International Economics
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Problem Set 5 - International Accounting

Exercise 1: **The Balance of Payment (I)**

Explain how each of the following transactions generates two entries (A Credit and a Debit) in the German BoP accounts, and describe *how* each entry would be classified.

a. **A German investor buys a share of a company in Ukraine, paying by writing a check in an account with a Luxembourg bank.**

   Solution:

   The purchase of shares $\rightarrow$ Debit in the German Financial Account (FA). It is compensated by a credit on the FA, as German claims on Lukembourg fall by the amount exchanged. This is a trade involving two foreign assets.

b. **Another German investor buys a share of Serbian Stock Company, paying the seller with a check on a German Bank.**

   Solution:

   The purchase of shares leads again to a debit in the FA. The corresponding credit in this case depends on the course of action: it might occur that the Serbian seller deposits the German check in his Serbian bank and that bank lends the money to a Serbian importer (in which case the credit will be in the German current account) or to an individual or corporation that purchases a German asset (in which case the credit will be in the German financial account). Ultimately, there will be some action taken by the bank, which might result in a credit in the German balance of payments.

c. **The Ukranian government carries out an official foreign exchange intervention in which it uses Euros held by a German Bank to buy Ukranians Hryvnias from its citizens.**

   Solution:

   The Ukranian government sells German financial assets held in Germany. This leads to a Debit in the German FA. Depending on the use made by Ukranian citizens, it might result in a Current Account Credit (if they use the Euros to buy German Goods) of a Financial Account Credit (if they use it to buy German Assets)

d. **A tourist from Bielefeld buys a meal at an exclusive (and expensive) restaurant in Kiev, paying with a traveler's check.**

Solution:

Assuming the Traveler's check to use a checking account in Ukraine (even if it is a German Company), than the payment represents a debit in the German Current Account. As the company has to sell assets to pay for the meal, it will generate a credit in the German Financial Account.

e. **A German Brewer contributes a barrel of beer for a charity event in Lille.**

Solution:

Nothing is recorded, since no market transaction accurred.

f. **A German-owned factory in Mongolia uses local revenues to buy additional machinery.**

Solution:

This is an offshore operation that leaves no record on the German BoP.

Exercise 2: **The Balance of Payments (II)**

Suppose that during the year 2019, all of the international transactions of Germany were those listed below. Enter them into the country's balance of payments accounts below, identifying each with its ID (the index to which it appears in the list).

a. A German corporation sells a shipment of hot gas to France, accepting as payment 750 Euro worth of shares in a Chinese laundry in Paris.

b. A group of German children collects 140 Euro worth of canned vegetables which they send to a group of undernourished fashion models in New York City.

c. A German father orders Ned Gramlich's book on Benefit-Cost Analysis as a birthday gift for his 12-year old daughter, charging it to his Visa card issued by Citibank in New York. The price of the book is 0.15 Euro.

d. The German president buys an Exocet missile from a French firm for 3,000,000 Euro, promising that the next administration will pay for it. She then contributes the missile to the government of an unnamed country as "humanitarian aid."

e. Russ Barens, a wealthy German businessperson, withdraws 10,000,000 Dollars from his american bank account, exchanges it for 2,340,000 Euro in the foreign exchange market, and deposits the Euros into his campaign fund where they are used to purchase German treasury bills from a resident of Hong Kong.

f. Karenthian Hellmann, daughter of Susan, is paid royalties of 1,740 Euro on sales of a book that she had previously ghost-written in the name of the family cat and published with a Japanese publisher. The royalties arrive from the publisher as a packet of small-denomination Euro notes in a plain brown wrapper.

g. The national treasury of Germany makes interest payments on its national debt, including a check for 3,178 Euros to U.S. resident Mary Corcoran. Corcoran mislays it and does not cash it until the end of year 2020.

h. The Ford School of the University of Michigan, having commissioned construction of a subsidiary in Bielefeld, purchases architectural drawings of the building from a German firm. It pays 450,000 Euros for these, writing a check on the School's account in the Deutsche Bank.

i. The Deutsche Bank reports an increase of 42,000 Euros in its deposits. The deposit was in fact made by the American rock star Billy Joel, but because the deposit slip bore no name, the bank does not know where this money came from.

j. The German Reserve Bank, which is the central bank of Germany, uses part of its reserves of Canadian dollars to purchase 815,000 Euros from a Canadian student who wishes to liquidate her deposits in the Deutsche Bank out of fear of a Euro devaluation.

