

# Assignment 2

Shuofan Zhang 27886913

## Question 1

$c_t$  is the logarithm of the per-capital consumption expenditure,  $i_t$  is the logarithm of the per-capital disposable income,  $p_t$  is the logarithm of GDP,  $r_t$  is the real interest rate.

All numbers are rounded to four decimal places.

Table 1: OLS estimates for each series

series	variance	alpha	beta	gamma
ct	0.0001	0.0743	0.0001	-0.0091
p.value		(0.4646)	(0.5941)	(0.5266)
it	0.0001	0.0873	0.0001	-0.0107
p.value		(0.3252)	(0.487)	(0.3875)
pt	0.0001	0.108	0.0001	-0.013
p.value		(0.3119)	(0.45)	(0.3602)
rt	0.8986	0.2328	-0.0007	-0.0835
p.value		(0.1251)	(0.5662)	(0.0059)

## Question 2

```
## Warning in kpss.test(data, null = "Trend"): p-value smaller than printed p-  
## value
```

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```

Table 2: Three unit root tests

	ADF	ADF	PP	PP	KPSS	KPSS
	conclusion	p.value	conclusion	p.value	conclusion	p.value
ct	trend and unit root	0.1	trend and unit root	0.21	trend and unit root	0.01
it	trend stationary	0.02	trend stationary	0.03	trend and unit root	0.01
pt	trend and unit root	0.32	trend and unit root	0.32	trend and unit root	0.01
rt	unit root	0.09	unit root	0.11	stationary	0.08

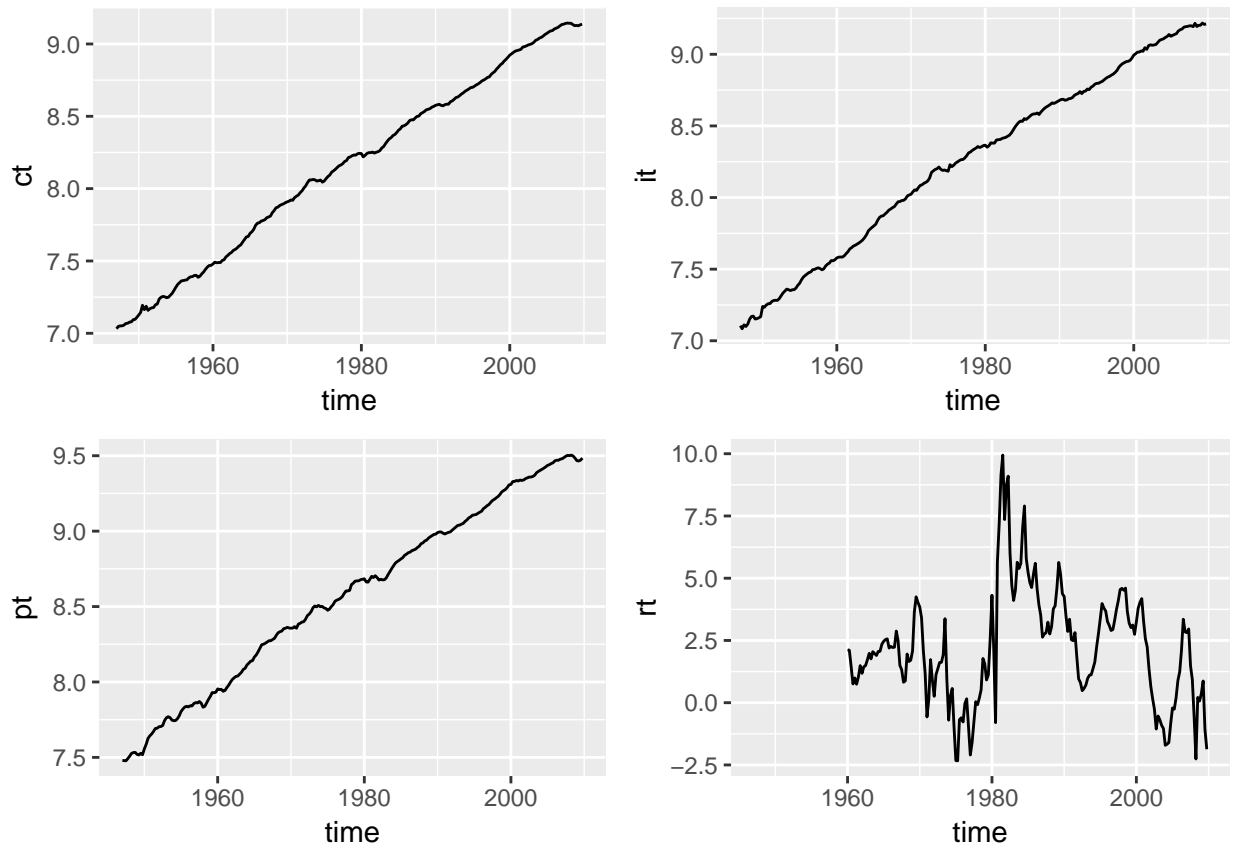


Figure 1: Time plot of four series