

# Chapter 1: The Balance of Payments (BoP)

## § 2: Definition and Rules

2.1 Overview

2.2 Current Account

2.3 Capital Account

2.4 Financial Account

2.5 Balance-of-Payments Equilibrium

2.6 Net Errors and Omissions

**Bibliography: Harms (2016), pp 15-33**

## 2.1 Overview

### (1) Definition

BoP **reports** all economic **transactions** between **domestic residents** and foreign residents for a special **time period**.

- “reports”:
- “transactions”, “time period”:
- “domestic residents”:

\* Problem 1 of the exercise to § 2

## (2) Classifying the transactions

### (a) Asset transaction *versus* goods transaction

- “goods” in a broad sense

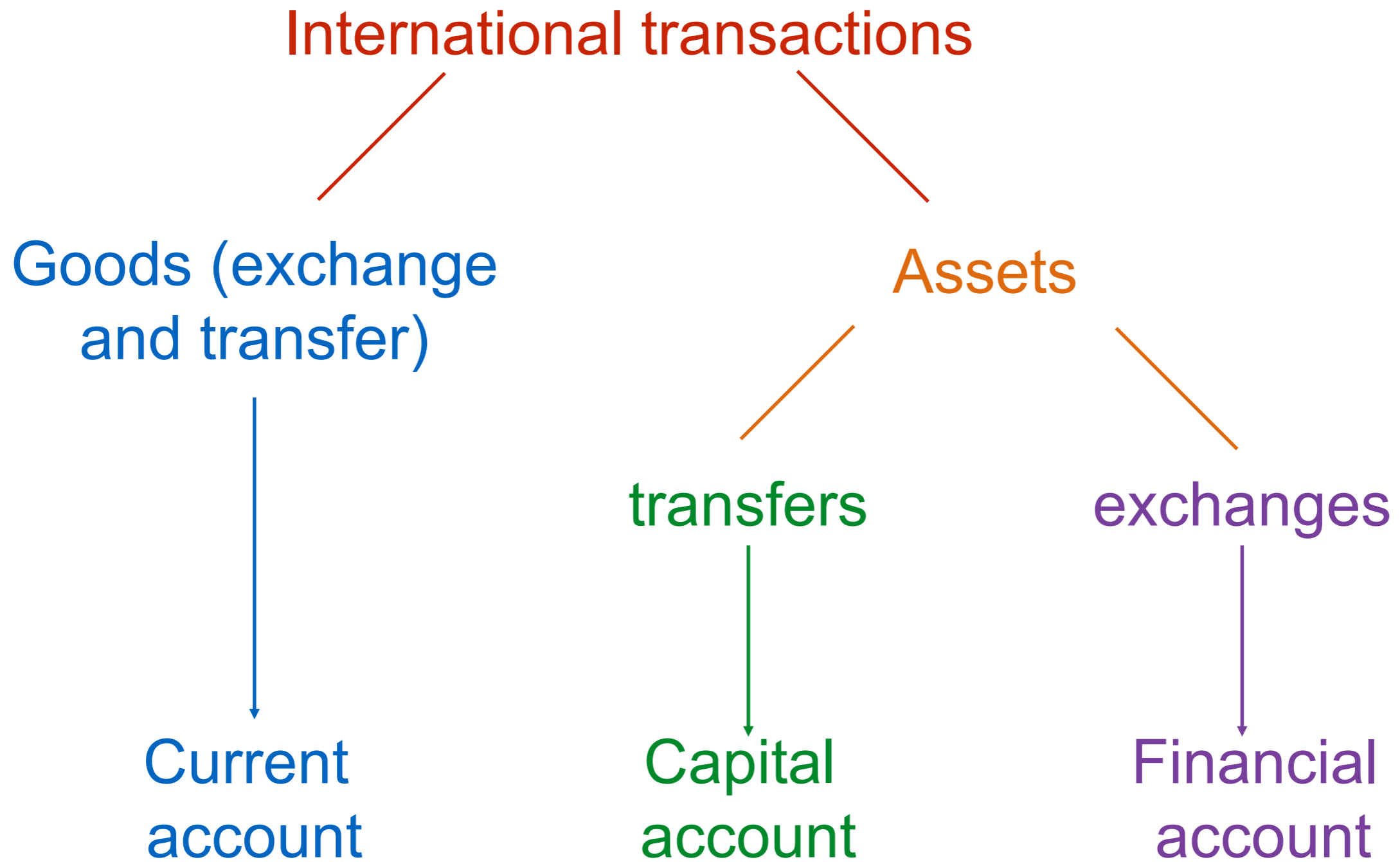
- asset transaction

### (b) Exchange *versus* unilateral transfer

- exchange

- unilateral transfer

### (3) Subdivision of the BoP in accounts



(4) Exhibit  
 2.1 (4)  
 Empirical  
 example:  
 German BoP  
 in 2015.  
 All numbers  
 are in billions  
 of Euros.