Solution:

Figure 1: Complete BoP

		Credits (+)	ID	Debits (–)	ID
Current Account					
Merchandise		*750*	*a*	*0.15*	*c*
		140	*b*	*3,000,000*	*d*
		3,000,000	*d*		
Services		*1740*	*f*		
Investment Income				*3178*	*g*
Unilateral Transfers	Private			*140*	*b*
	Government			*3,000,000*	*d*
Financial Account					
Wonk Assets Abroad					
Wonk Official Reserves and Other Assets		*815,000*	*j*		
Wonk Private Assets					
Direct Investment Abroad					
Foreign Securities				*750*	*a*
Bank & Nonbank Claims & Currency		*2,340,000*	*e*		
Foreign Assets in Wonkland					
Foreign Official Assets in Wonkland					
Foreign Private Assets in Wonkland					
Direct Investment in Wonkland		*450,000*	*h*		
Wonk Securities				*2,340,000*	*e*
Bank & Nonbank Claims & Currency		*0.15*	*c*	*1740*	*f*
		3,000,000	*d*	*450,000*	*h*
		3178	*g*	*815,000*	*j*
		42,000	*i*		
Statistical Discrepancy				*42,000*	*i*

Memoranda

Balance on Merchandise Trade	+889.85
Balance on Goods, Services, and Income	–548.15
Balance on Current Account	–3,000,688.15
Balance on Financial Account	+3,000,688.15
Change in Reserves	–815,000

Figure 2: Complete Memoranda

Exercise 3: Open Question

a. **Can you think of reasons why a government might be concerned about a large current account deficit or surplus? Why might a government be concerned about its official settlements balance (that is, its balance of payments)?**

Solution:

A current account deficit or surplus is a common situation in national accounting, that may become unsustainable over the long run. Under an intertemporal perspective, there are instances in which a country might have incentive to run in deficit, for example to borrow on the international markets to improve the domestic productive capacity. This would lead to a higher national income tomorrow. But for any period of current account deficit, there should be a corresponding period in which spending falls short with respect to income (i.e., a current account surplus) in order to pay the debts incurred to foreigners. In the absence of unusual investment opportunities, the best path for an economy may be one in which consumption, relative to income, is smoothed out over time.

Consider also the role of official reserves of foreign currency held by the central bank of a country, that change with nonzero values of its official settlements balance. Central banks use their foreign currency reserves to influence exchange rates. A persistent deficit could lead to the depletion of foreign reserves, which may limit the ability of the central bank to influence (or maintain the peg of) the exchange rate. For some countries (particularly the developing ones), central-bank reserves may be important as a way of allowing the economy to maintain consumption or investmentslevels when foreign borrowing is difficult. A high level of reserves may also perform a signaling role by convincing potential foreign lenders that the country is creditworthy.

b. **Consider the following equation:**

$$S^p = I + CA - S^G = I + CA - (T - G) = I + CA + (G - T) \qquad (1)$$

The equation tells us that, in order to reduce its current account deficit, a country must either increase its private saving, or reduce domestic investment, or cut its government budget deficit. Let's think to the case of the Unitied States of America. Nowadays, some people recommend restrictions on imports from China (and other countries) to reduce the current account deficit. How would higher U.S. barriers to import affect its private saving, domestic investments, and government deficit? Do you agree that import restrictions would necessarily reduce a U.S. current account deficit?

Solution:

Equation 1 can be re-written as

$$CA = (S^p I) + (TG) \tag{2}$$

Higher U.S. barriers to import may have little or no impact on private savings, investments, and the budget deficit. But, if there is no (or little) effect on these variables, then the current account would not improve (substantially) with the imposition of tariffs or quotas. It is possible to tell stories in which the effect on the current account goes either way. For example, investment could rise in industries protected by the tariff, worsening the current account (indeed, tariffs are sometimes justified by the alleged need to give ailing industries a chance to modernize their plants and equipment.) On the other hand, investment might fall in industries that face the higher cost for importing intermediate goods as a result of the tariff. In general, permanent and temporary tariffs have different effects. The point of the question is that a prediction of the way policies could affect the current account requires a general-equilibrium, macroeconomic analysis.