

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

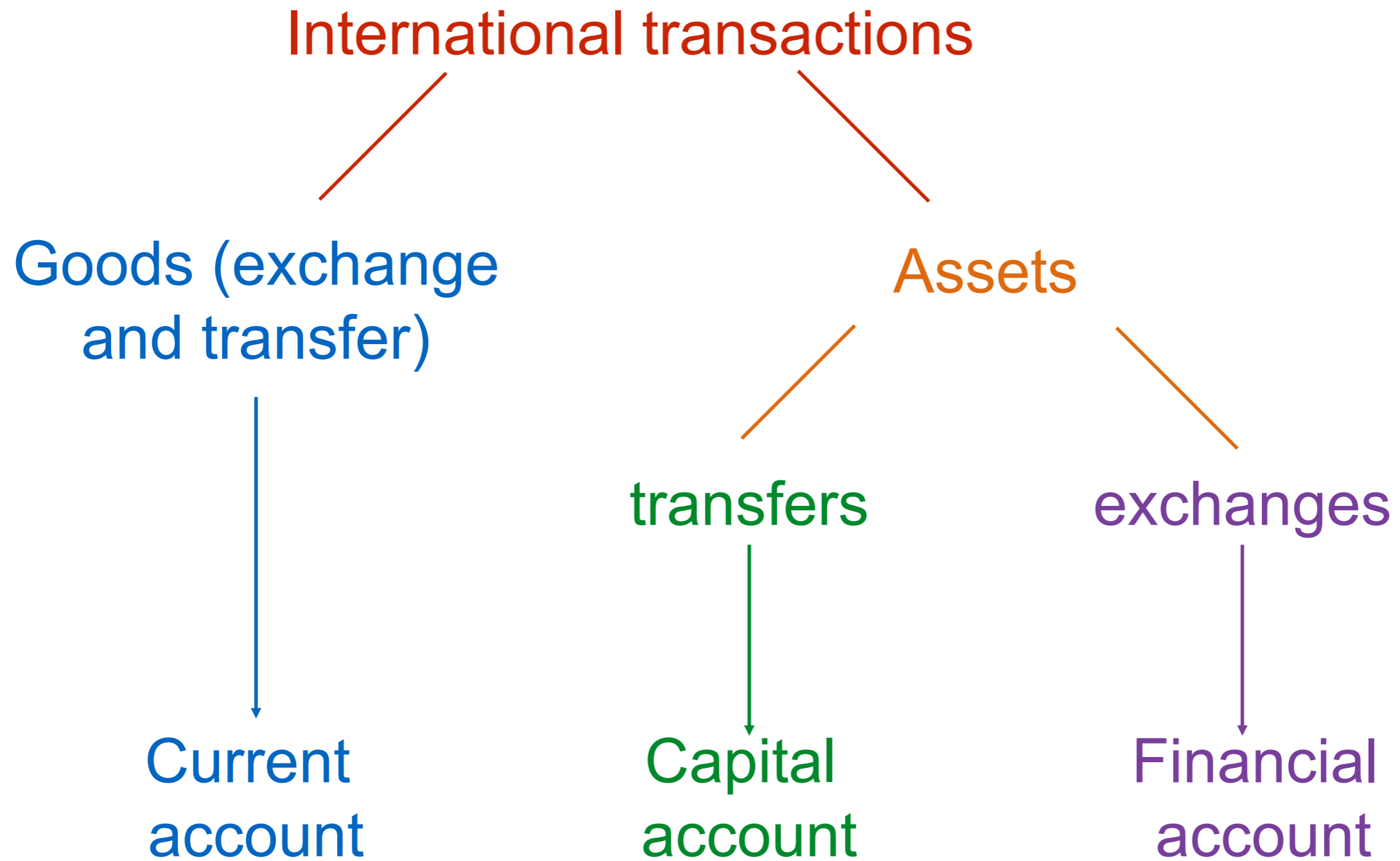
- asset transaction

(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) ²	1180.1		
Goods: Imports (fob)	916.9		
Balance		263.2	
Services: Exports (fob)	238.5		
Services: Imports (fob)	268.7		
Balance		-30.2	
Primary income: Receipts	194.8		
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Net direct investment		56.4	
Net portfolio investment		199.1	
Net financial derivatives and em- ployee stock options		25.8	
Net other investment		-53.3	
Reserve assets		-2.2	
Net financial account			225.8
Net errors and omissions			-31.2

Source:
 Harms (2016),
 p. 16

Item	2020 ^r	2021 ^r	2022 ^r
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 ¹	+ 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 ²	+ 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 ³	+ 94.6	+ 60.2	+ 42.7
4. Other Investment ⁴	+ 85.4	- 147.4	+ 23.1
5. Reserve assets	- 0.1	+ 31.9	+ 4.4
IV. Errors and omissions ⁵	- 39.6	- 29.0	+ 76.2