Goods: Exports (fob) <sup>2</sup>	1180.1		
Goods: Imports (fob)	916.9		
Balance		263.2	
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Source:  
 Harms (2016),  
 p. 16

Item	2020 <sup>r</sup>	2021 <sup>r</sup>	2022 <sup>r</sup>
I. Current account	+ 240.2	+ 278.7	+ 162.3
1. Goods	+ 191.0	+ 194.4	+ 111.9
Receipts	1,189.3	1,365.2	1,550.8
Expenditure	998.2	1,170.8	1,438.9
Memo item:			
Foreign trade <sup>1</sup>	+ 180.4	+ 175.3	+ 79.7
Exports	1,206.9	1,379.3	1,574.5
Imports	1,026.5	1,204.0	1,494.8
2. Services	+ 7.4	+ 4.8	- 30.8
of which:			
Travel	- 14.7	- 24.3	- 55.0
3. Primary Income	+ 96.0	+ 138.5	+ 150.0
of which:			
Investment Income	+ 94.2	+ 137.9	+ 152.9
4. Secondary Income	- 54.2	- 59.0	- 68.8

II. Capital account	- 9.1	- 1.2	- 18.6
III. Financial account <sup>2</sup>	+ 191.5	+ 248.6	+ 219.8
1. Direct Investment	- 4.9	+ 100.4	+ 125.3
2. Portfolio Investment	+ 16.4	+ 203.5	+ 24.3
3. Financial derivatives <sup>3</sup>	+ 94.6	+ 60.2	+ 42.7
4. Other Investment <sup>4</sup>	+ 85.4	- 147.4	+ 23.1
5. Reserve assets	- 0.1	+ 31.9	+ 4.4
IV. Errors and omissions <sup>5</sup>	- 39.6	- 29.0	+ 76.2

<sup>1</sup> Special trade according to the official foreign trade statistics (source: Federal Statistical Office). <sup>2</sup> Increase in net external position: + / decrease in net external position: -. <sup>3</sup> Balance of transactions arising from options and financial futures contracts as well as employee stock options. <sup>4</sup> Includes, in particular, loans and trade credits as well as currency and deposits. <sup>5</sup> Statistical errors and omissions resulting from the difference between the balance on the financial account and the balances on the current account and the capital account.

(4) Exhibit 2.1 (4a): German BoP i2020-2022..

Source: Deutsche Bundesbank (2023), p. 27. [Retrieved April 7, 2023]

## (5) Principles of recording transactions

### (a) Distinction between **debit entries** and **credit entries**

- credits: transaction leads to an **inflow** of payment
- debits: transaction leads to an **outflow** of payment

### (b) Balance: “sum of credits” minus “sum of debits”

### (c) Double-entry bookkeeping

- each transaction is registered **twice**
- immediate implication: (2.1)  $CA_t + KA_t = FA_t$

\* Problem 2 of the exercise to § 2

## 2.2 The Current Account

### (1) Survey

- transactions in goods, services and factor services
- exchanges and “current transfers”

### (2) Goods and services account

- **sales** of goods or services to foreign residents (“exports”) → **credit entries**
- **purchases** of goods or services from abroad (“imports”) → **debit entries**
- balance: net exports 
$$NX_t = (EX_G - IM_G) + (EX_S - IM_S)$$
- trade costs
  - fob (“free on board”)
  - cif (“cost, insurance and freight”)

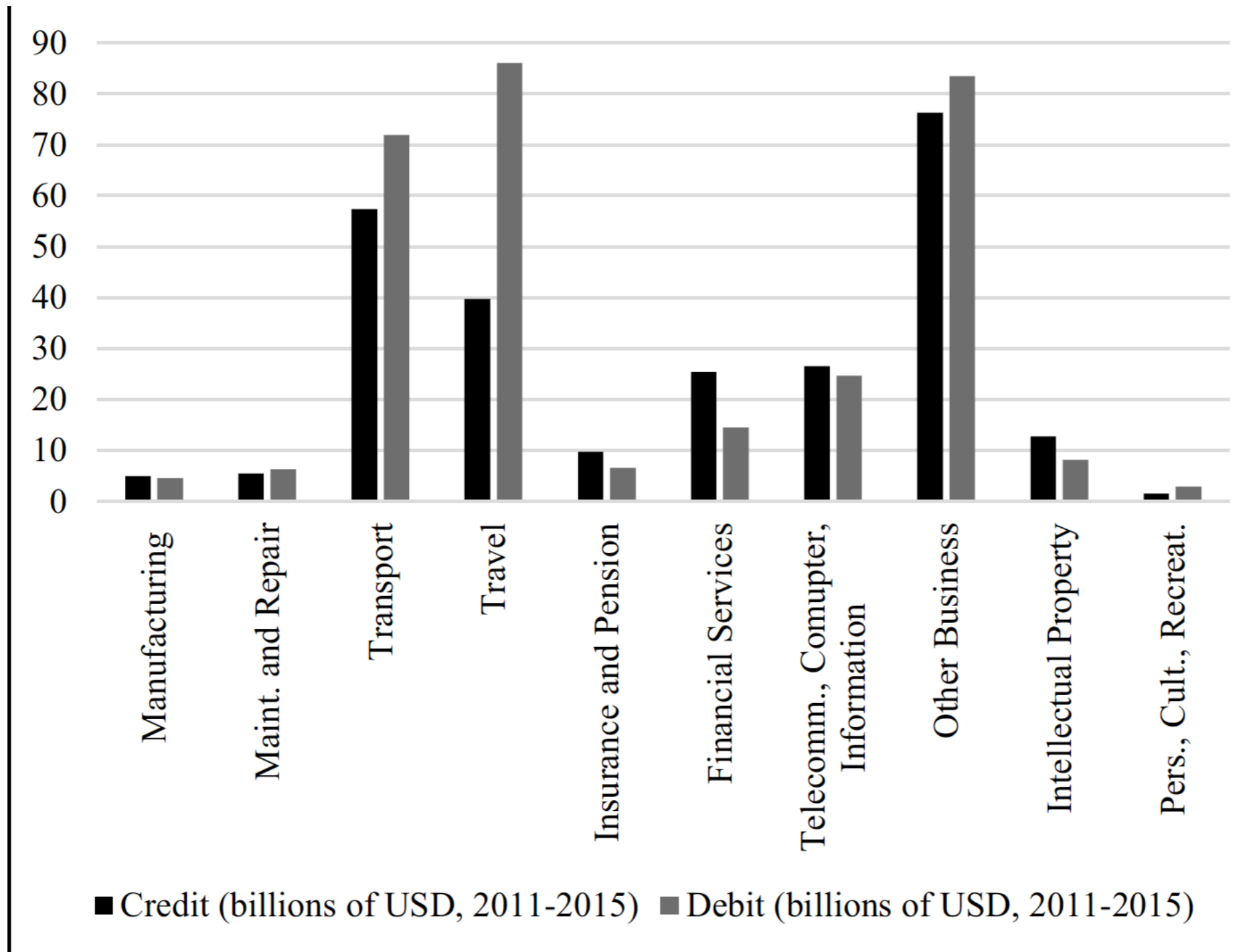


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Source:  
 Harms (2016),  
 p. 16

