2021 Notes - Economic Indicators/National Income Accounting

**Contents**

1. List of Definitions

2. Use of National Income Figures

3. Difficulties in using National Income to derive a country’s SOL

4. Difficulties in using National Income to derive the SOL of two countries for comparison

5. Can GDP growth rate (rise in GDP) be used as indicator that the standard of living has improved?

6. Economic Indicators to Assess the Economic Performance of a Country

7. Economic Indicators to Assess the Competitive Edge of the Economy

8. Economic Indicators to Assess the Standard of Living of the Economy

9. Trend Analysis

10. Inter-relationship of Economic Indicators

11. Areas of Discussion

## List of Definitions

### Nominal Gross Domestic Product (GDP)

* + - The monetary value of all final goods and services produced **within a country** within a given time period, expressed in current price

level before corrected for inflation.

* + - Measures from a territorial perspective.

### Nominal Gross National Product (GNP)

* + - The monetary value of all final goods and services **produced by nationals** within a given time period, expressed in current price level before corrected for inflation
		- Measures in term of income of all citizens in and outside of the country. (Citizen and resident perspective) – permanent resident

### Real Gross Domestic Product

* + - The real value of all final goods and services produced **within a country** within a given period of time, expressed in base year price level after it is corrected for inflation.
		- Formula:
		- Nominal GDP = 400, inflation rate is 200, real GDP is 200.

Real GDP = Nominal GDP x

Base Year Price Index

Current Year Price Index

### Real Gross National Product

* + - The real value of all final goods and services **produced by nationals** within a given period of time, expressed in base year price level after it is corrected for inflation
		- Formula:

Base Year Price Index

Current Year Price Index

Real GNP = Nominal GNP x

**Qn: What is meant by GDP at 2000 base year price level?**

-Real GDP

-Define real GDP – total monetary value of production of goods and services within a country, expressed in real term.

🡪GDP @ PPP🡪Real GDP for comparing real GDP among countries

GDP at purchasing power parity – discounted based on exchange rate (which is based on price level)’

### Net Property Income from Abroad (NPIA)

* + - Income earned by local firms and individuals abroad less income earned by foreign firms and individuals locally
		- For Singapore, NPIA is negative, as contribution of foreign workers is much more extensive than contributions from Singaporeans and local MNCs abroad
		- GDP + NPIA = GNP, for SG, NPIA is always negative – GDP > GNP.

### Personal Income

* + - The flow of income that is earned by the individual after compulsory deduction (CPF) but **before deduction for income tax**.

### Personal disposable income

* + - The flow of income available to individuals for spending and saving (CPF) **after compulsory deduction and deduction for income tax** and additions from transfer payments such as child benefits or subsidy.
		- Personal disposable income determines the amount of consumption of an individual🡪Yd (disposable income) 🡪Determines purchasing power
		- Higher PYd – higher purchasing power – higher SoL – however, real GDP per capita income is still the economic indicator for SOL

### Standard of living (SOL)

* + - Measures the average quality of life of a population (well-being) which includes the material and non-material aspects of life.

### Quantitative standard of living(material SOL)

* + - SOL measured in terms of the purchasing power which will reflect the level of material comforts and this is commonly represented by the **real per capita income / real GDP per capita**
		- Only real per capita income/GDP can be used as the economic indicator that directly determine the quantitative value of SOL

### Qualitative standard of living (non-material)

* + - SOL measured in terms of the quality of life, which will reflect the intangible aspect of comfort of the life of the people and this is commonly represented by the mortality rate, birth rate, level of working hours and stress and the level of externalities in the country consumption and production. (measured by HDI and MEW)

### Real per capita Income

* + - Real income of an individual in an economy
		- Formula:

Real per capita income =

Real GDP/GNP

Population figure

### **Qn: Does economic growth (rise in GDP) indicate an improvement in SOL?**

EG – a. Real GDP↑🡪↑real GDP per capita🡪improvement in SOL (% increase in GDP > % increase in price level or population figure) – higher purchasing power – **more income is shared among the given population** (4% - 2% pop growth and 1 % inflation – improvement in SOL)

 b. More goods & services for consumption for the given population

 c. More tax revenue to improve infrastructure 🡪 improve SOL (a more convenient and comfortable way of life with better infrastructure

