

INVESTMENT AND SAVINGS

EE 462 Development Macroeconomics

Semester 1/2021

Topics

Production f^n : $Q = f(L, K)$

↑

$$\Delta K = \underbrace{SY}_{\text{savings}} - (n+d)K$$

↓
Investment.

✓• Savings

- Household Saving and Consumption
- Foreign Saving

✓• Investment

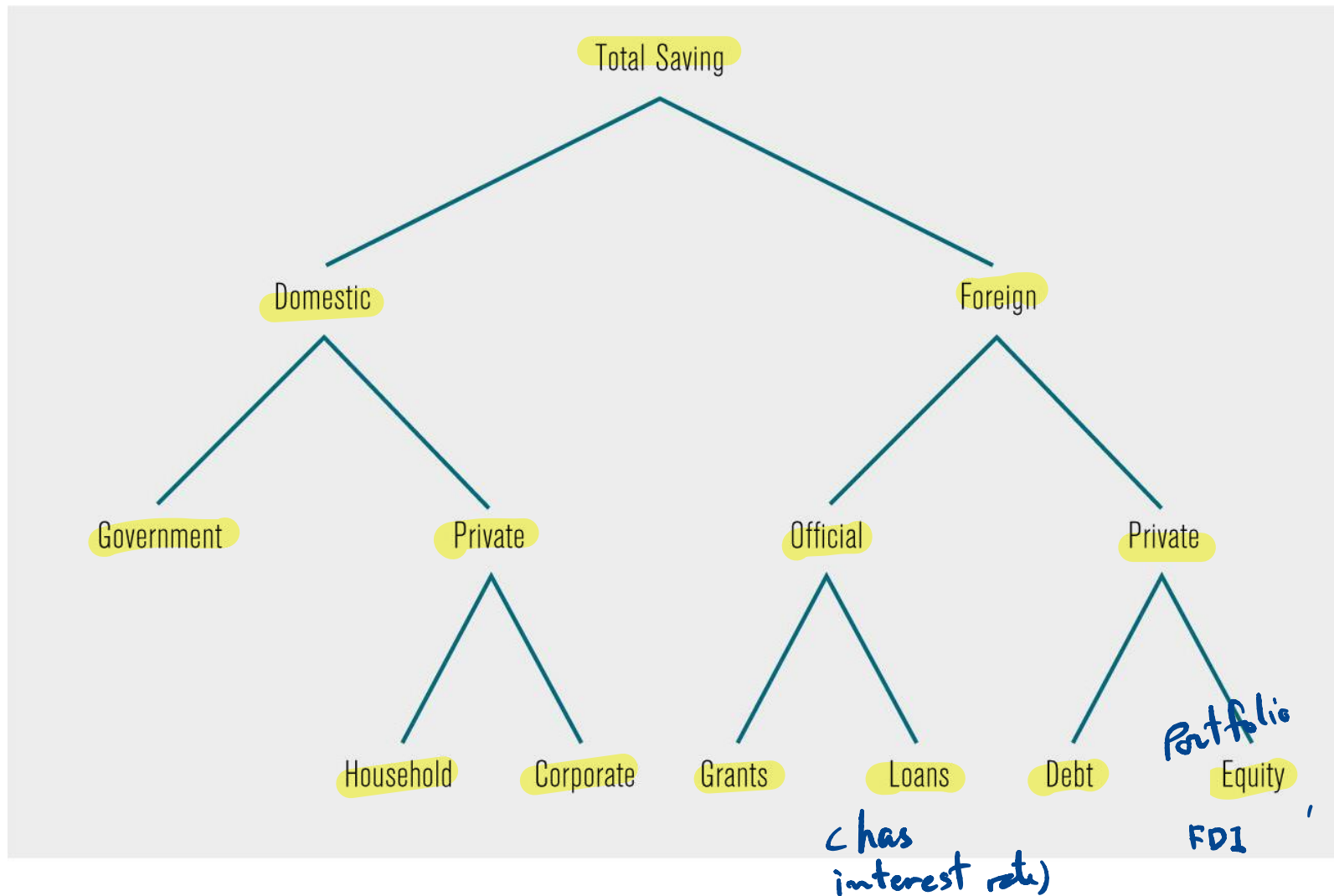
- Barriers to Productive Public and Private Investment
- Foreign Direct Investment **