- Exhibit 2.2 (2): Germany's service trade 2011 - 2015



Source:  
Harms  
(2016),  
p.18

### (3) Primary income account

- income from factor services:

**sale** of factor service (“export”)



receipt of factor income



inflow of payment



**credit entry**

**purchase** of factor service (“import”)



bill of factor cost



outflow of payment



**debit entry**

**Exhibit 2.1 (4)**

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Source:  
Harms (2016),  
p. 16

## (4) Secondary income account

### (a) Basics

- transfers (=unilateral transfers): “provision of resources without any obvious material return”; Harms (2016), p. 15

“current” transfers: **directly** affect the **disposable income**

- more precisely: the account registers **counter-entries** for current transfers

- current transfer that domestic residents receive from abroad:

credit entries

- current transfer that domestic residents give to foreigners:

debit entries

### (b) example:

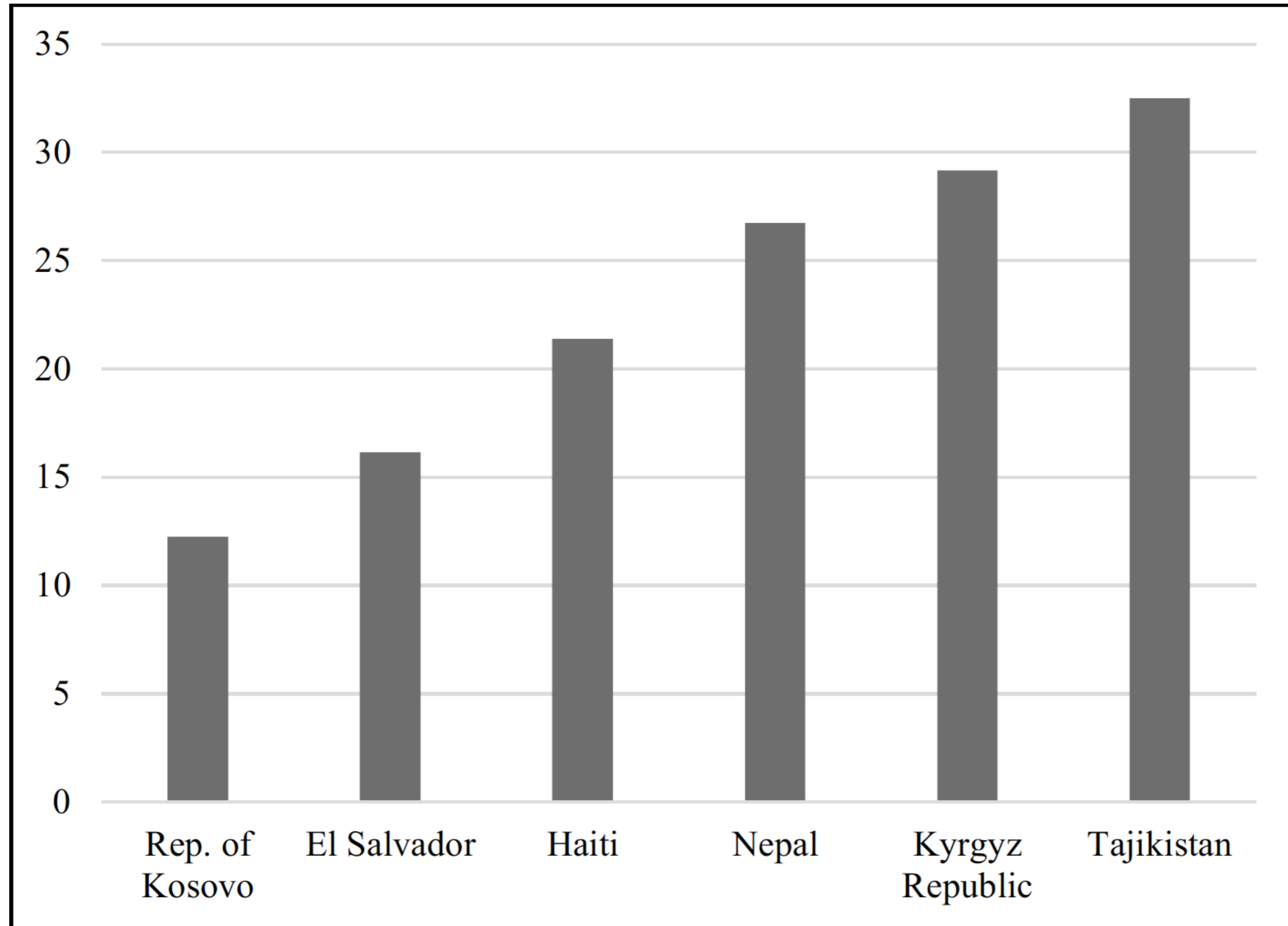
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Source:  
Harms (2016),  
p. 16

## (c) Types of current transfers

- payments between governments or within institutions
- cross-border aid payments by non-governmental organizations
- personal transfers sent by individuals
- empirical example: personal transfers received as a percentage share of GDP





