University of Chicago
Booth School of Business

Business 33040 | John Huizinga
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OLD EXAM PROBLEMS FOR SECTION I

1. The April 13/14 2013 issue of the *Financial Times* ran an editorial entitled "Obama's budget" in which the following appeared: "Most significantly, Mr. Obama is offering to index Social Security to a lower inflation measure ….".

   This statement refers to Mr. Obama's support for having future government transfer payments rise at the rate of inflation measured by the changes in the deflator for the consumption component of GDP and not at the rate of inflation measured by the changes in the CPI.

   a) This change is estimated to reduce the U.S. government budget deficit because CPI inflation tends to be higher than inflation calculated using the deflator. (See table below for evidence in 2012.) Why is that? In other words, why is the CPI measure of inflation the higher inflation measure and the consumption deflator measure of inflation the lower inflation measure?

	2012			
Inflation Indicators	**Q1**	**Q2**	**Q3**	**Q4**
PCE Deflator	2.4%	1.6%	1.5%	1.6%
CPI	2.8%	1.9%	1.7%	1.9%

   Notes: Changes are year over year at an annual rate
   PCE stand for Personal Consumption Expenditure

   b) A higher inflation measure is not necessarily a less accurate inflation measure. Putting aside which measure of inflation is higher, identify whether the CPI measure of inflation or the consumption deflator measure of inflation is more accurate, and explain why.

2. The October 11, 2014 issue of the *Financial Times* contained an editorial entitled "Germany needs to fix its economic model". The article contains the following analysis: "Investment has fallen 5 percentage points as a share of GDP since 2000, and labor productivity per hour has grown less than 1 per cent a year since 2005. Looked at another way, Germany's current account surplus is a sign of weakness, not of strength, reflecting the fact that savings are not being invested at home."

    a) Give two definitions of the current account.

    b) Explain what the sectoral balance equation is. Use the sectoral balance equation to determine if a current account surplus indicates that "savings are not being invested at home".

3. The October 17th – 23rd, 2015 issue of *The Economist* contained an article entitled "The other deficit: How worrying is Britain's large current-account deficit?"

    a) The article states, "The current account is often misunderstood. It comprises three things. First, the difference between exports and imports of goods and services. Second, the gap between what British investors earn on foreign investments and what foreigners earn on their investments in Britain. And third, transfers such as money sent to and from Britain by migrant workers."

       Is this definition of the current account correct? If not, what changes need to be made to make it correct? Does the fact that Britain is running a current account deficit tell you whether British GDP is bigger or smaller than British GNP?

    b) The article also states, "To finance its current-account deficit, Britain has sold assets to foreigners, from chocolate factories to posh London homes. It has also taken on more debt."

       Why does Britain have to sell assets and/or take on more debt when it runs a current account deficit?

3. c) The article also states, “No big developed country has a bigger current-account deficit as a share of GDP. In absolute terms Britain has the world’s second-largest deficit, behind only the America. Is this a problem?”

As part of its attempt to answer this question the article reports, “Net foreign assets, a measure of the value of assets owned abroad minus the value of domestic assets owned by foreigners, are worth around 35% of GDP,. . .”.

Using the concepts of stocks and flows described in class, explain how a country’s current account deficit and its net foreign assets are related. Explain how the net foreign assets of “35% of GDP” figure given in the article could be relevant for answering the question of whether Britain’s current account deficit is a problem.

ANSWERS

1. a) The CPI will usually deliver a higher inflation rate because it is a fixed weight index, while the deflator for consumption is a variable weight index. That is, the CPI will weight the inflation rates for individual goods by how important those goods were in the base year, while the consumption deflator weights the inflation rate by how important those goods are in the current year. So long as households substitute away from goods whose relative price increases, the CPI will weight high inflation goods more heavily than the consumption deflator.

   Aside from the difference in the way the CPI and PCE deflator weight inflation rates for individual goods, there is the issue of which goods are included. Since household purchases of new residential construction is considered Investment instead of Consumption, changes in this price is not in the PCE deflator measure of inflation. This could make CPI inflation either higher or lower the PCE deflator inflation.

   b) Putting aside the omission of new house prices in the PCE deflator, the inflation rate measured by the consumption deflator is not just lower than CPI inflation, it is also more accurate. It is more accurate because the weights the PCE deflator assigns to the inflation rates for individual goods are based on how important the good is in the current economy, which is clearly more appropriate than using weights based on how important the goods were in some previous year, which is what inflation based on the CPI does.

2. a) The current account is net exports plus net factor payments minus net international transfers. It is also the difference between GNP and total spending of domestic residents plus net international transfers, i.e. CA = GNP – (C + I + G + TRPF + TRGF).

2. b) The sectoral balance equation states $S^P = I + BD + CA$.

When a country is running a current account surplus, $CA > 0$ and the sectoral balance equation implies $S^P > I + BD$. This is equivalent to $S^N > I$ when all government spending is consumption (i.e. none is investment) so that $S^G = -BD$.

Hence, if savings is interpreted to mean national savings and all government spending is consumption then a current account surplus means "not all national savings are being invested at home". However, in these circumstance a current account surplus can occur when "almost all national savings are being invested at home", e.g. $S^N = 10$, $I = 9$ and $CA = 1$.

If savings is interpreted as private saving, then it is possible to have all savings being invested at home and still have a current account surplus. All that is required is for the government to run a budget surplus, e.g. $S^P = I = 10$, CA 2, BD = -2.

3. a) The current account is net exports plus net factor payments minus net international transfers. What the definition from The Economist leaves out is the labor income part of net factor payments, i.e. labor income earned by British residents abroad minus labor income earned by non-British residents in the Britain.

The fact that Britain is running a current account deficit does not tell one whether British GDP is bigger or smaller than British GNP. GNP = GDP + Net Factor Payments. Because net factor payments are one of three components of the current account, it is possible for Britain to have a current account deficit and at the same time have Net Factor Payments be either positive or negative.

b) A current account deficit means a country is spending more than its income. To spend more than one's income means a reduction of assets or an increase in liabilities.

c) The current account deficit is a flow. A country's net foreign assets are a stock. The current account deficit determines by how much, ignoring any capital gains or losses, a country's net foreign assets are declining.

The "35% of GDP" figure could be relevant for answering whether Britain's current account deficit is a problem because it states the Britain's excess of spending over income is occurring at time when the country is a net creditor to the world rather than a net debtor. Spending in excess of one's income when there is 35% of one year's worth of income "in the bank" would seem to be less of a problem than spending in excess of one's income when a country is already in debt by 35% of one year's worth of income. (Admittedly income would be better measured by GNP than GDP, but the two are likely close to the same thing.)