

UNIVERSITY OF DAR ES SALAAM BUSINESS SCHOOL



DEPARTMENT OF FINANCE FN101: PRINCIPLES OF MACROECONOMICS SEMINAR QUSTION: GROUP 01

SEMINAR LEADER: **Mr. LOIBOO**

SEMINAR VENUE: SC 111

SEMINAR HOURS: 1100 - 1155

PARTICIPANT;

S/N	NAME	REGISTRATION NO.	COURSE	SIGN
01	SWAI, ELIAS EMMANUEL	2020-04-11951	Bsc in Actuarial Science	
02	CHOMBOCHO, PAUL OBADIAH	2020-04-01236	Bsc in Actuarial Science	
03	KUMARI, LESHINGA LENDINGA	2020-04-04421	Bsc in Actuarial Science	
04	MGETA, GLORIA J	2020-04-06830	Bsc in Actuarial Science	
05	MASALU, JONATHAN JULIUS	2020-04-05882	Bsc in Actuarial Science	

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QN1. EXPLAIN WHY EACH OF THE FOLLOWING SHOULD BE TAKEN INTO ACCOUNT WHEN GDP DATA ARE USED TO COMPARE THE LEVEL OF WELLBEING IN DIFFERENT COUNTRIES

- (a) population level
- (b) the distribution of income
- (c) the amount of production that take place outside the market
- (d) The length of average work week
- (e) Environmental pollution

Ans

Gross domestic product (GDP) is the total monetary or market value of all the finished goods and services produced within a country's borders in a specific time period. It a broad measure of overall domestic production.

Level of well-being is the standard of people's lives in a country, it is a measure of how people are able to meet their daily basic needs. The GDP can be used to determine the level of well-being of people in a country. When comparing GDP data of different countries, the following factors should be taken into account and why they should be taken into account.

(a)

Considering two countries with the same GDP, by looking at the population count, the level of well-being of a country can be determined. For the country with a huge population the level of well-being is expected to be lower than that of a country with less population, this is due to the GDP per capita of each individual being less for the country with greater population than that of a country with less population. For example Canada and India have approximately the same GDP of roughly 1800 billion dollars, whereas the population of Canada is smaller compared to that of India the GDP per capita of Canada is way higher suggesting that the standard of living of Canadians is higher than that of Indians.

(b)

The reason for distribution of income;

when GDP data are used to compare the well-being of two countries, If disproportionate shares of national income is earned by a small minority of the households, for example when the top 10% of house holds earn 80% of total income in a country then the well-being of such a country is not as well as a country with equal distribution of income among its citizens but the same GDP. This is a case in countries like India where most of the income generated is distributed among the few rich leaving the lower class people in bad living standards differently from countries like Ireland where income is equally distributed among citizens as a result, citizens in Ireland have higher standards of living.

(c)

The amount of production takes place outside market,

Economic activities that take place in informal sector (formal babysitting, illegal drug sales) market or blank market economy. Non market transaction is not recorded, taxed or officially monitored by the government because of this the outcome and income generated are not included in the calculation of national GDP. For a country with a lot of non-market activities but having the same GDP as a country with fewer of these activities, it is expected that such a country has a poor well-being of its individuals than the one with fewer non-market activities since its individuals work a lot more yet what they produce is still comparable to a country where individuals do not seem to work more harder.

(d)

GDP itself does not give a true reflection of the well-being of the inhabitants thus factor such as length of the average work week comes into account. Countries of same GDP but different working hours have different level of well-being of the people, the shorter the work week the better the well-being as other hours may be spent in other activities like leisure. For example, under comparable GDP countries, Sweden has 6 hours working time while Poland has 8 hours working time. Hence Sweden has a higher level of well-being. Both their GDP lies at 500 Billion USD.

(e)

GDP shows the output income of the country not clearly specifying the life of inhabitants thus why the study of well-being other factors like level of environmental pollution comes into account. Countries of same GDP, with different level of environmental pollution also have different levels of well-being. The higher degree of environmental pollution the lower the well-being of the inhabitants that may cause steady rise of diseases and premature deaths as in Bangladesh, the world's most polluted country as stated by Dr. Shahriar of Bangladesh environmental Agency. Unlike less polluted countries like Finland of same comparable GDP but has less environmental pollution scenarios, exposure to diseases and deaths is low hence the well-being of its citizens is a little bit advanced. Their GDP lies at 300 Billion USD.