## (5) Balance on current account

$$(2.8) \quad CA_t = NX_t + BPI_t + BSI_t$$

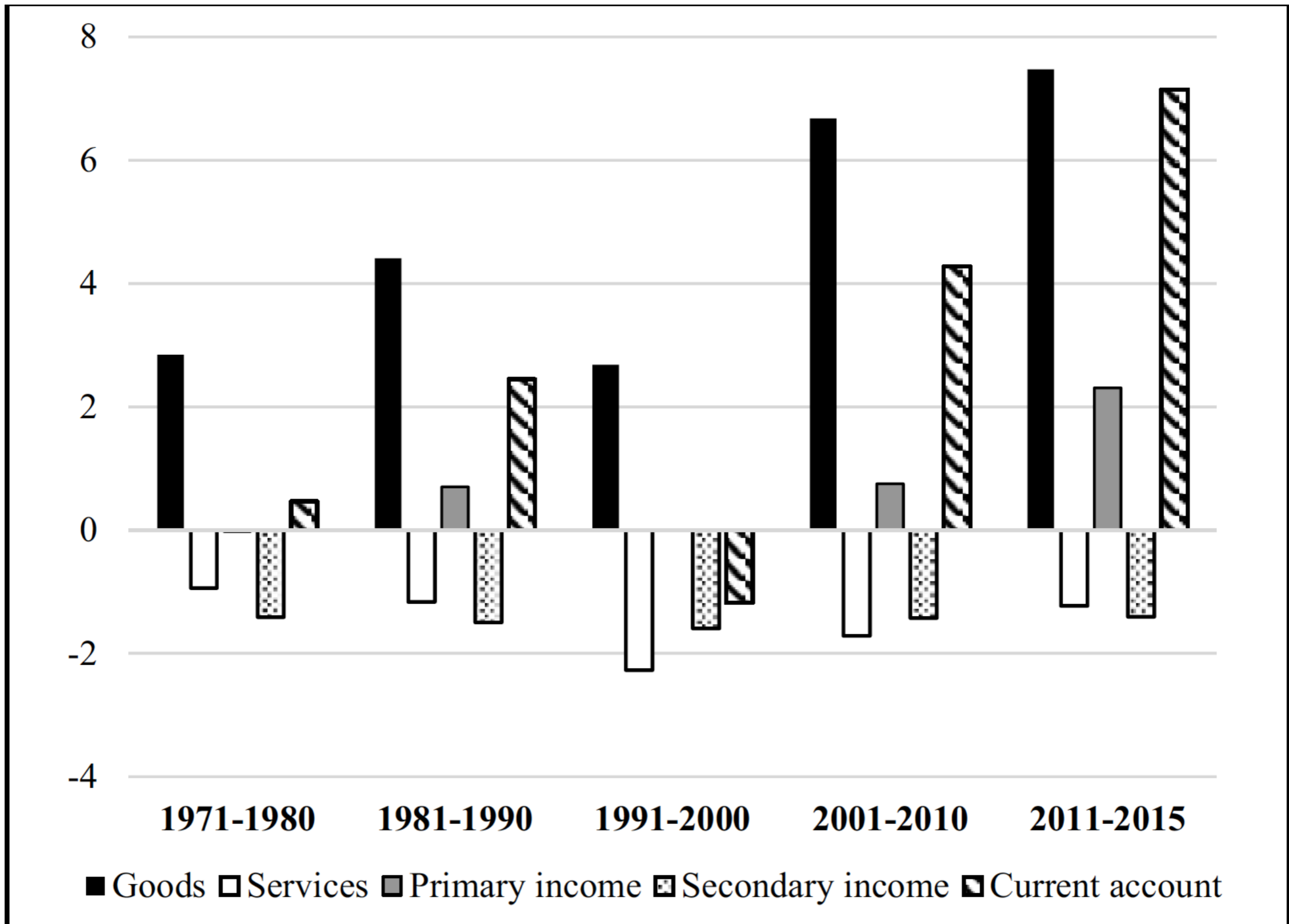
- empirical example: Germany 2015 (billions of Euro).
- empirical example: Germany 1971 - 2015 (% of GDP).

