# ETF5200 Applied time series econometrics

Project 2

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## Contents



# Part I

Personal capita consumption and income data are more likely to be inter-dependent dynamically, therefore vector autoregressive model (VAR) will be used to study their behavior in this project.

## Question 1

First we want to estimate the intercept vector and the coefficient matrices for the VAR(2) model. The time plots of these two series are shown in figure 1. We can see the increasing time trend clearly.

```
##
## VAR Estimation Results:
## ========================
##
## Estimated coefficients for equation Consumption:
## ================================================
## Call:
## Consumption = Consumption.l1 + Income.l1 + Consumption.l2 + Income.l2 + const + trend
##
## Consumption.l1      Income.l1 Consumption.l2      Income.l2          const
##    1.136022350    0.093369182   -0.138377638   -0.102066897    0.099878535
##          trend
##    0.001649501
##
##
## Estimated coefficients for equation Income:
## ===========================================
## Call:
```

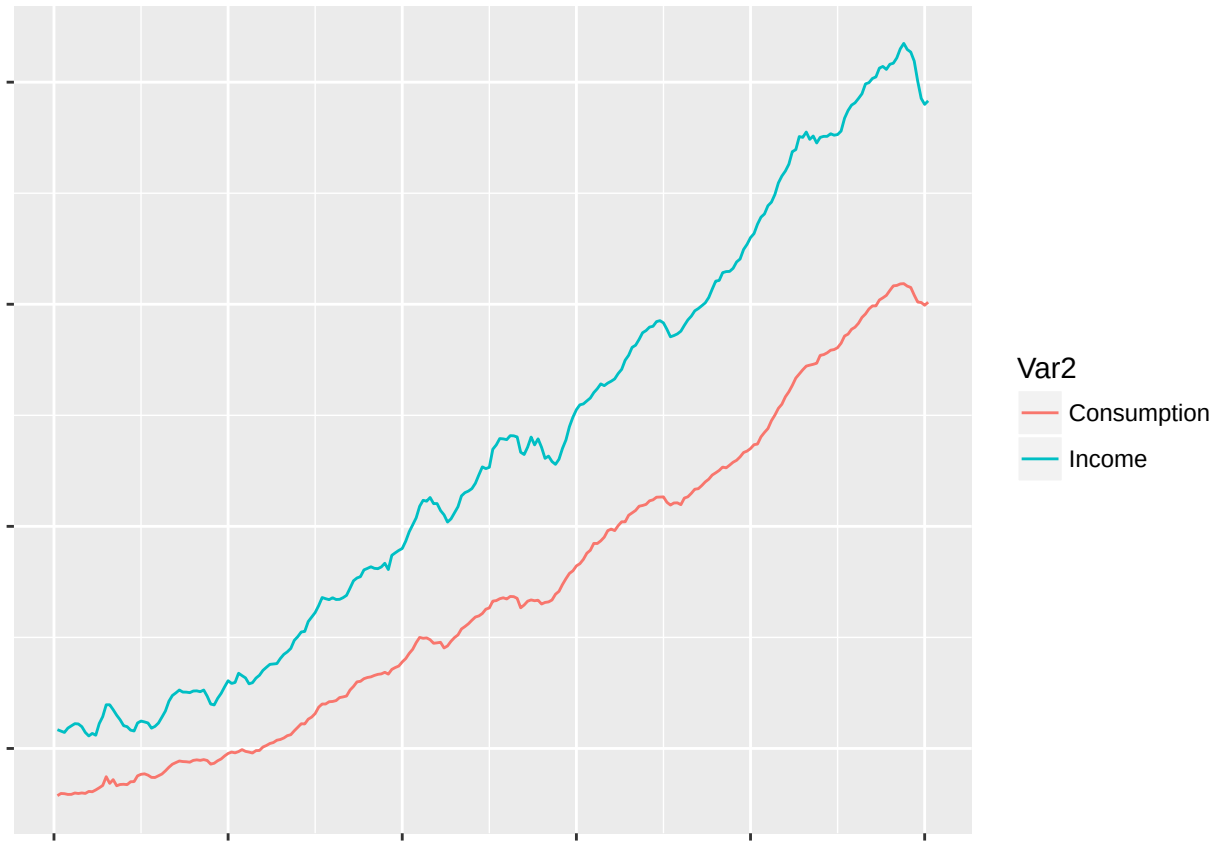


Figure 1: Time plots of personal capita consumption and income shows clear trend.

```
## Income = Consumption.l1 + Income.l1 + Consumption.l2 + Income.l2 + const + trend
##
## Consumption.l1      Income.l1 Consumption.l2      Income.l2          const
##    0.799665253    1.113185505   -0.739028457   -0.185013573    0.211463502
##          trend
##    0.003618762
```

```
##             Consumption.l1  Income.l1
## Consumption      1.1360223 0.09336918
## Income           0.7996653 1.11318550
```

```
##             Consumption.l2  Income.l2
## Consumption     -0.1383776 -0.1020669
## Income          -0.7390285 -0.1850136
```