### Human Development Index

* + - Measured the standard of living in terms of the progress of the well-being of the individuals
		- Includes:
* Life expectancy at birth
* Adult Literacy
* Adjusted real per capita income

### Measurement of Economic Welfare

* + - Measured the standard of living in terms of the monetized value of the qualitative aspect of SOL – Green GDP (GDP – negative externalities + positive externalities)
		- Includes:
* Discounting for externalities (traffic jam, pollution)
* Adding of non-marketed activities (subsistence activities)
* Adding the value of leisure
	+ - Problems with the measure are associated with difficulty in assigning values to non-marketed activities and leisure. Both MEW and HDI are indicators of qualitative aspect of SOL.

**Limitations of Human Development Index as a measurement of SOL**

1. Quality of improvement in the well-being is difficult to quantify as the standard of education may be different at different level

2)lack of a common yardstick to measure for countries against countries – value of leisure (movie ticket is $12 in SG but 30 cents in the village of India)

**Limitations of Measurement of Economic Welfare as a yardstick for SOL**

1. the value of monetization of the qualitative variable of SOL may vary due to the quality of services as seen in the form of leisure like cinema.
2. price level of goods and services that determines the value of leisure will experience inflation and distort the values of leisure

**Explain whether non-material SOL can adequately measure standard of living. (15)
1. Explain how non-material SOL is used to measure SOL (like HDI and MEW) (4)**

**2. why non-material SOL cannot be used to measure SOL (5)
3.Explain why material sol is needed to measure SOL (using the real GDP per (6)**

**- how material aspect of SOL is measured (how real GDP is derived and link to purchasing power and material comfort)**

### Consumer Price Index (CPI) – measure inflation and deflation

* + - Measures the change in price of a fixed basket of goods and services commonly purchased by households in a given time period.
		- Uses of CPI (indicator for inflation rate)
* It is used as a deflator in compilation of real economic figures, e.g. real GDP per capital.
* CPI is also used in economics policy formulation and business planning.
* It determines the cost condition which will affect the production capacity. Inflationary cost condition will mean that the production capacity is experiencing rising costs condition which makes economic growth unsustainable. Rising prices will also affect the competitiveness of the economy as the export price level and cost of FDI is affected by the price level.
* Rising price will lower purchasing power 🡪 ↓level of material comfort🡪worsen SOL

### Cost of living – determine minimum wage

* + - The amount that is spent in order to maintain a certain way of life

### Cost of living index

* + - A theoretical price index that measures the amount one needs to spend in order to maintain a certain level of satisfaction.

### Labour Force

* + - Working population (both active and inactive)
		- Refers to both employed and unemployed individuals (aged 15 and above) that are willing and able to work.

Inactive – students / housewife

### Labour Participation Rate

* + - Conversion of inactive working population to active working population
		- Proportion of labour force that are employed.
		- Formula:

Labour Participation Rate = 100 x

Labour Force (active)

Working Population

**Qn: List the effects of low labour participation rate**

* Lack of labour supply🡪↑wage rate
* Lack of working citizens🡪↑Govt expenditure

↓ Tax revenue

* + - The ratio of unemployed people to the labour force or active working population
		- Unemployed people are individuals aged 15 and above who are unemployed but are willing and able to work.
		- Formula:

Unemployment Rate = 100 x

No. of unemployed people

 Labour Force (active working population

### Working Population

* + - Refers to the proportion of population who are available for employment, inclusive of the economically inactive.