QN02: Assume the following

- 1) UDSM is an autonomous country.
 - 2) The only good/service produced at UDSM is undergrad(freshmen)education.
- (a) Filling the blacks in the table.
 - (b) Find the growth rate of nominal GDP for 2017,2018 and 2019.
 - (c) Find growth rate of real GDP (using 2015 Shs) for 2017, 2018 and 2019.
 - (d) Find the growth rate of real GDP (using 1985 shs) for 2017, 2018 and 2019.
 - (e) Why are your answers in b), c) and d) diff /same?
 - (f) Compute inflation using GDP deflator (using 2015 shs) for 2017, 2018 and 2019
 - (g) Beside GDP deflator what other price indices are you use in measuring inflation?
 - (h) Which one is the best? Why?

ANS

YEAR	# OF UDSM FRESHMEN	PRICE(TUTION)	NOMINAL GDP	REAL GDP (1985 Shs)	REAL GDP (2015 Shs)
1985	300	2,000,000	600,000,000	600,000,000	6,000,000,000
2015	900	20,000,000	18,000,000,000	1,800,000,000	18,000,000,000
2016	1000	21,000,000	21,000,000,000	2,000,000,000	20,000,000,000

2017	1100	23,000,000	25,300,000,000	2,200,000,000	22,000,000,000
2018	1000	25,000,000	25,000,000,000	2,000,000,000	20,000,000,000
2019	1200	28,000,000	33,600,000,000	2,400,000,000	24,000,000,000

b)

$$\text{growth rate} = \frac{\text{Nominal GDP for current} - \text{Nominal GDP for base}}{\text{Nominal GDP for base}} \times 100\%$$

FOR 2017

$$= \frac{25,300,000,000 - 21,000,000,000}{21,000,000,000} \times 100\%$$

$$= 20.47619\%$$

$$= 20.47619\%$$

FOR 2018

$$= \frac{25,000,000,000 - 25,300,000,000}{25,300,000,000} \times 100\%$$

$$= -1.18577\%$$

$$= -1.18577\%$$

FOR 2019

$$= \frac{36,000,000,000 - 25,000,000,000}{25,000,000,000} \times 100\%$$

$$= 34.4\%$$

$$= 34.4\%$$

c)

BASE YEAR=2015

FOR 2017

$$= \frac{23,100,000,000 - 18,000,000,000}{18,000,000,000} \times 100\%$$

$$= 28.33333333\%$$

=28.333%

FOR 2018

= $\frac{20000000000 - 18000000000}{18000000000} \times 100\%$

=11.111%

FOR 2019

= $\frac{24000000000 - 18000000000}{18000000000} \times 100\%$

=33.333%

d)

Growth rate = $\frac{\text{Real GDP for current} - \text{Real GDP for base}}{\text{Real GDP for base}} \times 100\%$

Of real GDP Real GDP for base

BASE YEAR=1985

FOR 2017

= $\frac{22000000000 - 6000000000}{6000000000} \times 100\%$

=266.666%

FOR 2018

= $\frac{20000000000 - 6000000000}{6000000000} \times 100\%$

233.333%

FOR 2019

= $\frac{24000000000 - 6000000000}{6000000000} \times 100\%$

=300%

e)

In part (b) the base years were changing relatively, growth rate is compared relative to the previous years such that effects to change in price are noticeable

In part (c) the base year was 2015, growth rate is compared relative to GDP of 2015

In part (d) the base year is 1985, growth rate is compared relative to GDP of 1985 which was low thus very high growth rate

f)

BASE YEAR=2015

GDP DEFLECTOR= $\frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100\%$

Real GDP

FOR 2017

$= \frac{25300000000}{23100000000} \times 100\%$

=109.523%

FOR 2018

$= \frac{25000000000}{20000000000} \times 100\%$

=125%

FOR 2019

$= \frac{33600000000}{24000000000} \times 100\%$

=140%

g)

The other price indices which are used to measure inflation beside GDP deflector are as follow:

1) Weighted price index

Is the one in which a stock index in each company is included in the index makes up a fraction of the total index proportional to that company's share stock price per share. In simplest form, adding the price of each stock in the index and dividing by the total numbers of companies. A stock with higher price will have more weight than the stock with low price.

2) Consumer price index

It measures changes in the price level of a weighted average market basket of consumer goods and services purchased by households

MATHEMATICALLY

$$CPI_t = \frac{C_t}{C_o} \times 100\%$$

C_o

CPI_t = consumer price index in current period

C_t = cost of market basket in current period

C_o = cost of market basket in base period

h)

The best way is GDP deflator because it picks up the prices of all goods and services produced