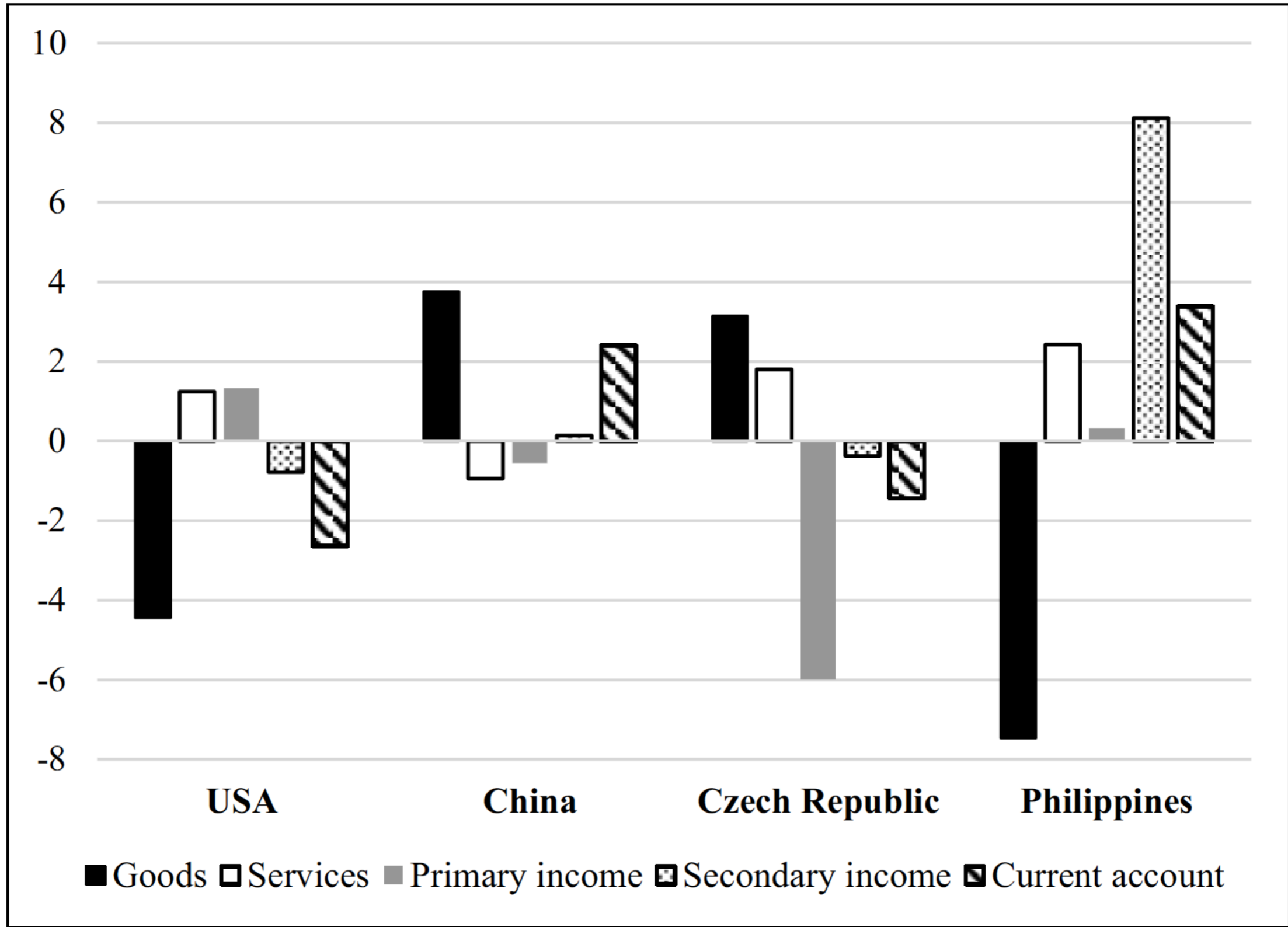
Source: Harms (2016), p. 21

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Source:  
Harms (2016),  
p. 16





## 2.3 The Capital Account

### (1) Concept

- **transactions** that ...
  - ... **change** a country's **wealth**
  - ... **without** being driven by **savings** of that country
- two very different components: (2) and (3)

### (2) Capital transfers

- transfer of **assets** or liabilities **→** change of **stock** variables
- more precisely: **counter-entries** of capital transfers
  - first entry:
  - second entry:
- examples: debt-forgiveness; heritage

### (3) Acquisition and disposal of “non-produced, non-financial assets”

- non-produced, non-financial assets:
  - natural resources:
  
  - leases and licenses
  
  - marketing assets:
  
- **purchase** of such assets abroad enters as a **debit** in the capital account

(4) Empirical  
example:  
Germany  
2015

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Source:  
Harms (2016),  
p. 16

## 2.4 Financial Account

### (1) Basics

- changes of a country's assets and liabilities towards the rest of the world (row) that are due to transactions with foreign residents
- **increases** in assets and **decreases** in liabilities towards the row: **credit**



$FA_t$  = (purchase - sale of foreign assets)

- (incurrence - redemption of foreign liabilities)

= net increase of foreign assets (“capital export”)

- net increase of foreign liabilities (“capital import”)

= change of foreign assets

- change of foreign liabilities

= change of (foreign assets - foreign liabilities)



= change of net foreign assets

## (2) Example

The following financial transfers are done in a given period:

- (a) Domestic residents lend 2000 € to the row
- (b) Domestic residents borrow 1000 € from the row
- (c) Domestic residents repay outstanding foreign debt of 700 €
- (d) Domestic residents receive repayments of 200 € on loans outstanding

Please calculate the balance on financial account!

## (3) Sub-accounts

### (a) Foreign Direct Investment (FDI)

- changes of assets and liabilities in order to actively manage a foreign company
- in practice: equity with voting power of 10% or more in a foreign company
- empirical example: Germany 2015

### (b) Portfolio investment

- transaction in debt or equity securities other than those included in direct investment or reserve assets (see below)
- financial derivatives and employee stock options

# Germany 2015

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Source:  
Harms (2016),  
p. 16

## (d) Other investment

- concretely: loans, trade credit, currency and deposit
- general features: usually not securitised (and thus not traded on secondary markets), but tied to a direct creditor-debtor relationship

## (e) Reserve assets

- external assets that are held by the central bank and can be used immediately to buy any currencies and for other external payment purposes
- “immediately” usable: assets easily tradable on financial markets (cash; deposits; bonds denominated in foreign currencies; reserve assets created by IMF)