1 Special trade according to the official foreign trade statistics (source: Federal Statistical Office). **2** Increase in net external position: + / decrease in net external position: -. **3** Balance of transactions arising from options and financial futures contracts as well as employee stock options. **4** Includes, in particular, loans and trade credits as well as currency and deposits. **5** 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

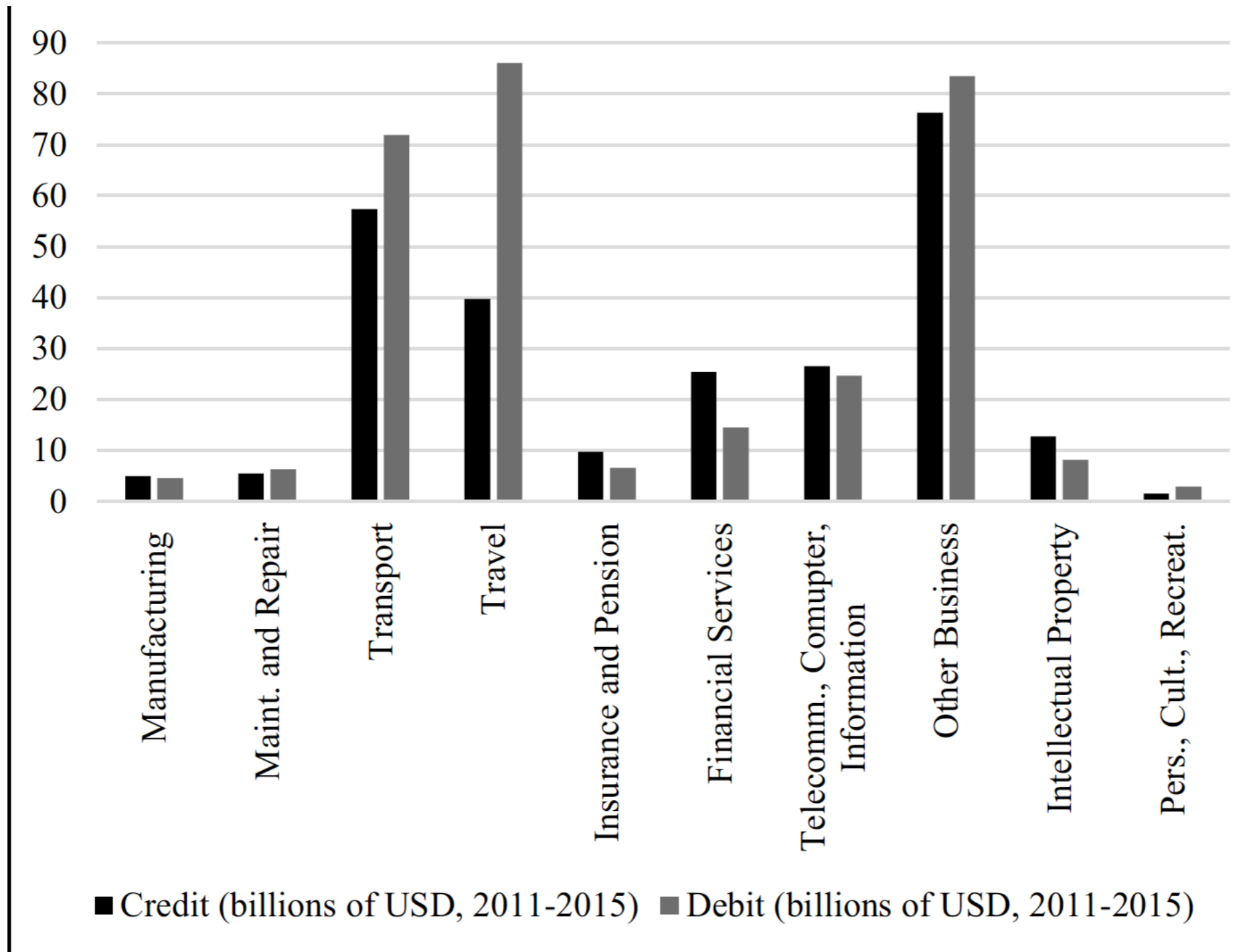
- **sales** of goods or services to foreign residents (“exports”) → credit entries
- **purchases** of goods or services from abroad (“imports”) → debit entries
- balance: net exports
$$NX_t = (EX_G - IM_G) + (EX_S - IM_S)$$
- trade costs
 - fob (“free on board”)
 - cif (“cost, insurance and freight”)

