#  Topic 2A: Economic growth

## List of Definition

### Economic Growth

* + - The growth of production in actual production or potential capacity.
		- Economic growth refers to the growth of the production in terms of actual production or potential production capacity.

### Actual Growth

* + - Actual economic growth refers to the **actualization of resources into monetized products and services** which is commonly measured in terms of the **percentage change in real GDP.**
		- Growth that has be realized where there is an increase in actual production of the economy. (increase in quantity of goods and services.)
		- Actual economic growth is the percentage annual increase in national output actually produced that is the **percentage change in the Gross National Product/Gross Domestic Product** over the **previous** year. (Real GDP – real NY – determines production – determines demand for Labour – change in employment when NY increases – can use AS-AD diagram to explain employment level
		- It fluctuates with the swings of the trade cycle and is affected by changes in aggregate demand components.

### Potential Growth

* + - Potential growth refers to the expansion of the availability of resources for production which is measured in terms of rightward shift of the long run supply curve and outwards shift of the production possibility curve (PPC) – shift of the Yf level indicating rise in potential production capacity
		- Potential growth is the speed at which the economy could grow. It is the **percentage annual increase in the economy’s capacity to produce**: the rate of growth in potential output. (production capacity)
		- It is reflected in the shift of the aggregate supply curve to the right.
		- An outward expansion of the PPC from PPC I to PPC II show the potential growth of the country.

### Sustained Economic Growth

* + - Increase in Real GDP incurring without rising cost condition or an increase in GPL
		- This can be represented by AD-AS diagram or Production capacity

### Production Possibility Curve(PPC)

* + - The PPC reflects the resource and production capacity an economy can attain with the given resources and technology.

Capital goods

Consumer goods

PPCI PPCII

a

b

c

* When production level shift from a to b, there is actual economic growth while the outward shift of the PPC from PPCI to PPCII will induce potential growth.

**Qn: Using Production Possibility curve, explain how increase in government spending will affect the growth of the economy? (10) (actual and potential growth**

Focus:

a. Show how increase in government expenditure will lead to actual growth (raise production and real GDP) /

b. Show how increase in government expenditure will lead to potential growth (expansion of resources shift LRAS to the right/outward shift of PPC)

**Introduction**

definition of growth of economy – actual and potential growth

increase in government spending- a form of increase in AD

**Main Body**

1. **How increase in government spending leads to actual growth (explain the K process)**
2. **how increase in government spending leads to potential growth**
3. **How this is seen by the illustration from PPC**
* **draw the diagram and description of diagram**
1. **analysis – key determining factor of this economic effects**
* **amount of increase in government spending/ type of govt spending**
* **value of the multiplier**
* **govt spending on roads – raise mobility of resources – increase efficiency – expand resource capacity – raise potential growth**
* **type of government spending – sr / lr Concusion**

## Determinants of Economic growth

### **Qn: Explain why certain economies have higher rate of economic growth than other nations?**

Actual growth – directly affected by Ad components / indirectly affected by the supply factors

Potential growth is affected by supply side. (factors are based on the types of supply-side policies – manpower, technology, availability of resources, capital(funding)

### Physical Capital

* + - Physical capital refers to the tangible investment goods like plant, equipment, machinery and building.
		- Physical capital accumulation increases the productivity of labour. Machines allow one worker to raise productivity and allow more efficient use of the limited natural resources such as land and raw materials.
		- Physical capital accumulation can occur if there is investment in machines and equipment. The rate of investment in an economy depends on
* Level of household savings that provides the fund for investment
* Expected returns in the future from the investment of capital
* Rate of interest which determines the cost of borrowing
* Government policy and terms of tax policy, expenditure and direction given.
	+ - In order to achieve capital accumulation, there must be a positive net investment, investment level that is higher than the depreciation.