# Germany 2015

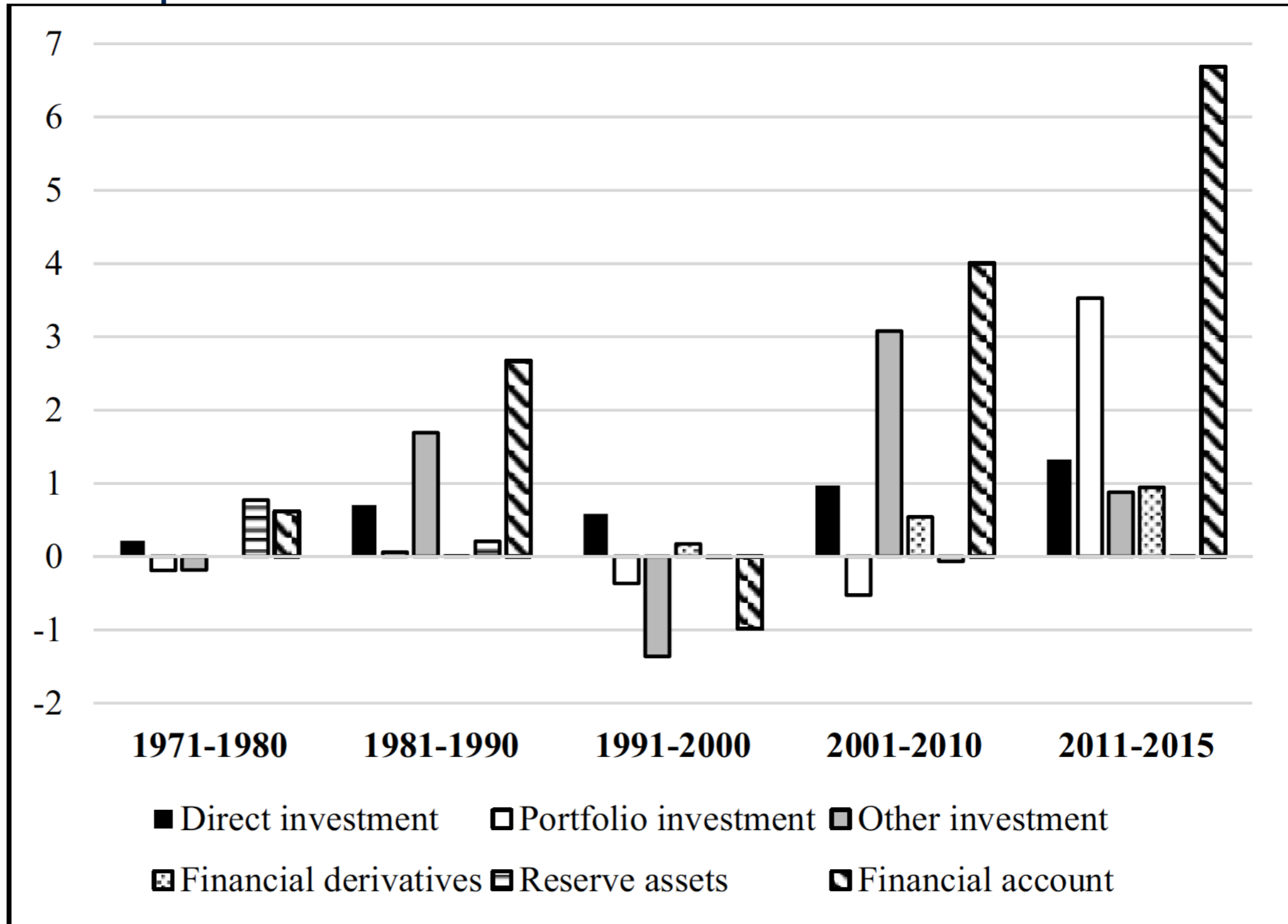
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Source: Harms  
(2016),  
p. 16