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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:

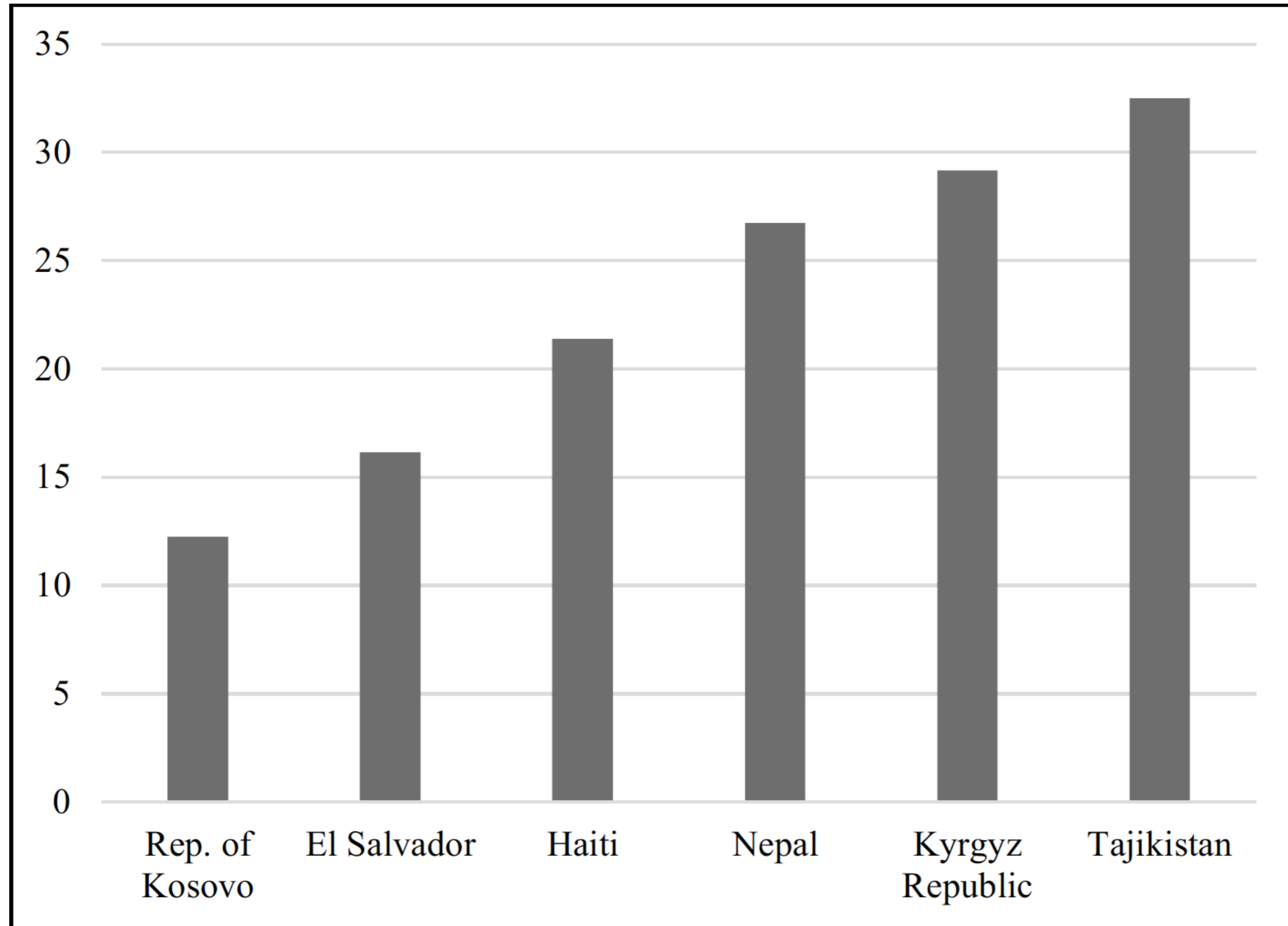
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Source:
Harms (2016),
p. 16