### Labour Resources

* + - The labour force is critical in determining the growth of the national income.
		- The quantity of labour force can be increased through the increase in the working population, labour participation rate or import of more foreign workers
		- Training and development of the workers and import of foreign talents raise the **productivity of the workers,** improving the quality of labour force.
		- Singapore overcome our labour shortage and lack of quality of labour through import of foreign workers and talents

### Land and Raw Materials

* + - Availability of land space and raw materials determines the resource capacity which affects the cost of production.
		- Better management and utilization of resources will minimise the cost of resources which will determine the cost of production. (**Production and Allocative efficiency**) (E.g. Constructing taller buildings – enable greater utilisation of land capacity)
		- Higher cost of production will undermine the economy from attaining a higher level of national income and thus lowering actual economic growth.
		- The shortage in the supply of resources will also reduce the resources capacity and thus undermines potential growth and this is usually overcome by the import of resources as seen in the case of Singapore.

**Qn: How Singapore is able to raise resource capacity for production despite being a small nation?**

**Import of resource (labour and other resources for production)**

**Efficient usage of resources**

**Use of technology to renew or expand availability of resources**

**Expand the source of funding through FDI**

**Promote free trade and strengthening exchange rate**

### Entrepreneurship

* + - Entrepreneurs’ skills are essential in the organization of production. The effectiveness and efficiency of the entrepreneur will determine the productivity of the production and distribution process which will affect the production capacity of the economy, in actual and potential term.

### Technological Advancement

* + - It will increase efficiency of factors of production
		- Technological improvement includes:
* Creation of new knowledge/Invention
* Innovation which is the **application of new knowledge** to the production of goods and services
* Innovation which is the **application of current knowledge in new ways** to the production of goods and services
* the quality of production, improving competitive edge, which will raise the efficiency of production contributing to lower cost of production and innovate
	+ - New technology 🡺 capital investment possibilities 🡺 greater productivity and higher incomes 🡺 changing demand patterns and encourages more R&D 🡺 further technological improvements
* The rate of technological progress depend on:
* supply of scientists, engineers
* environment for research and development
* the development of intellectual property
* assurance on the return on capital
* Significance of intellectual property rights in aiding Singapore in attracting more high-valued and R&D based FDI – This is beneficial to Singapore as it will enable Singapore to derive more tax revenue and make it easier for the industries to raise wage rate for the workers

**2.5A How can countries attract more Foreign Direct Investment?**

* Political stability -assurance of capital invested, have market confidence for consumption – increase rev and profit
* low corporate tax – raise the return on investment (ROI)
* stable exchange rate
* size of market demand
* lower cost of labour and skills of labour
* efficient infrastructure
* availability of resources

interest rate cannot induce FDI as foreign companies cannot borrow from local banks

increase in int rate – higher cost of borrowing – lower profit and reduce investment

**How can the country raise high valued FDI to achieve high economic growth rate? (high economic growth – high tax revenue / high valued employment**

Low corporate tax – increase profitability – raise return on investment > interest rate (MNC’s bank) – raise FDI

political stability – assurance of the protection of funding for FDI and better consumer to increase market demand

**intellectual property rights -patents and copy rights**

efficient infrastructure – smoothen production and distribution – raise efficiency – lower cost of production – raise rate of return on FDI – induce more FDI

### Other Determinants

Favourable cultural, social and political environment would promote growth. Legal institutions are needed to provide law and order and to enforce contracts between parties of economic transactions. Cultural attitudes towards work and material advancement are determinants of incentives to work. A social structure that allows fluid upward and downward mobility based on performance and merit is more conducive than a rigid social structure that puts premium on the station of one’s birth. Political stability is vital to economic activities

## Positive Impact of Economic Growth (Desirability of Economic Growth)

### Higher Standard of Living

* + - The main benefit of growth is the increase in amount of goods and service which becomes available for the country’s citizens to enjoy.
		- Economic growth also increases the income of the country allowing citizens to enjoy more of both local and foreign goods. (Raise GDP – Increase in real GDP as long as percentage increase in GDP is greater than percentage increase in price level and population growth)
		- Provides more tax revenue for the government to improve the infrastructures that will raise the convenience and comfort of the citizens

### Redistribution of Income is Easier

* + - With more overall income available, government will have the resources to redistribute wealth the poor.

### Encourages Investment

* + - A stable level of economic growth increases firms and consumer confidence which will induce an accelerator effect on the economy. This will encourage more investment which, in turn, induces positive cycle of economic growth.