### GDP Growth Rate

* + - The amount at which GDP increases/decreases (usually measured annually) 4% - 2019 is 400bn 2020 is 416bn

### Real GDP Growth Rate

* + - The rate at which real GDP increases/decreases
		- Economic Growth Rate – Inflation Rate = Real Economic Growth Rate – indicates the percentage change real output

### Balance of Trade (X-M)

* + - Revenue from exports less expenses spent on imports (of goods and services)
		- positive BOT – surplus BOT, negative BOT – deficit BOT

### Balance of Payment

* + - Records the flow of currency due to trade, investment, flow of savings, equity transactions
		- Inflow of money from abroad less outflow of money from the country
		- Divided into current account, financial account and capital account
		- **Current account** records monetary transfer for exports and imports of goods and services, income flows and net transfers in and out of the country.
1. Balance of Trade – (X-M) of physical goods
2. Service Balance – Services - tourism
3. Income Balance – Flow of dividends, profit
4. Transfer Balance – Flow of remittance of wages

For SG, income balance and transfer balance are often in deficits as there are a lot of foreign companies and foreign workers

* + - **Capital account** records all inflows and outflows of funds due to financial activities like acquisition and disposal of fixed assets, shares, government grants for overseas project, etc. FDI determines the level of investment – determine the value of AD – affect the value of GDP
		- **Financial account** records flow of funds due to transfer of saving and equity transaction (hot money) – foreigners’ saving in local bank
		- **Use the data from BOP to assess economic performance**

**BOT surplus implies that there is an increase in aggregate demand which will raise real GDP, production and employment. (Balance of trade = X-M)**

**Increase in import of goods and services will raise SOL**

**Increase in import of resources will raise production capacity and potential growth**

Exchange Rate

* + - The measure of one country’s currency in another country’s currency.

### Nominal Effective Exchange Rate

* + - Value of an individual country's currency relative to a basket of major currencies in the index, before adjusting for the effects of inflation.

### Real Effective Exchange Rate

* + - Value of an individual country's currency relative to a basket of major currencies in the index, after adjusting for the effects of inflation.

### Gini Co-Efficient Ratio

* + - Measure of inequality of wealth/income distribution.
		- It is measure as a ratio between 0 and 1.
		- A low Gini co-efficient indicates more equitable income.

### Wage to GDP Ratio

* + - Proportion of total wage earned individuals employed to GDP
		- Ratio – 0 to 1
		- Higher the ratio, the more even the income distribution

(50% of income from wage shared by 80% of working citizens)

1. Uses of National Income figures

### Measure Economic Growth

* + - To compare economic activity within the country, nation income figures can be used to derive the growth rate
		- For e.g.

GDP growth rate (2008) = 100 x

GDP (08) – GDP (07)

 GDP (07)

|  |  |  |  |
| --- | --- | --- | --- |
| **Year** | **2000** | **2001** | **2002** |
| **Year-on-Year (pa)** | 3% 103m | 2% 105.06m | 1% 106m |
| **Base Year (1999)** | 101% (101m) | 105% (105m) | 103% (103m) |
|  |  |  |  |

**For comparison based pa (per annual)**

For year on year, GDP is highest at year 2002. GDP growth rate decreases. GDP increases at decreasing rate.

2 countries – similarity and difference

1 country – general trend / refinement (pattern of trend)

**For comparison based on Base Year**

Fr base year comparison (1999) – GDP increases from 2000 to 2001 and decreases from 2001 to 2002. GDP is highest at 2001

Describe the trend of Singapore GDP from 2000 to 2002, based on year on year.

### To derive the real per capita income for valuation of standard of living of the people (time comparison – 1 country with 2 different time periods) – Singapore real GDP per capita in 2000 to 2020

* + - Using real per capita income enables the economist to understand the amount of goods and services that the citizens can enjoy with his purchasing power.

### To use the value of the real per capita income to compare SOL between countries (space comparison – 2 countries for the same time periods) Singapore and Malaysia in 2020

* + - International organisation like IMF, World bank uses National Income figures to identify between developed and developing countries.
		- Use of national income figures as benchmark of SOL to identify which countries needs help.

### To indicate the rate at which the economy is growing as the value of national income will depict the actual production capacity

a. AS-AD – represented by value of real GDP

b. PPC🡪the attainable point of production

move within the PPC from one combination to another combination – actual growth

outward shift of PPC – potential growth – expansion of production capacity – amount of resources for production

### To derive information on the level of economic activities in both the internal and external aspects of the economy NY = AD =C+I+G +(X-M)

* + - Expenditure statistics expenditure statistics shows the proportion of consumption in relation to investment expenditure will indicate future growth.
		- The export contribution can also be measured by looking at (X-M) of the expenditure statistics.
		- Degree of openness – total trade to GDP = (X+M)/GDP = 5 times
		- Show the degree of government participation in economic growth.