(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

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

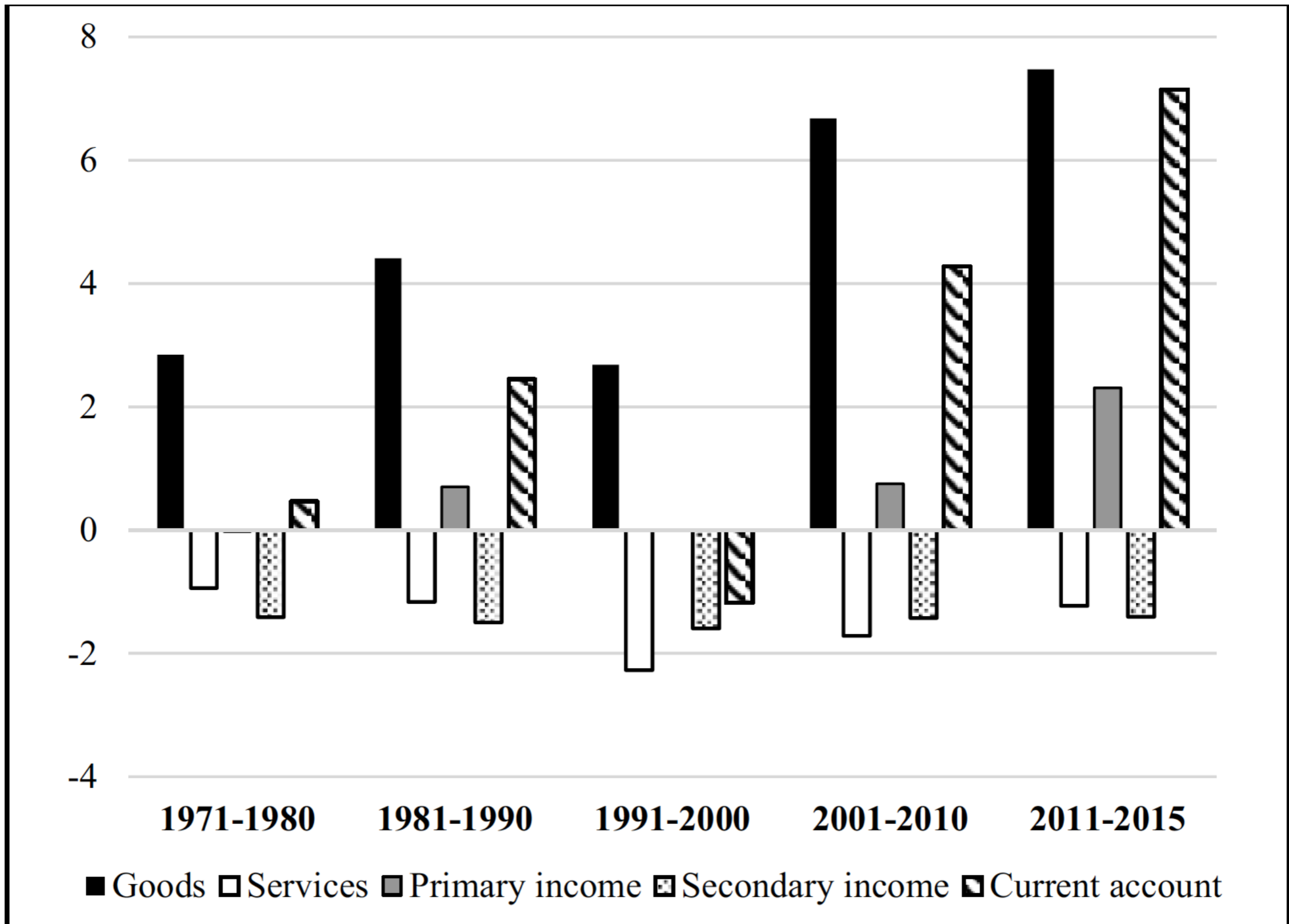
- empirical example: Germany 2015 (billions of Euro).
- empirical example: Germany 1971 - 2015 (% of GDP).

