The burden of the government debt in future generation

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Burden of Internal Public Debt

- Consider the following situation.
- The government issues the government bond. It was bought by the domestic consumers at year 2000. The government promises that the government redeems the government debt at the year at January 1st, 2020.
- At the January 1st 2020, the government imposes an additional tax on domestic consumers and uses the collected tax revenue to redeem the existing government bond.

Burden of internal debt:the old argument

- At year 2020, the government imposes a tax. Thus, consumer's disposable income decreases due to this tax. However, this collected tax revenue will be paid back to domestic consumers. Thus, in net, the consumers will not lose anything.
- If we define the burden of the debt in future period as the decrease of the available resources at the future period, there will no decrease of the resource at the year 2020 since the amount of tax that the consumers pay will be sent back to consumer when the government redempts its debt.

- In this sense, there is no burden at the generation who is alive at the year 2020 when the government debt is internal. This is the old type logic of the government debt arguing that the internal debt is similar to the situation where the husband is borrowing from a wife. In net, the resource available in future period for this household does not decrease.
- On the other hand, when the government debt is external, the domestic consumers at the future period will bear the burden because the collected tax revenue will go to foreign investors.

Counter argument

- Focusing on the direction where the collected tax revenue goes (whether it goes to domestic consumers or foreign investors) is misleading.
- Suppose that at the December of 31st in year 2019, the domestic consumers sell the government debt, which they initially owned, to foreign investors.
- Then, at January 1st of 2020, the government imposes a tax to domestic consumers, collects the tax revenue and redeem the government debt.

- If you look at the monetary flow at the year 2020, it looks like that the money goes to foreign investor. This money is just the compensation of the money that the foreign investor paid at December 31 of 2019.
- At the December of 2019, domestic consumer receives the almost the same amount of the income that they would have received if they keep holding the government bond until January of 2020.
- Thus, although the government debt is external at 2020, the money essentially flows into domestic consumers.

Counter argument (2)

- In the above case, the timing that domestic residents sell the government bond to foreign investor is December 31, 2019.
- However, the timing of selling the government bond to foreign investor can be very early. For example 2001.
- In this case, of course, the domestic investor will receive less. The price of the government bond is
  $\frac{D}{(1+r)^n}$
  where D is the price that the government promises to pay at the maturity date and n is the remaining period until the maturity date.
- But the domestic investor can deposit this money to the bank account and can get interest income. At the year 2020, they will receive the same amount of money from depositing.
- In this case, the government debt is almost all period, external and the money goes to the outside of the country at the year 2020. However, domestic consumer receives the same present value of cash at the year 2001 from foreign investors.

Counter argument (3)

- On the other hand, we can think a completely opposite case where initially the foreign investor buy the government bond at the year 2000. But the foreign investor sell this government bond to the domestic consumer at December 31, 2019.
- In this case, although the money flows into the domestic consumers at year 2020. But this inflow is just the compensation of the domestic consumers' purchase of the government bond at December 31 of 2019. Thus, essentially, the money is outflowing to foreign investors at 2020.

Logic of Bowen, Davis and Kopf

- A paper by Bowen, Davis and Kopf shows an important logical point regarding on the burden of the government debt.
- Consider a case where at year 2000, the governments issue the government bond promising to redeem \$1000 at year 2020. Assume that the interest rate is 5%. Then, the price of this government bond at year 2000 is

$$\frac{1000}{(1+0.05)^{20}} = 376.89$$

- The important point that BDK showed is that \$1000 that bond holders receives at year 2020 is the compensation of the purchase of the government bond, \$376 dollar as the value in year 2001.
- Thus, the following argument is wrong: that there is no burden to domestic consumer since \$1000 dollar tax is imposed on domestic consumer in 2020 and this \$1000 dollar is paid to the domestic consumers.
- The \$1000 dollar the domestic consumer will receive is the compensation for domestic consumer's purchase at year 2000, \$376 dollar.

Summary

- Focusing on the monetary flow at the time of maturity date of government bond is completely irrelevant.
- Distinguishing external debt and internal debt does is irrelevant.
- The amount of money that the bond holder receives from the government at the maturity date is just the compensation for the payment that a bond holder paid when they purchase.
- Thus, arguing that the collected tax is balanced by the money as the matured government bond does not make sense.
- Issuing the government bond, whether it is internal or external, causes a burden for future generation in the sense that the life time resource of the future generation goes down.