(i.e. govt expenditure as a percentage of GDP) – 17%

**Qn: Why government expenditure decreases over the years? (17% of GDP)**

High degree of privatisation

* + - US economy is highly driven by consumption

### To determine the contribution of each sector to GNP

* + - Output Statistics
		- Can derive information on the performance of the various sectors of the economy so as to devise suitable economic policies to propel the growth of the economy
		- To derive information to develop an effective industrial policy to raise the productivity of these sectors.
		- Can reflect the degree of diversification and specialization

Sectoral performance analysis (main industries for Singapore – pharmaceutical/banking and finance)

**Qn: Why is there a need for diversification of the economy?**

* Widen scope of economic growth
* Provide a greater variety of employment opportunities
* More areas of economic development
* Reduce vulnerability of the economy in terms of dependency on fewer sectors of growth

### To assist the government in formulation of taxation and social policy

* + - Income statistics (wage, rent, profit, interest rates)

Government

* Information of the distribution of income/wealth can be used to formulate appropriate income tax policy and welfare programme to improve welfare of the people and attain greater equal income distribution.
* To assess the country’s source of income so as to help the government to derive its source of income for public expenditure from the income statistics.

Private Sectors

* To guide private enterprises in formulating their policies
* Help the producers and investors understand the economic conditions in term of the market size, nature of competition and others, which will help them to formulate production and investment policy.

### 2.8. **Limitation of GDP figures**

* + - The underground economy especially if the economy has a lot of illegal activities and production like illegal gaming and rental services of pirated CDs
		- Valuation of certain items may differ for certain nations such as the treatment of interest from bonds is considered non-income but interest from banks is considered income and taxable income

2.8.1 Weak administrative systems (cannot apply to SG)

* + - Obtaining correct and reliable information is difficult as a result of the weak collection system.
		- Danger of double counting due to sub-standard accounting procedure and system
		- The presence of non-marketed items due to subsistence activities or difficulties in monetizing the output
1. Difficulties in using national income to derive a country’s SOL (Problems of Time Comparison) - in comparing SOL of one country over 2 time periods

### Changes in the Price Level

* + - Affect the value of real per capita income since increase in price level would mean a fall in the purchasing power of the citizens
		- Inaccuracy of price index

### Growth of the Population

* + - The real per capita income will fall as the total income is distributed over larger population

###  If percentage increase in GDP or economic growth rate is lesser than the percentage increase in population growth rate and inflation rate, the real per capita income will not increase – SOL has not improved

* E.g. EG (4%) < pop. growth (3%) and inflation rate (2%) – real GDP per capita will not rise – as the gain in NY is shared lesser by the citizens

### Distribution of Income Not reflected in National Income Figures

* + - If the distribution of the national income is not even, the actual average income will not be a good reflection of the average citizen’s income. This means that the increase in national income is only enjoyed by a small group of the citizens.

### Lack of the consideration of the composite of expenditure

* + - If the increase in national income does not lead to greater production of more merit and public goods, it does not generate an improvement in standard of living

### Lack of consideration of the quality of products and goods and services

### Length of working hours and conditions of work not shown

### Unrecorded and undeclared items. (moon lighting)

### Social costs and benefits not accounted for

* + - It may be higher due the presence of externalities which may undermine the welfare of the consumers

*Note: 3.5-3.8 – Criticise why real GDP per capita cannot assess qualitative aspect of SOL*

1. Difficulties in Using National Income to Derive the SOL of Two Countries for Comparison (Problems of Space Comparison) (difficulties in comparing SOL between two countries)

### Different Structure of Prices (how inflation rate is determined)

* + - Due to differences in price index – may undermine the calculation of real per capita income
		- Difficulty to derive a similar basket of goods for comparison

### Different Rates of Foreign Exchange (Use PPP)

* + - The value of real per capita income may be over-valued or under-valued due to the fluctuation of the exchange rate
		- Purchasing Power Parity determined exchange rate is used to denote the denomination rate