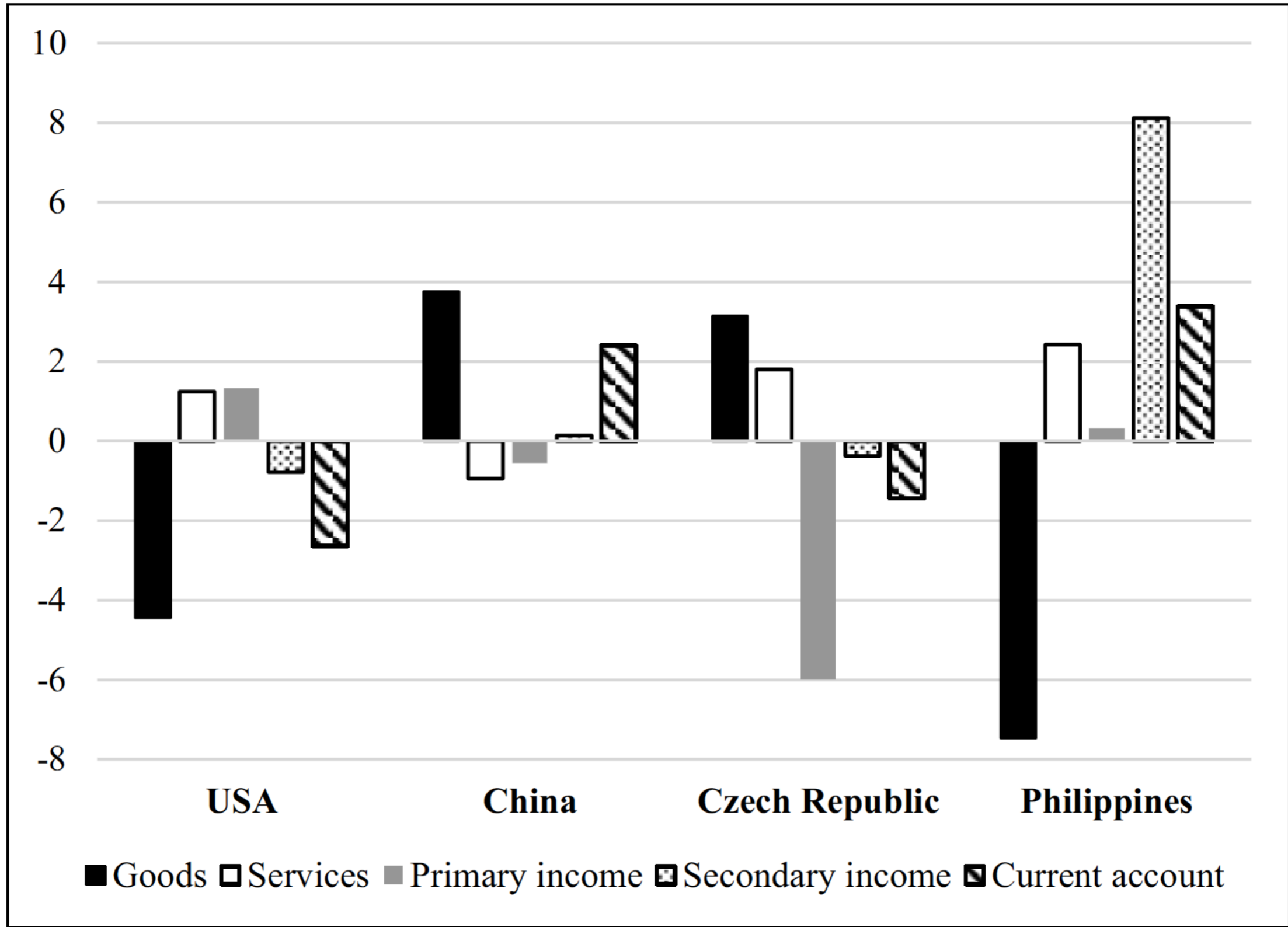
Source: Harms (2016), p. 21

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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

