
    hatvalues.ivreg
                         AER
##
     model.matrix.ivreg AER
##
    predict.ivreg
                         AER
##
    print.ivreg
##
     print.summary.ivreg AER
##
     summary.ivreg
##
     terms.ivreg
                         AER
##
     update.ivreg
                         AER
                         AER
##
     vcov.ivreg
##
## Attaching package: 'ivreg'
## The following objects are masked from 'package:AER':
##
##
       ivreg, ivreg.fit
## Loading required package: modelsummary
## Warning: package 'modelsummary' was built under R version 4.2.1
## Attaching package: 'modelsummary'
## The following object is masked from 'package:Hmisc':
##
##
       Mean
## Loading required package: summarytools
## Warning: package 'summarytools' was built under R version 4.2.1
##
## Attaching package: 'summarytools'
## The following object is masked from 'package:tibble':
##
##
       view
## The following objects are masked from 'package:Hmisc':
##
##
       label, label<-
library("glue")
library('skimr')
```

```
library('psych')
## Warning: package 'psych' was built under R version 4.2.1
##
## Attaching package: 'psych'
## The following object is masked from 'package:modelsummary':
##
##
       SD
## The following object is masked from 'package:Hmisc':
##
##
       describe
## The following objects are masked from 'package:ggplot2':
##
##
       %+%, alpha
## The following object is masked from 'package:car':
##
       logit
library('ggplot2')
fertility = read.csv("fertility.csv")
```

## R Markdown