### Different Treatment of Some Items Coverage of Items in National Income Estimates

* + - Different countries have different ways on how the value of an item is calculated, contributing to diversity in calculation and interpretation of the values
		- Interest payment from Singapore is not considered taxable income but it is considered taxable in US

###  Different Sources of Statistical Data

### Lack of the Consideration of the Composite of Expenditure

* + - If the increase in national income does not lead to greater production of more welfare goods, it does not generate an improvement in standard of living

### Distribution of Income is Not the Same

* + - If the distribution of the national income is not even, the actual average will not be a good reflection of the average citizen’s income. This means that the increase in national income is only enjoyed more by a small group of the citizens in one country than another

### Difference in Quality of Goods

* + - The consumption of the good and services may be the same but the quality of the services of consumption will differlack of consideration of qualitative aspect of SOL
1. Can GDP growth rate (rise in GDP) be used as indicator that the standard of living has improved?

Since the real per capita income will be determined by the rise in GDP, it implies that the economy is experiencing actual economic growth, and thus, the rise in economic growth will lead to an improvement in SOL.

* Explain how ↑ GDP will lead to improvement in SOL
1. The rise in GDP will mean that there is a higher level of real per capita income which implies that the purchasing power of the people has improved. This will lead to a higher level of material comforts and enjoyment and this implies that their SOL has improved.
2. The increase in GDP would also imply that there is an increase in the total production capacity of goods and services for the citizens and residents to consume, implying that there is a higher level of material comfort.
3. A higher level of national income will enable the nation to attain a higher level of tax revenue and this will provide more funds for government to embark on infrastructural and institutional development. This will make their lives more convenient and comfortable and thus raise the SOL.
* Problem of inaccuracy of NY figures

However, the rise in national income may not lead to a rise in SOL if the value of NY figures is not accurate due to weak administrative system, double-accounting and under-declared income.

Singapore – presence of illegal activities/pirated transactions -understating the value of real GDP

* Problem of Time Comparison

Furthermore, if the **percentage increase in price level or population or both are to rise above the percentage increase in GDP, the percentage increase in real per capita income will not rise**, implying that there is no improvement in SOL.

The increase in national income may not imply that the SOL of the whole nation has improved since the **increase in real per capita due to a rise in GDP may not take into consideration** of the actual distribution of income. This means that not all the citizens will experience rise in real per capita income, indicating an increase in purchasing power.

It is also **important to take note of the composition of production.** Even if the GDP increases does contribute to growth in production capacity, the **low level of production of welfare good such as does not improve the lives of the people.**

Lastly, it is imperative for the economist to **take note of the qualitative aspect** of SOL such as the stress level and level of externalities. Therefore, qualitative indicators like MEW or HDI will be needed as **MEW reflects the monetized value of intangible aspects of SOL, while HDI reflects the progress of well-being of the individuals.**

1. Economic Indicators to Assess the Economic Performance of a Country
	* + Economic Performance is analysed by showing the positive or negative effects of the indicators
		+ The GDP growth rate or the value of the GDP will reflect the level of production capacity which measures the monetary level of the total goods and services produced within the economy. This will reflect the productivity of the economy as the comparison is made over a previous year.
		+ The sectoral performance analysis which will reveal the scope of economic development as it will reveal the areas of specialization of the economy and its extent of depth of the development of the economy. This can be seen by examining the percentage of contribution of the sectors to the GDP and the extent of growth the sector over time🡪 significance of industries to the state
		+ Growth of capital-intensive industries raise GDP but provide very little to employment.
		+ The unemployment rate will determine the rate of utilization of resources seen in terms of labour in employment. A full employment utilization of resources will mean that the economy has made attained the production efficiency as it has produced on the production possibility curve.

Determines the wage rate as high UN+ rate will mean an excess labour supply and thus, the wage rate will be lowered.

* + - The consumer price index will reflect the level of price stability in the economy as the rise in CPI would mean the economy is experiencing inflation and it may undermine the economy from attaining sustainable economic growth as the economy will experience rising cost condition.
		- The level of investment in the economy, especially the foreign direct investment will raise production, leading to higher level of national income and employment. Higher level of investment in the areas of infrastructural development and research and development will expand the mobility of resources and efficiency in production and thus, expanding potential growth and raising actual production.