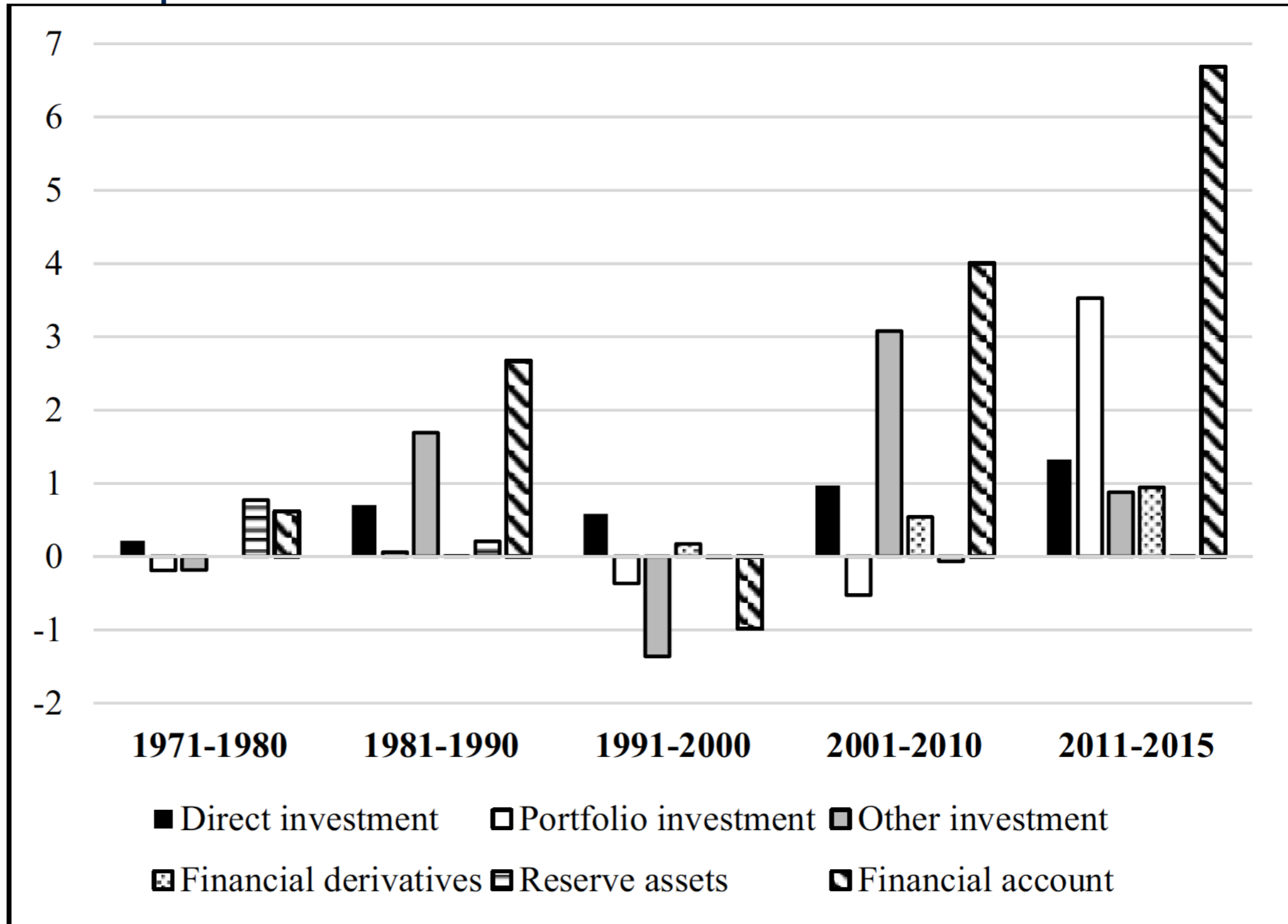
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Source: Harms
(2016),
p. 16