SAVINGS

Savings

- **Domestic savings:** $\rightarrow S_D$
 - Includes household, domestic corporation, and government savings
 - Saving rates vary across countries, but on average domestic savings tend to be higher in high- and middle-income countries.
- **Foreign savings:** $\rightarrow S_F$ / Foreign Direct Investment.
 - Includes foreign aid, FDI, portfolio equity, loans
 $\downarrow$ grants $\downarrow$ soft loans
- Interesting questions:
 - Can government policy have a major influence on a country's saving rate?
 - Does a rise in savings lead to a rise in investment that in turn leads to higher growth, or the causation goes in the other direction?
 - Impact of foreign savings on the country's econ growth?

Key Components of Savings



Domestic savings.

Household Saving and Consumption

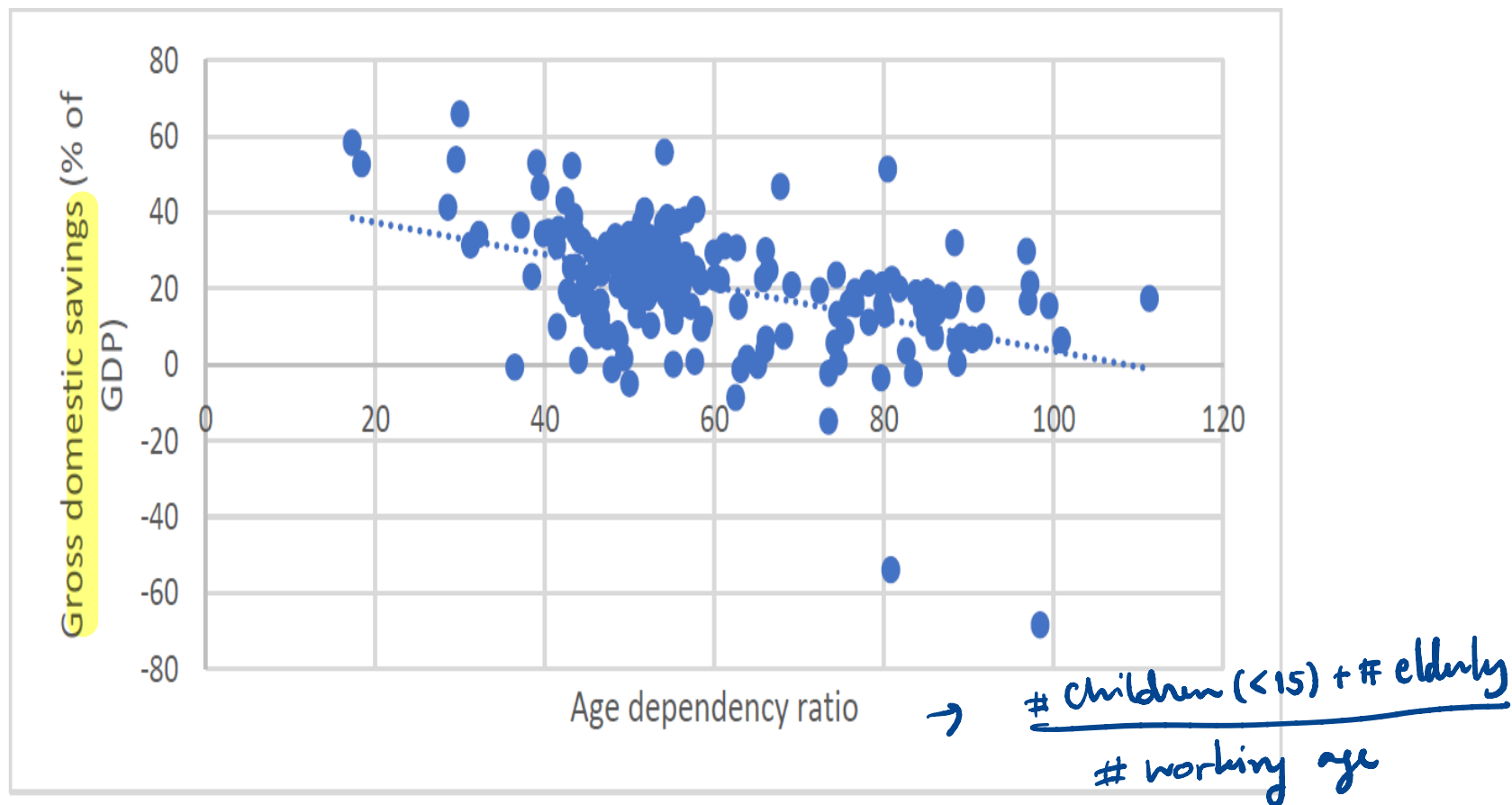
- Individuals and households saves for 2 main purposes:
 1. To generate future income by saving and investing current income
 2. To protect themselves against unexpected falls in income in the future → Precautionary savings
- But, to save is to reduce in current consumption. So, what determine saving behavior?
- Modigliani's life-cycle model – saving and consumption vary systematically during a person's lifetime:
 - Lower savings when young
 - Rising saving and peak toward the middle and end of working years
 - Dissaving after retire



