María González Cabrera

PS2 Quantitative Macroeconomics – Extension

For this extension of the Problem Set we follow the procedure used in the paper 'Labor Share Decline and Intellectual Property Products Capital'.

Therefore, the first step is to calculate the unambiguous capital income (UCI), which is given by the following formula:

UCI = rental income + corporate profits + net interest + current surplus government enterprises

If we add up depreciation and compensation of employees to the UCI variable, we end up with the Unambiguous income (UI).

UI = UCI + depreciation + compensation of employees

Now, what we want to do is calculating the proportion of unambiguous capital income in the unambiguous income. This proportion called theta is calculated in the following way:

Theta = (UCI + depreciation)/UI

But the income is more than the one that we have calculated previously, so there exist some items that added up create the ambiguous income (AI):

AI = Proprietors income + taxes on production – subsidies + business current transfers payments

(if we had data about the statistical discrepancy, it would be added in this calculation).

Following the assumption about the proportion of ambiguous capital income into ambiguous income is theta (that is, this proportion is the same for ambiguous and unambiguous parts), we can calculate the ambiguous capital income (ACI) in the following way:

ACI = theta*AI

Therefore, the total capital income (CI) and the total income (Y) would be as follows:

CI = UCI + ACI + depreciation

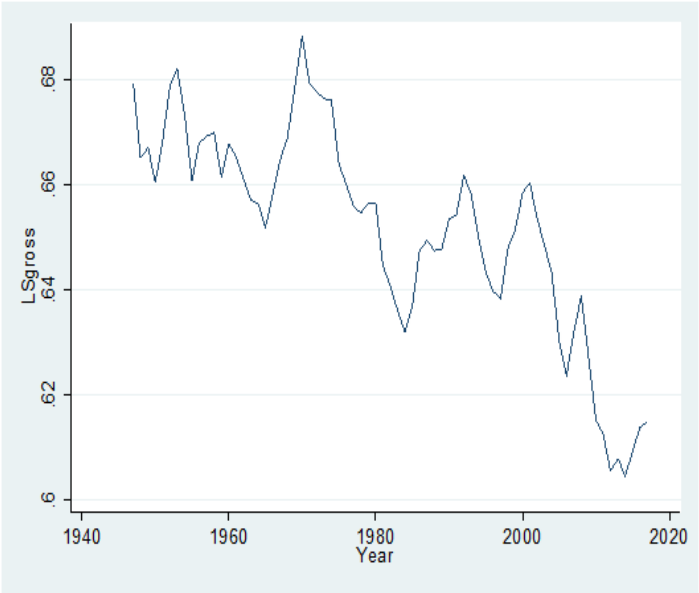
Y = UI + AI

Given all this data, we can compute the gross labor share:

LSgross = 1 – (CI/Y)

And the result we have obtained is presented in the following graph. What we can see if we take into account the results obtained in the previous part of this problem set, is that the negative trend of the gross labor share is more pronounced.

An explanation for this fact is that here we are taking into account the depreciation, whereas in the previous results not, so we were misspecified/overspecified the labor share.


LSgross
.6
.62
.64
.66
.68
1940
1960
1980
2000
2020
Year