(4) Empirical examples

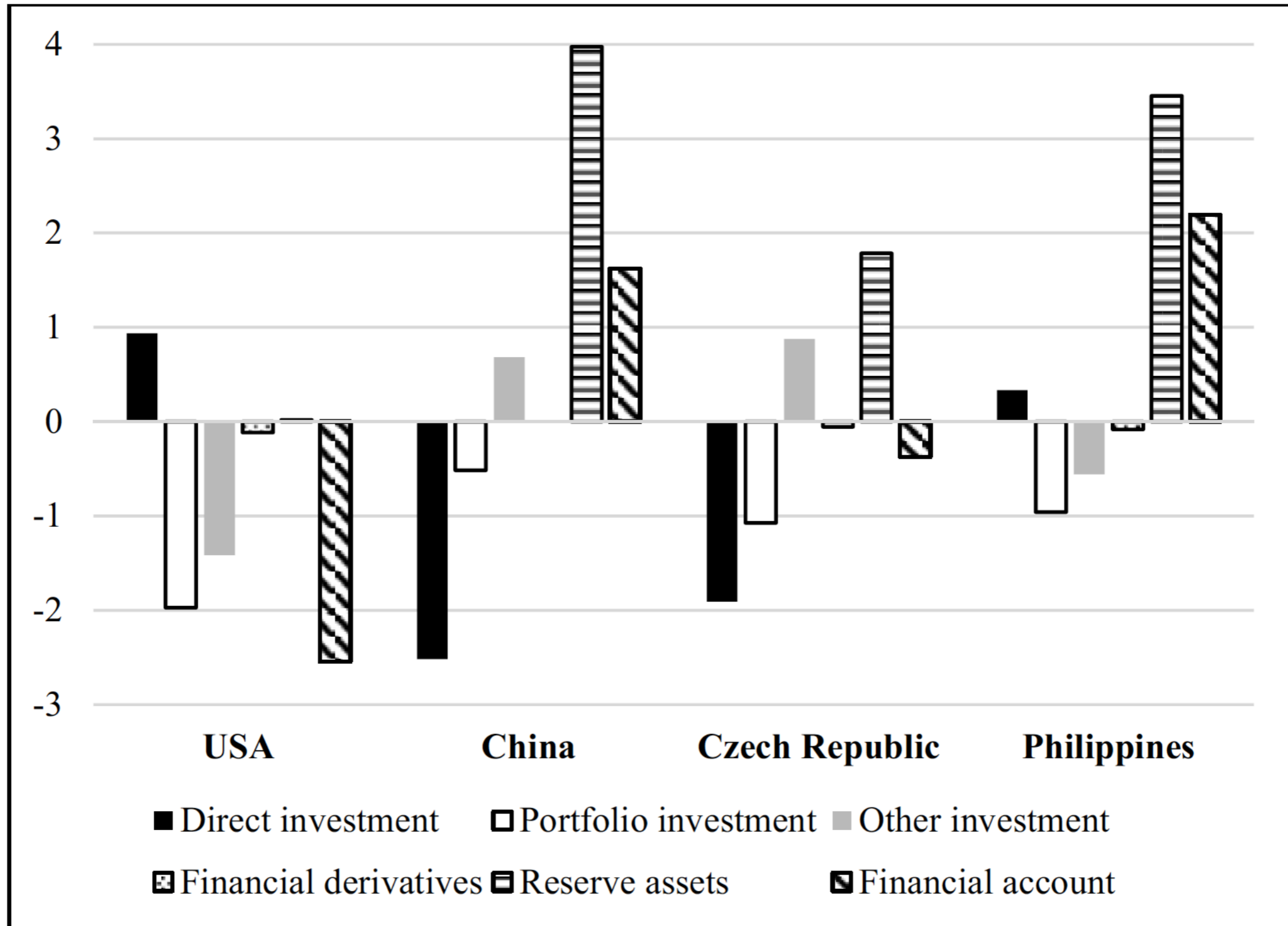
(a) Germany

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

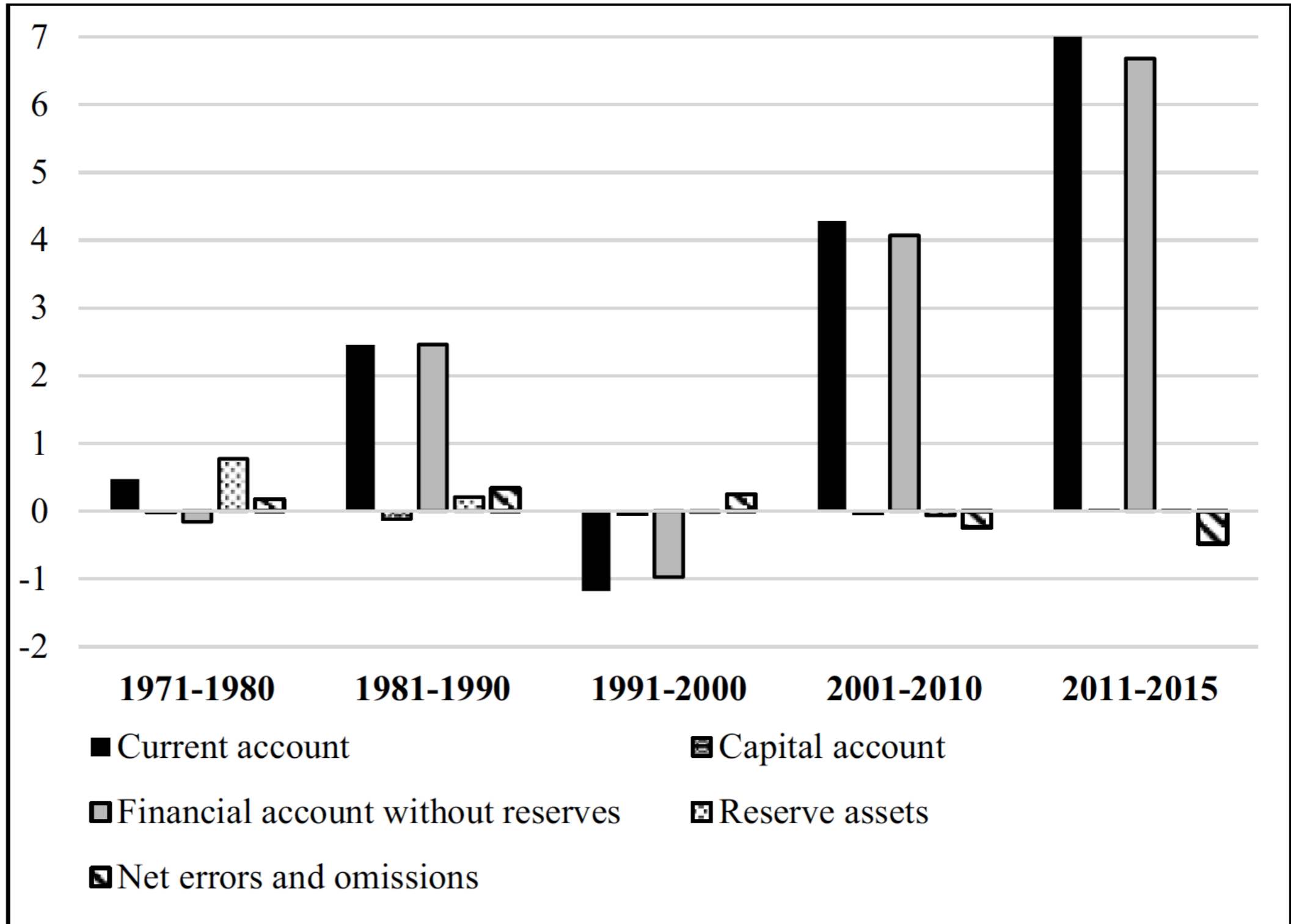
(2) Reasons for errors and omissions