Life-Cycle Hypothesis and Demographic Structure

- Recall the demographic transition with 3 stages:
 - High birth and death rates → low pop growth
 - Declining death rates and continued high birth rates → high pop growth
 - Low birth and death rates → low pop growth
- Question: In which stage of the demographic transition would a country have high saving rates?
 - Third stage → low dependency ratio
- Examples:
 - High saving rates in East Asia^{in 1980's} such as South Korea and Taiwan
 - China's one child policy → China's economic boom starts in
 ↳ 1980 ↳ 2000's.

Gross Domestic Saving and the Age Dependency Ratio, 2017



Source: WDI

Government Saving

$$S_G = \overset{\uparrow}{T} - \underset{\uparrow}{G} \quad \left| \begin{array}{l} \text{Easy to lower } G? \\ \hookrightarrow \text{No!} \\ \text{"Populism"} \end{array} \right.$$

- Government saving arises when tax revenues exceed public consumption expenditures.

➤ Government saving can be changed by either increasing revenues or reducing consumption expenditures

- Key questions:

eg income tax rate for income < \$150,000/year is 5%.

- To what extent can government increase the tax ratio (if they want to)?

➔ Not so easily (due to political resistance)

- Will an increase in the tax ratio lead to an increase in government saving?

➔ Yes, but not always.

$$\uparrow S_G + S_P$$

- Will an increase in government saving increase total domestic saving?

➔ Not necessary

Government Saving and Domestic Saving

- Q: How does ^{hh & corporate} private saving responds to an increase in government spending?
- **Ricardo equivalence**: Any increase in ^{Gov't saving ↑ due to ↑T} public saving is offset by an equivalent decline in private saving, with total domestic saving remaining unchanged.
 - When there's a tax cut, government saving may fall, but private ^{$S_c \downarrow$} sectors increase private saving in anticipation of a future tax increase. ^{$S_p \uparrow$}
- Empirical studies finds that, in general, an increase in government saving tends to be associated with a decline in private saving, but less than the strict one-to-one relationship.
 - Will domestic saving increase or decrease?
 - Ex. 1% rise in gov't saving rate is associated with a 0.4 – 0.65 % decline in private saving.
 - ⇒ Domestic saving would increase by less than 1%.

