Monday, March 7, 2022

Day 1

Syllabus

Material

Exercises

Please feel free to ask, make comments, etc. Raise hand using Zoom; or wave; or just speak.

Economic Development

How measure economic output?

GDP: Gross Domestic Product

"money value of final goods and services produced and marketed in an economy in a year"

- Money value. If not valued in money terms, not included. A lot of home-produced services are not included (e.g. minding your own children). If you pay someone to mind your children, it does enter GDP!
- FINAL goods and services only (so as to avoid double counting of the inputs).

	Farmer, cotton	Textile mill, cloth	Garment factor, shirts	Retailer	Total
Sales (USD)	6	13	18	30 = GDP	
Value added	6	7	5	12	30
	Millet	Bread			
Sales	2	5			
Value added	2	3			5

Value added = value of what you sell – cost of inputs that you buy. Represents the value that you add to the inputs.

GDP measures the value added by economic activity in an economy in a year. It could be measured by looking at the final sales to consumer, or by summing up the value added by every economic agent.

- Goods and services must be produced in the year. Don't include sales of old houses; in general, don't include transfers of existing assets when measuring GDP.

- Marketed (usually). In poorer countries, we also include home-consumption of home-produced food.

We may measure GDP in practice by looking at spending undertaken in the economy.

GDP = C + I + G + X – IM

C: consumption spending. Bread, milk, rice, beer, haircuts, bus service, etc. Three-quarters or more of GDP usually. Some of this spending goes on imported goods (e.g. foreign beer, flour, gasoline, etc.)

I: investment (mainly private, also government investment). Investment goods are goods that will deliver services over many years. Truck. Electric motor. Factory. House. Hotel. Essential for economic growth. Typically about a sixth of GDP.

> Question: If you build your own house, is it included in GDP? In theory, yes; in practice, no. If you buy cement to help build the house, the cement will be included in measured GDP. If water comes from well or a river, and is "free", not counted in GDP. Many environmental goods are not included in GDP. If the water is paid for, then it is included in GDP.
>
> Wealth vs. income. Wealth is a stock of assets: land, big house, car, jewelry. Income is a flow, come from earnings (labor) or profits (capital assets that you own).
>
> About half of investment is needed to replace worn-out capital: depreciation. E.g. computer. Lasts about 5 years, after which it needs to be replaced. That calls for new investment. If we don't replace capital as it wears out, the capital stock would shrink, and the ability of the economy to produce would diminish.
>
> Investment = depreciation + net investment

G: government spending on goods and services. Education. Health care. Road construction. Police. Army. Firefighters. Tourist office. Diplomatic services. About a tenth of GDP usually.

X: exports of goods and services. E.g. Tourists come to The Gambia. Airlines. Exports of peanuts. Oil exports.

-IM: imports of goods and services.

Ghana. World Bank's World Development Indicators. Billions of cedi.

GDP	= C	+ I	+ G	+ X	- IM
409	323	69	31	124	137
100%	79%	17%	8%	30%	- 34%

Find data from World Bank.

How well-off is a country?

Typically compare GDP per capita. = GDP / population.

We would like to compare GDP per capita across countries.

But: GDP in Senegal is in CFAF, in Ghana in cedis, in US in USD, etc. Need a common currency.

Solution 1. Use exchange rates.

US: $65,543 per capita

CFAF per USD	602.92
Senegal GDP in USD	25,087,558,880
Senegal population	16,740,000
Senegal GDP per capita in USD using exchange rate	1,499

Problem: Cost of living in Senegal is cheaper than in the US.

In order to compare properly, we need to use a common cost of living. This adjustment is called the purchasing power parity (PPP) adjustment.

Worked example, India

Assume 60 rupees per USD.

	US ($)			India (rupees)		
	Price	Quantity	GDP	Price	Quantity	GDP
TVs	500	10,000,000	5 billion USD	30,000	10 m	300 billion Rp
Teachers	40,000	100,000	4 billion USD	120,000	1 m	120 billion
Total			9 billion USD			420 billion Rp
Population			1 million			10 million
GDP/cap			9,000			42,000
In USD			**$9,000**	60 Rp/USD		**$700 / cap**
Value in US prices						
				$500	10 m	$5 billion
				$40,000	1 m	$40 billion
Total						$45 billion
						10 million
						$4,500 / cap

Televisions are a traded good, so price is similar everywhere (in USD).

Teachers are non-tradeable.

What PPP does is it re-values GDP using a set of international prices (denominated in US dollars). The international prices are a compromise, trying to get an average of prices from around the world.

Country Name	Country C	Series Name	2019 [YR20
Burkina Faso	BFA	GDP per capita, PPP (constant 2017 international $)	2,176
Niger	NER	GDP per capita, PPP (constant 2017 international $)	1,224
Nigeria	NGA	GDP per capita, PPP (constant 2017 international $)	5,135
Cote d'Ivoire	CIV	GDP per capita, PPP (constant 2017 international $)	5,213
Senegal	SEN	GDP per capita, PPP (constant 2017 international $)	3,361
Mali	MLI	GDP per capita, PPP (constant 2017 international $)	2,322
Togo	TGO	GDP per capita, PPP (constant 2017 international $)	2,122
Ghana	GHA	GDP per capita, PPP (constant 2017 international $)	5,540
Gambia, The	GMB	GDP per capita, PPP (constant 2017 international $)	2,225

Roughly, PPP measures of per capita incomes for low-income countries are about twice as high as GDP per capita measured using exchange rates.

GDP per capita is not a very good measure of wellbeing (although much better than nothing!). Why?

1. Most non-marketed goods and services are not included.
2. Leisure is excluded.
3. Environment. Services of the environment are excluded from GDP. Damage to the environment ("natural depreciation") is not included. Danger here is that if it is not measured, it gets ignored.
4. Does not measure income distribution.

UNDP: United Nations Development Program

Human Development Index (HDI). Compares countries, using a mixture of information on health (life expectancy at birth), education (years of schooling), and income (GNI/capita).

Comparing information on GDP per capita is OK, but is it sustainable?

Sustainable development = development **"that meets the needs of the present without compromising the ability of future generations to meet their own needs."** 1987 Brundtland Report. "Our Common Future"

- Doesn't define "development" very precisely.
- Allows substitution.

- Copper. Main use is electrical wires. Using it up. But we have invented fiber optic cable, and more efficient ways to transmit electricity.

Economic Development: Why are poor countries poor? Make some suggestions on the Chat.

1. **Lack of resources to invest and grow.**

We saw: $GDP = C + I + G + X – IM$

$GDP = C + S + T$

GDP is used for consumption or is saved or goes to government as taxes.

We have $GDP = GDP$

So: $C + I + G + X – IM = C + S + T$

So: $I + G + X – IM = S + T$

So: $I = S + (T – G) + (IM – X)$

Investment = Private savings + government budget surplus ("government saving")

+ current account deficit ("foreign saving")

Often argued that poor people don't have enough resources to save, so S is low. Governments don't save (low tax revenue, lots of spending). Foreign saving is unpredictable. Result: low investment (and growth).

However, we saw that investment is typically about a sixth (16%) of GDP. Plenty for OK growth.

2. Lack industry
3. Human resources
4. Poor governance (including war, corruption)
5. Weak institutions
6. Population
7. Climate
8. Culture. Lazy
9. Natural Resources. [Other exploit their resources]
10. Colonization
11. Not consuming locally
12. Lack of technology