PPOL 670 Project

Female Labor Force Participation

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12/14/2019

Introduction

The relationship between female labor force particiaption and economic growth is hypothesized to be U-shaped

```
wb_data <- wb(indicator = c("SL.TLF.CACT.FE.ZS","NY.GDP.PCAP.CD",
                            "SE.ADT.LITR.FE.ZS","SP.DYN.TFRT.IN",
                            "SG.TIM.UWRK.FE", "SE.COM.DURS",
                            "SE.SEC.CUAT.LO.FE.ZS",
                            "SE.TER.CUAT.BA.FE.ZS",
                            "SE.XPD.TOTL.GB.ZS"),
              startdate = 2005,
              enddate = 2018,
              country = "countries_only") %>% as_tibble()


wb_data <- wb_data %>% mutate(year=as.numeric(date)) %>%
  select(iso3c,year,value,indicatorID,country) %>%
  spread(key = indicatorID, value = "value")


wb_data <- wb_data %>% select(country=country,ccode=iso3c,year=year,
```

```
                              f_lfpr=SL.TLF.CACT.FE.ZS,
                              gdp_pcap=NY.GDP.PCAP.CD,
                              f_literacy_rate=SE.ADT.LITR.FE.ZS,
                              com_edu=SE.COM.DURS,
                              f_lower_sec_edu=SE.SEC.CUAT.LO.FE.ZS,
                              f_ba_edu=SE.TER.CUAT.BA.FE.ZS,
                              gov_exp_edu=SE.XPD.TOTL.GB.ZS,
                              f_ptime_chores=SG.TIM.UWRK.FE,
                              fertility_rate=SP.DYN.TFRT.IN)

wb_data <- wb_data %>% filter(!is.na(f_lfpr))

#split data into training and test data set
train_data <- wb_data %>% filter(year < 2016)
test_data <- wb_data %>% filter(year > 2015)
```

```
glimpse(train_data)
```

```
## Observations: 2,057
## Variables: 12
## $ country         <chr> "Afghanistan", "Afghanistan", "Afghanistan", "...
## $ ccode           <chr> "AFG", "AFG", "AFG", "AFG", "AFG", "AFG", "AFG...
## $ year            <dbl> 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012...
## $ f_lfpr          <dbl> 44.025, 43.597, 43.192, 42.873, 42.709, 42.735...
## $ gdp_pcap        <dbl> 242.0314, 263.7337, 359.6935, 364.6605, 438.07...
## $ f_literacy_rate <dbl> NA, NA, NA, NA, NA, NA, 17.61206, NA, NA, NA, ...
## $ com_edu         <dbl> 6, 6, 6, 9, 9, 9, 9, 9, 9, 9, 9, 4, 4, 6, 6, 6...
## $ f_lower_sec_edu <dbl> NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA...
```

```
## $ f_ba_edu         <dbl> NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA...
## $ gov_exp_edu      <dbl> NA, NA, NA, NA, NA, 17.06756, 16.04843, 10.356...
## $ f_ptime_chores   <dbl> NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA, NA...
## $ fertility_rate   <dbl> 6.875, 6.722, 6.555, 6.373, 6.180, 5.977, 5.77...
```