Domestic Savings



	Gross Capital Formation (% of GDP)					
	1970	1990	2018 2000	1970	1990	2018
<i>Economy</i>						
Low income	14.45	28.28	24.40		9.97	15.21
Lower-Middle income	18.05	26.88	28.31	14.14	22.42	23.11
Upper-Middle income	27.11	28.43	30.83	28.54	29.05	32.69
High income	27.49	25.10	22.08	26.73	24.31	23.23
<i>Region</i>						
East Asian and Pacific	33.57	33.56	32.26	34.12	34.43	33.98
Europe and Central Asia	28.62	25.28	21.71	26.87	23.75	25.25
Latin America and Caribbean	22.26	19.71	18.74	20.65	21.91	18.47
Middle East and North Africa	26.49	23.72	25.74	30.58	21.45	32.42
South Asia	16.14	26.71	30.36	11.26	20.29	26.52

Source: WDI

Foreign Saving

- Recall the income side of the national account:

$$Y = C + I + G + X - M \quad \text{Withdrawal}$$

- Expenditure side:

$$Y = C + S_p + T \quad \text{; injection} \quad (S_p = \text{private saving})$$

- Rearranging: $Y = C + I + G + X - M = C + S_p + T$

$$I = (T - G) + S_p + (M - X)$$

Where $T - G$ = government saving

$M - X$ = deficits of the balance of payments + foreign savings
(Net imports)

portfolio equity
loans
FDI

- Alternative writing:

$$I = (S_g + S_p) + S_f$$

$$I = S_d + S_f$$

or

$$I - S_d = M - X$$

- As the difference between investment and domestic saving grows, the trade deficit grows proportionately.

Foreign Saving

- Two components of foreign saving:
 1. *Official foreign saving* – foreign aid provided on concessional terms as either *grants* or *soft loans*
 2. *Private foreign saving*:
 - *FDI* – made by nonresidents (typically MNCs) in enterprises located in hosted countries *inflow FDI*.
 - *Portfolio equity* – purchase by foreigners of host country bonds or stocks
 - *Commercial bank lending*
 - *Export credits* – credits given to firms in developing countries that import from the industrialized countries (permitting delayed payment)

Capital Flows to Developing Countries, 1990-2003

(Official Dev't Assistance)		1990	1996	2000	2003
Inflows ODA		107.0	307.1	206.2	272.1
Official development finance		51.8	25.8	28.1	23.7
Grants (excluding technical assistance)		25.4	23.0	23.2	38.0
Official loans (net)		26.4	2.8	4.9	-14.3
Private finance		55.2	281.3	178.1	248.4
Long-term debt flows (net)		16.6	82.5	7.4	22.9
Short-term debt flows (net)		13.2	37.4	-7.9	49.0
Portfolio investment		3.4	32.9	12.4	24.8
Foreign direct investment		22.1	128.6	166.2	151.8
Outflows		53.5	200.5	226.6	346.9
Accumulation of reserves		32.4	90.4	46.8	291.9
→ FDI from developing countries		5.0	10.0	16.5	24.0
Other items/errors and omissions		16.1	100.1	163.3	31.0
Total		53.5	106.6	-20.4	-74.8
Memo item: Aggregate current account balance of developing countries					
Excluding grants		-53.5	-106.6	20.4	74.8
Including grants		-28.1	-83.6	43.6	112.8

Source: World Bank, *Global Development Finance* 2005 and IMF, *International Financial Statistics*, annual yearbook.

INVESTMENT

Investment

- Investment is central to economic growth and development.
 - *Public investment* generally focuses on roads, infrastructures, schools, health facilities.
 - *Private investment* involves creating new jobs, new technologies, and growth in economic output.
- Question – what leads to “good investment” (i.e. Investment that promote growth either of individuals, large corporation, or the country as a whole?)
- Investment decision making can be made by using *cost-benefit analysis* (or *project appraisal*).
- Investment decision can also be affected by *ownership*.

who are the owners?