**Qn: Assess the economic performance of the country**

* With an inflation rate at around 2%, the economy is experiencing mild inflation, which will dampen rise in cost of production and cost of living
* With an unemployment rate of 2%, the economy is experiencing low rate of unemployment, indicating the economy is unable to attain greater utilization of production capacity.
	+ - The level of balance of trade is critical in the examination of international of economic performance, especially for nations which rely extensively on external trade for growth. Balance of trade surplus would mean that there is a higher level of export demand which will induce a higher of local production that will raise national income and employment. When the total trade in proportion to the GDP increase, it implies that the economy’s resource and production capacity has expanded which will be an indication of economic growth for countries which rely extensively on trade for growth. This is significant for export-oriented economy like Singapore and Japan
		- Exchange rate variation also reflect the growth of the economy as it indicates the level of net currency flow of the economy which is influenced by the net flow of investment, flow of fund and net trade that determines the production and resource capacity.
1. Economic Indicators to Assess the Competitive Edge of the Economy

(quality of product, cost competitiveness, price competitiveness)

The competitiveness of the economy can be measured in terms of price or cost competitiveness in determining the price of exported goods and cost of competitiveness which is affected by the following factors:

* + - Wage rate – as part of COP, it determines the prices at which goods are sold. This, in turn, reflects the level of competitiveness of the economy (labour cost per hour)
		- Cost of resources – Also a part of COP, lower cost will enable lower price of goods and services; the economy is more competitive.
		- Productivity – Higher productivity will allow some amount of resource input to yield higher output, thereby lowering cost.
		- Exchange rate – Exchange rate determines the price of goods exported to other countries. A weak exchange rate makes exports cheaper and more competitive
		- Cost of living – When cost of living is higher, higher wages will be demanded by the labour force. Higher wage increase the cost of production.
		- Taxation – a higher indirect tax create incremental COP. Direct tax will reduce profitability, which reduce investment in the economy.
		- Level of government expenditure – When the government spends more to improve infrastructure in the economy, FDI will be attract and productive efficiency will improve. The former leads to more investment and the latter lowers COP.

**Example**

Effects of Increase in Labour Cost per hour

* Negative effect -↑COP🡪↑Px 🡪loss of international competitiveness
* Positive effect - ↑Wage🡪↑purchasing power🡪↑SOL/solve income inequality

**Qn: Why Singapore government needs to raise productivity?**

Raising productivity will lower COP, which will enable workers to raise wage above inflation rate. This will sustain or raise purchasing power and thus, maintain or improve SOL.

E.g. Productivity (6%), W↑(3%), ↑P (2%), ↑Purchasing power (1%)

* + - * Can worker maintain a 6% productivity growth rate?
			* Will producer increase the wage rate by 3%?
			* can SG maintain inflation rate at 2% - Sg is a price taker in the resource market
1. Economic Indicators to assess the standard of living of the economy
	* + Real per capita income – determined by the value of GDP or GNP, Population Index and price level – determines purchasing power which will determine the level of material comfort, and thus SOL.
		+ Composition production in terms of types of goods that the economy which will determine the degree of welfare consumption of the citizens (consumption, government expenditure, investment and net trade)
		+ Level of consumption expenditure which will determine the level of material comfort
		+ Gini-coefficient ratio and the wage-to-GDP ratio –reflects the income distribution which will reflect the actual well-being of citizens
		+ Human Development Index which will determine the degree of progress of the well-being of the citizens – Measure with life expectancy, education index to determine the qualitative aspect of SOL
		+ Measurement of economic welfare which will determine the value of the qualitative aspects of life in monetary term – a quantitative measurement of the qualitative aspect of life (pollution – a qualitative development – life of the people into dollar (1 billion) GDP – 1 billion
		+ Qualitative aspects of standard of living which will affect the qualitative aspects of standard of living of the people.
		+ Unemployment Rate – low UN+ - more people have a source of income to sustain their livelihood. furthermore, tight labour market will reflect a high wage rate
		+ Low inflation Rate - ↓cost of goods and services 🡪↑purchasing power🡪higher level of material comfort
	1. Assess whether the standard of living of the Indonesian are higher than the Vietnamese
		* + Use of economic indicators that will prove that SOL is higher for Indonesians than Vietnamese (quantitative indicators)
			+ Limitations of these economic indicators – space comparison for evaluation
			+ What are other economic indicators are needed (not listed in the CSQ)