## (4) Empirical examples

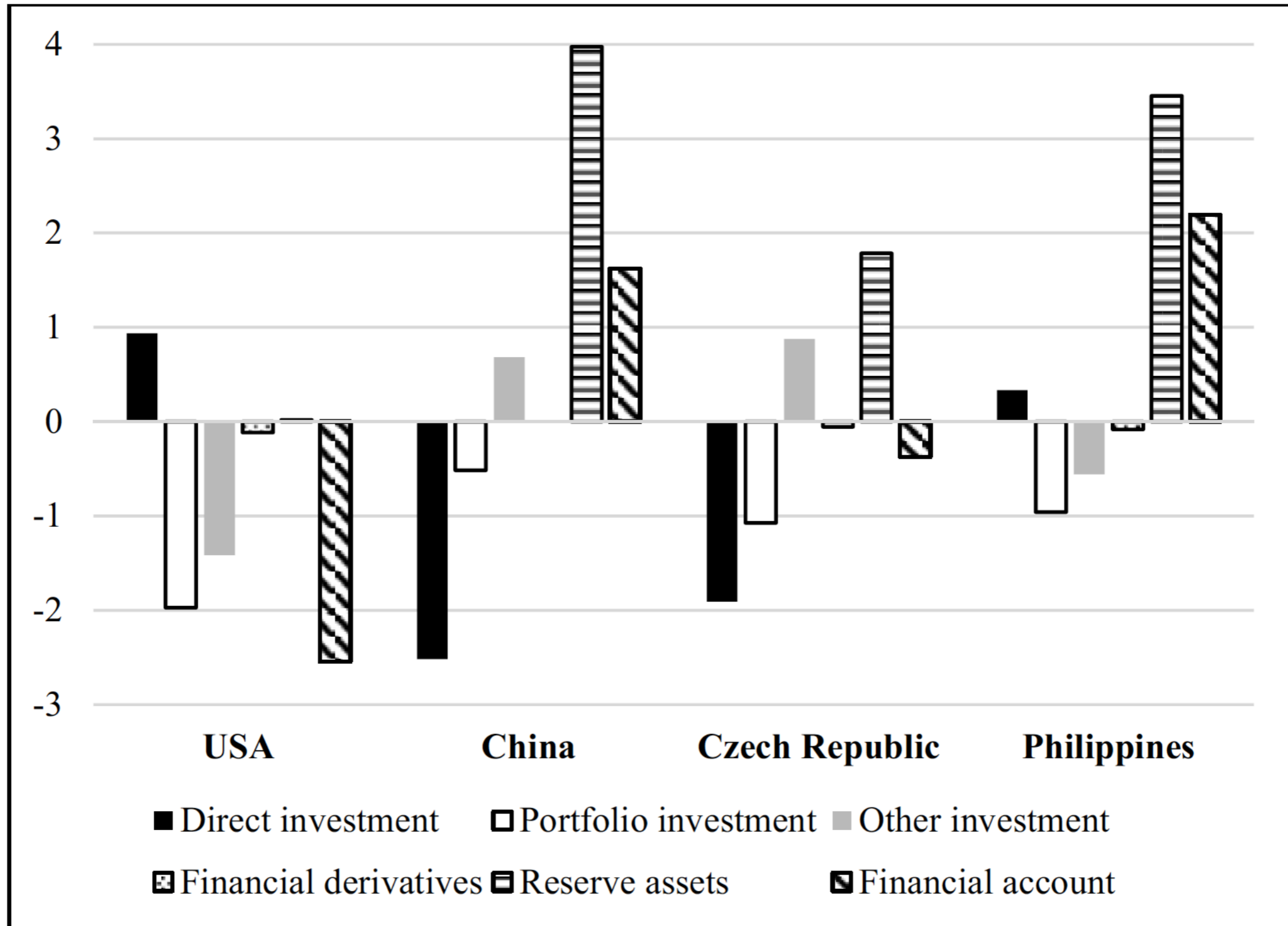
(a) Germany

1971 - 2015



Source: Harms (2016), p. 27

(b) Selected other countries, 2010-2014





## 2.5 Balance-of-Payments Equilibrium

(1) Implication of double-entry accounting principle

$$(2.1) \quad FA_t = CA_t + KA_t$$

Example: surplus of financial account

$$CA_t = 50 > 0$$

$$KA_t = -10 < 0$$

$$FA_t = 50 - 10 = 40$$

$$FA_t = 50 - 10 = 40 > 0$$

- surplus is invested in claims against the row
- we will get future payments from abroad

Example: deficit of financial account:  $FA_t < 0$

- means that ...
  - ... in period  $t$ , we have lived beyond our means
  - ... we have accumulated debt towards the row
- commitment to make payments to row in the future

## (2) Implication: two views of the current account

- modern view:  $CA_t = FA_t - KA_t$

perspective of trade in assets: CA driven by financial decisions

- traditional view:  $CA_t = NX_t + BPI_t + BSI_t$

perspective of trade in goods and services: CA driven by decisions on income and expenditure

### (3) “Equilibrium” of the BoP

$$(2.1) \quad CA_t + KA_t - FA_t = 0$$

- implication: non-balance (“disequilibrium”) impossible for BoP as a whole
  - distinction only meaningful for **sub**-balances
- most prominent: reserve assets as part of the financial account

$$(2.2) \quad CA_t + KA_t = \boxed{FA_t^{NR} + \Delta R_{t+1}} \longrightarrow FA_t$$

$$(2.3) \quad CA_t + KA_t - FA_t^{NR} = \Delta R_{t+1}$$

\* Problem 3 of the exercise to § 2

## 2.6 Net Errors and Omissions

### (1) Additional balance in the practice of BoP statistics

- in practice:

$$(2.4) \quad CA_t^{est} + KA_t^{est} + NEO_t = FA_t^{est}$$

- interpretation:

additional balance because CA, KA, FA are estimated to some extent

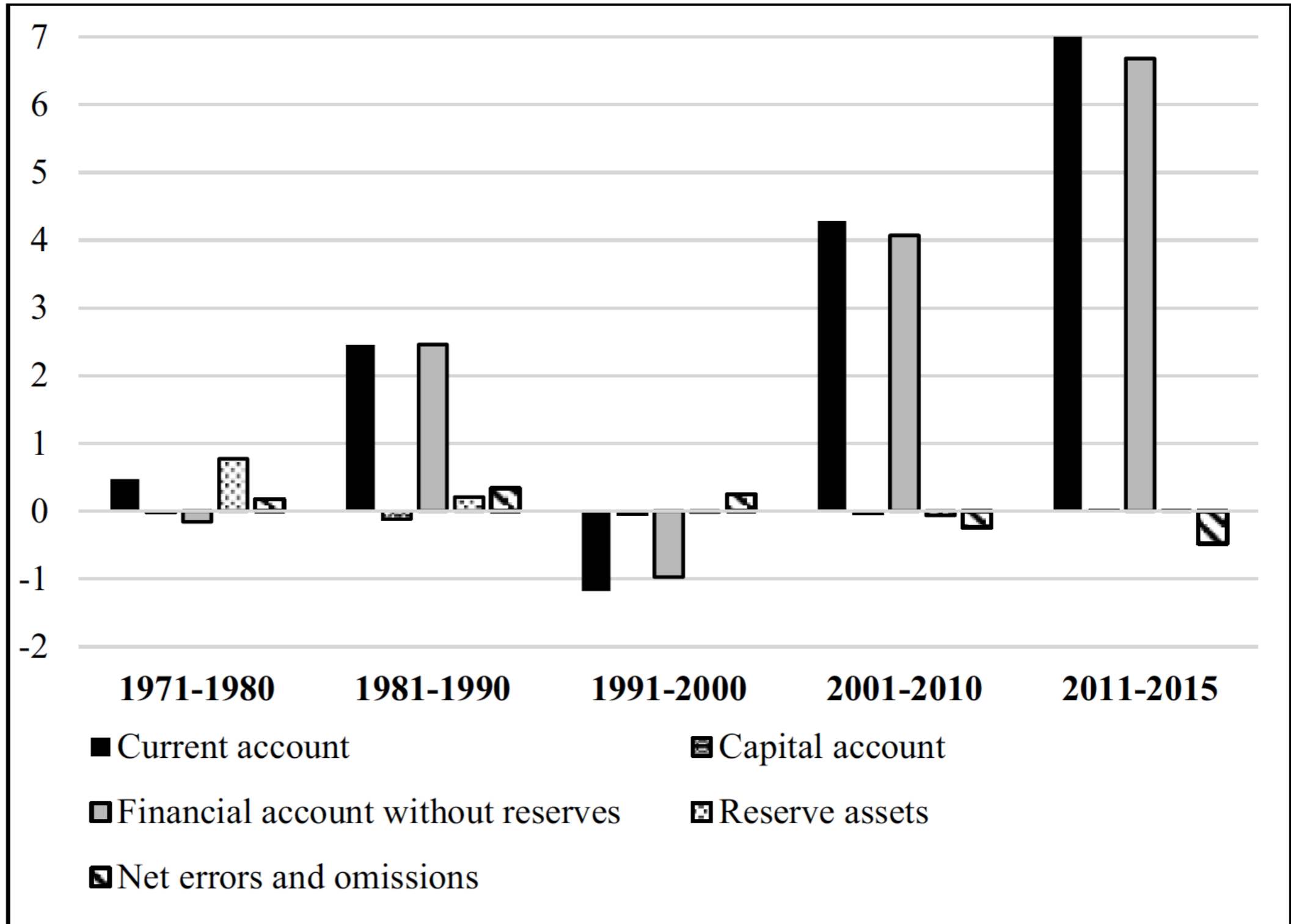
### (2) Reasons for errors and omissions