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

* Problem 4 of the exercise to § 2

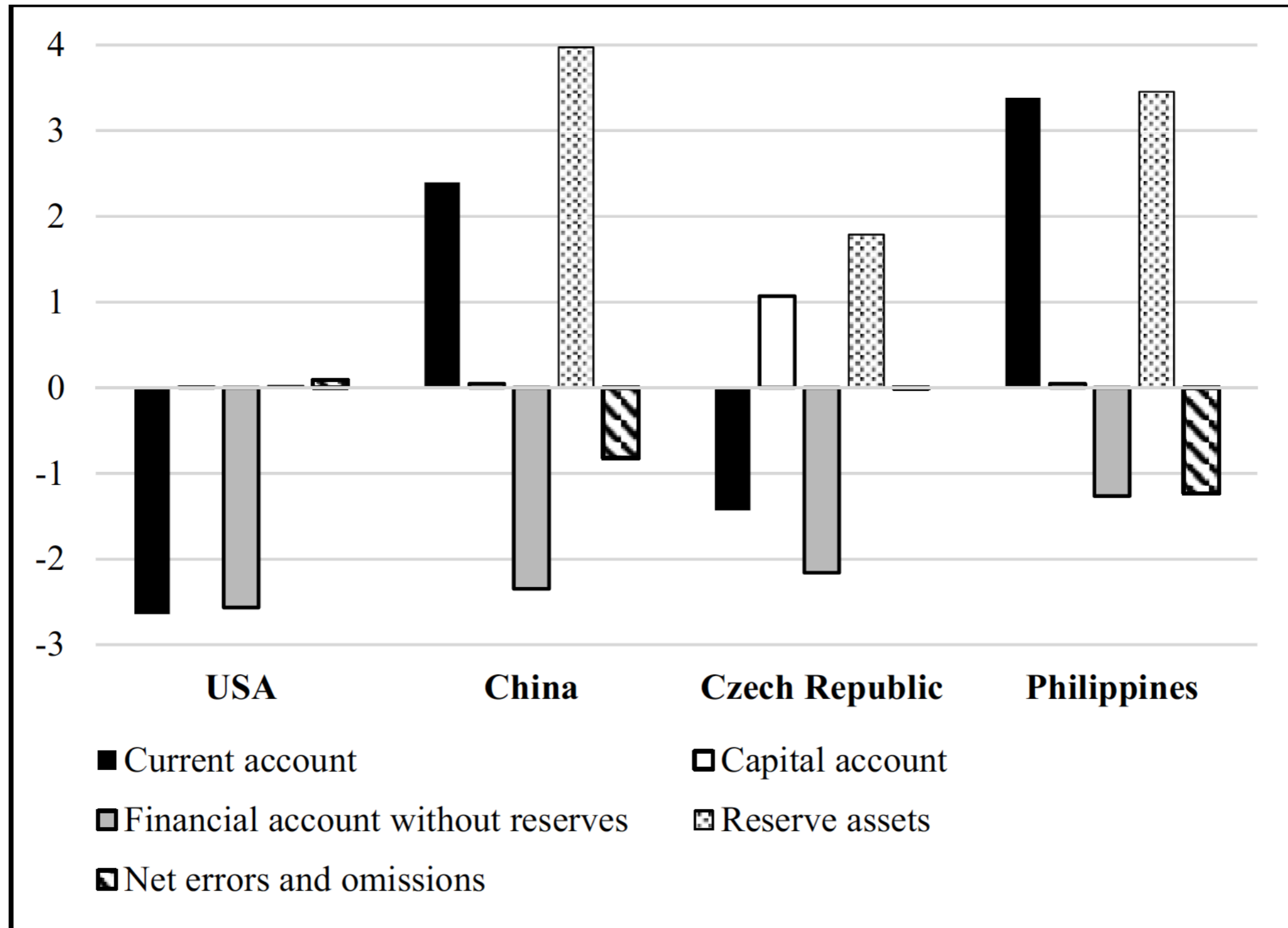
2.7 Empirical Examples

(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