Barriers to Productive Public and Private Investment

- **Political instability**
 - Lowers the rate of return and increases the risk of project
- **Macroeconomic instability**
 - Drives away from investment that promote long-term growth and toward investments that are protected from inflation
- **Rent-seeking behavior** – activities by private and public officials to extract value from a project without providing any compensation in return or contributing any increased productivity to the project.
 - **Excessive or inappropriate regulations**
 - **Corruption**
 - These can lead to low rate of return

Foreign Direct Investment

- **Foreign Direct Investment (FDI)** is a long-term investment in which a non resident entity exerts significant management control over an enterprise ⁱⁿ the host country.
- **Portfolio equity** is another cross-border investment, in which investors takes a smaller stake in an enterprise, either through a direct purchase or a stock exchange. → short-term investment
- Most FDI in developing countries is undertaken by multinational corporations (MNCs).
 - MNC – A firm that controls assets of enterprises located in countries other than its home country in which foreign operations are central to its profitability.

FDI Patterns and Products

- Three broad categories of FDI:

1. Natural resource-based activities

- Petroleum, minerals *eg. De Beers invests in diamond mines in S. Africa.*

2. Manufacturing and services aimed at the domestic market in the host country *eg. cars, electronic parts*

- Consumer goods, capital-intensive goods, and some services

3. Labor-intensive manufacturing aimed for export on world markets

- Apparel, electronics, food processing, footwear, etc.

*eg. cloth factories in Vietnam
Nike*

Benefits of FDI

- FDI is a **source of capital** that adds to total investment, and it is usually **more stable** than other forms of private foreign capital. *b/c it's long-term.*
- In addition to new capital, FDI could add to the demand for labor and **generate employment**.
 - Note that the impact of FDI on wages and **working conditions** is still controversial. (Ex. **Maquiladora** in Mexico) *labor exploitation, child labor*
- FDI could help **increase specialization in production**, especially for FDI in manufactured exports.
- It can also **bring access to world markets**.
- Most important potential benefits is the **transfer of technology, skills, and ideas**; that is, it creates **positive externalities** or “**spillovers**”
 - Through the **training of workers and managers**

Drawbacks of FDI

- MNCs might create air or water pollution or cause other environmental damage, generating negative externalities in host countries.
 - FDI could be a source of “labor exploitation” if the host country does not have strong regulations.
 - FDI in protected (or inefficient) activities can lead to economic losses.
 - Ex. FDI in petrochemical industry where an MNC can be profitable only with government regulations that limit competition
 - Lost of local control over business
 - MNCs can drive local businesses out of market
- ↪ restrict competition → inefficiency

Questions for Discussion

- Should developing countries rely on FDI in order to promote economic growth?
 - Pros?
 - Cons?
- Can you think of any past evidences that show either positive or negative consequences (or both) of FDI on economic development?

FDI and Growth

- General findings about this relationship is mixed, but there's a pattern.
- FDI focusing on manufactured exports tends to have a positive relationship with growth and development.
 - Efficient and conducive to adoption of new technologies, training new workers, and positive spillovers.
- FDI for natural resources or for firms producing in protected domestic markets is less likely to be beneficial or even create economic losses for the host country.
 - Inefficient operations
 - Dependent on the impact of the industry (for natural resource based industry)

Policies toward FDI

- *Improve the general environment for all kinds of investment*
 - Improve the general infrastructure and improve the quality of labor
- *Introduce specific policies and incentives to attract FDI*
 - Establish industrial parks or **export-processing zones (EPZs)**
 - Provide **specific incentives**, such as protection from import competition (tariffs and quotas), **tax holidays** (tax exempts on corporate income)
- *Impose requirements on MNCs*
 - Requirement of specified share of equity to local partners to form “**joint ventures**”
 - **Domestic content requirement** – require MNCs to purchase a certain share of inputs locally