- legal omissions in reporting transactions: small transactions
- illegal omissions
- other reasons

\* Problem 4 of the exercise to § 2

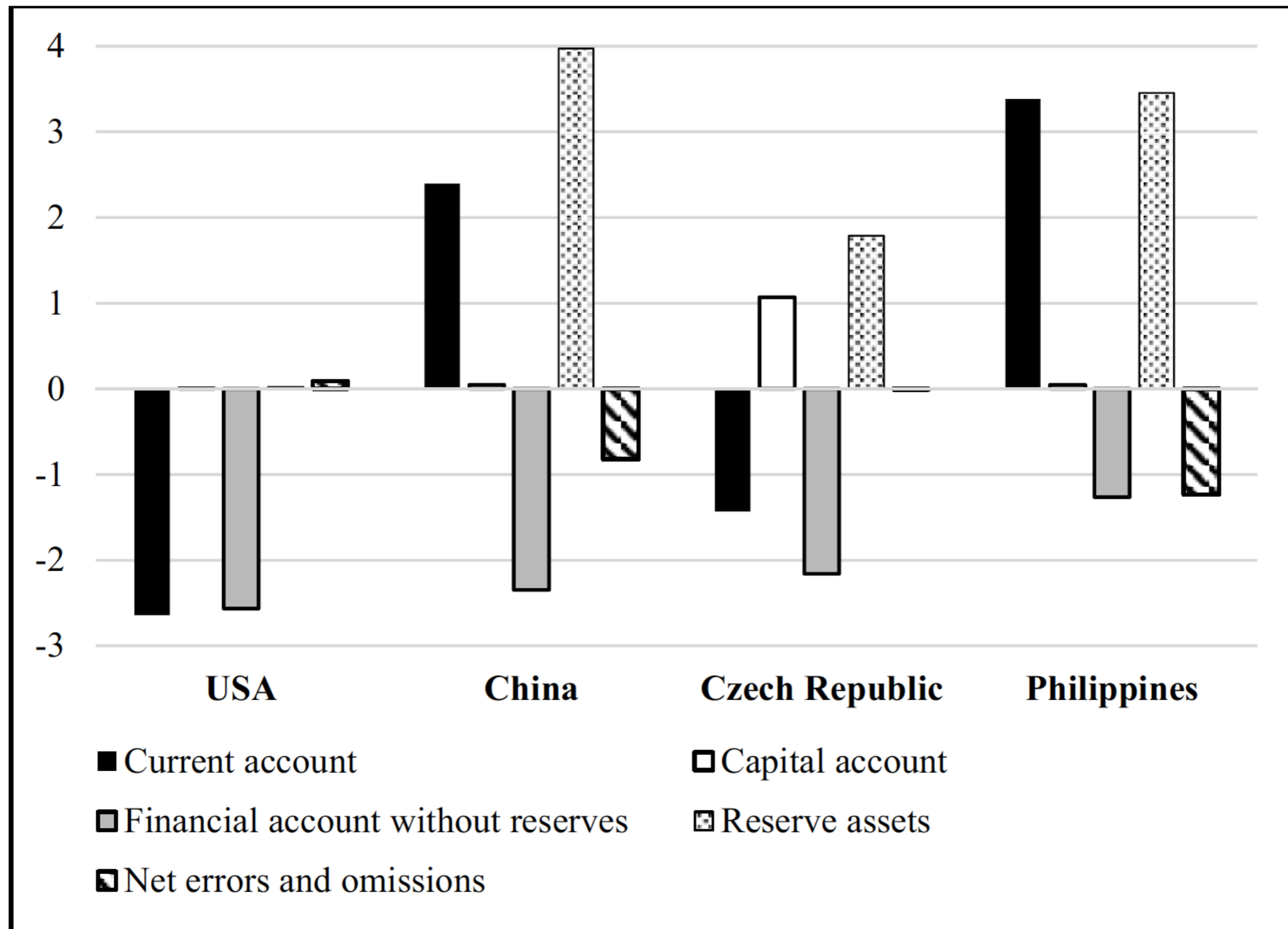
## 2.7 Empirical Examples

(1) Sub-balances  
of the German  
BoP 1971-2015



Source: Harms  
(2016), p. 32

## (2) BoP sub-balances of some other countries 2010-2014



Source: Harms (2016), p. 33