**9. Trend Analysis**



9.1 Real GDP and Real GDP Growth Rate (Economic Growth Curve)

* Real GDP trend for UK
* In general, UK Real GDP increases at a positive rate from 2004 to 2008 and falls in 2008
* Real GDP Growth Rate trend for UK
* The Real GDP growth rate for UK is positive from 2004 to 2009 but is projected to be negative in 2009. The Real GDP growth rate for UK is stable from 2004 to 2007 but falls sharply in 2008
* Comparison of Real GDP growth trend for UK and China – comparative statement required if more than one country is involved
* In general, both China and UK have positive real GDP growth rate is from 2004 to 2008. However, China has registered higher rate of positive real GP growth rate as compared to UK real GDP growth. Both countries real GDP growth rate have increased till 2007 before it falls in 2008.

9.2 Inflation Rate

* Price trend for UK
* In general, the price level for UK has increased at an increasing rate from 2004 to 2008
* Inflation Rate for China
* The Inflation Rate for China fell from 2004 to 2006 and rose again from 2007 to 2008

9.3 Current Account Balance

* Comparison of UK and China

UK current account balance has been in deficit while China’s current account balance has been in surplus from 2004 to 2006. UK current account deficit has worsened from 2004 to 2006 and improves from 2003 to 2008 while China’s current account surplus has improved over the same time period

9.4 Government Budget

* Comparison of UK and China’s Government Budget as a Percentage of GDP

Both countries are experiencing budget deficit for the years from 2004 to 2008 except for the year 2007, when China experience budget surplus. The UK’s budget deficit as a percentage of GDP is higher than China’s for the time period

**10. Inter-relationship of Economic Indicators**

10.1 Exchange Rate –FDI flows, Net trade

Appreciation of exchange rate will raise price of export demand in foreign value and cost of FDI which will reduce export demand the inflow of FDI. It will also lower the price of import in local value and this will contribute to rise in import demand, contributing to high import expenditure. Consequently, there will be net trade deficit.

10.2 Money Supply, exchange rate and inflation rate

Reduction in money supply will lead to rise in interest rate which will reduce aggregate demand, curbing excess demand condition, which will eradicate demand-pull inflation. Rise in interest rate will also induce inflow of hot money and thus increase local money supply and then lowering the interest rate, which will contribute asset-based inflation.

10.3 Components of current account balance

1. Balance of Trade
2. Service Balance
3. Income Balance
4. Transfer Balance

10.4 FTA, Xd, Md, FDI and Real GDP

FTA promotes export demand and import demand, enabling firms to raise production as there will be more resources available and large market demand. At the same time, FDI will rise as MNC will invest in countries with export capacity. Consequently, this will lead to a rise in AD which will raise real GDP via the multiplier effect.

10.5 Government expenditure and Budget deficit

Rise in government expenditure/low government revenue

* Budget deficit – need borrowing – internal loan will lead to increase debt burden while external loan will reduce the future earning of the nation
* May create crowding out effects if there is excessive government borrowing

10.6 Productivity, Real GDP, Inflation Rate

* When government increases productivity, it will increase demand for labour and this will raise wage rate. Consequently, with a higher wage, workers will raise their purchasing power to raise their ability to curb inflation rate
* Increase in productivity (5%) > Wage Rate increment (4%) > Inflation rate

⇨Increase purchasing power without increasing cost

**11. Areas of discussion**

1) Economic measures of the Singapore economy for 2007 indicate that GDP was S$243 billion. The current account on the balance of payments was S$59 billion in surplus [A Levels 2009/Qn5]

(a) Explain how you might use GDP and balance of payments data to measure the performance of an economy. [12]

(b) Assess whether these economic indicators are the best measures of economic performance and standard of living in Singapore. [13]

2) Explain how saving/import expenditure will affect the standard of living. (12)

3) Explain how an increase in government expenditure will lead to an improvement in standard of living. (13)