### Provide a higher degree of employment

### Higher level of economic growth will mean a higher level of production, demanding for labour. This is especially significant for a country with large population where growth in the labour intensive industries will produce more employment opportunities for the massive population. (E.g. China, India)

### Care More for the Environment

* + - As people grow richer, they satisfy their basic needs in life and have attained a certain material standard of living.
		- They move on to achieve more the qualitative side of life, becoming concerned about living in a clean environment.
		- Growth also allows more resources to be used for the correction or regulation to reduce external costs.

## Negative Impact of Economic Growth

### **Qn: Why government should not focus excessively on economic growth?**

### Current Opportunity Costs of Growth

* + - To achieve faster growth, firms will probably need to invest more and require financing. The finance can come from higher savings or higher taxes. Either way, there must be a cut in consumption. In the short run, therefore, higher rate of growth must mean less consumption which will lower the standard of living in the short run

### May lead to structural unemployment (jobless growth)

### The need to accelerate economic growth will mean a need to focus on high-valued industries to raise competitiveness of the economy and this will induce the need for *technological advancement and sectoral adjustment to adjust the industries towards capital intensive development.* Consequently, there will be skills incompatibility and displacement of workers as industries rely more on machinery.

### May induce inflationary condition

### As economic growth is accelerated, there is a higher degree of demand for resources which will induce increase in cost of resources, contributing to cost-push inflation. Economic growth will also contribute to higher level of disposable income or rise in real GDP per capital and thus, this will induce higher level of composition which will contribute to demand-pull inflation

### Inequality in Income Distribution

* + - Growth often involves changing pattern of demand and supply conditions. Given that resources are not perfectly mobile, there will be individuals who are unable to adapt to the rapid changes. Those who are able to adapt well will benefit significantly. Income may be redistributed in favour of certain economic groups, undermining other groups.
		- With greater income disparity, the social framework of the country becomes less stable; more social problems would occur.

### Depletion of Non-Renewable Resources

* + - Increased production often involves using a greater amount of resources. This means that certain non-renewable resources (e.g. coal, oil, natural gas) will run out more rapidly.

### Increase in Negative Externalities

* + - Increased output and consumption levels tend to consume more resources, putting more and more pressure on the environment.
		- This leads to pollution, more emission of green house gas and, in turn, global warming, etc.

### Non-Economic Costs

* + - Economic growth may bring increased stress and anxiety. Workers may have to learn new skills and have to change their lifestyles. Economic growth may also be accompanied by increased working hours and pressure to come up with new ideas and improvements. Some workers may find this difficult to cope and the level of stress related diseases, suicides, divorce and other social problems tend to rise.
		- E.g. Japan, where GDP per capital is among the highest in the world yet citizens rank low on happiness.

## Other Concepts of Qualitative Growth

### Qualitative Standard of Living

* + - Pollution
		- Cultural Development

### The Gini coefficient is a measure of statistical dispersion, commonly used as a measure of inequality of income distribution or inequality of wealth distribution.

### Gross National Happiness (GNH) is an attempt to define quality of life in more holistic and psychological terms than Gross National Product.

### Education Index

### Life expectancy – Average age people are expected to live to

### Genuine Progress Indicator (GPI) is a concept in green economics and welfare economics that has been suggested to replace gross domestic product (GDP) as a metric of economic growth.

## What is sustainable growth?

* Sustained growth refers to the expansion of the actual production capacity without incurring excessive rise in cost condition.
* Sustainable Growth is attained with minimum impact of externalities and damage to the resource capacity such that the production capacity can be increased in the future.
* In the context of economics, we are concerned about economic growth without severe inflation.
* This is made possible by corresponding expansion of the resource capacity.

**6.1 Explain how government can attain sustainable growth?**

Po = P2

Y1=Yf₀

Y2

Yf2

AS0

AS1

P1

GPL

Real GDP

AD1

Y0

ADo

To achieve sustained economic growth, there is a need or government to raise both potential and production capacity. This can be achieved with the use of demand management policies, trade development policies and supply-side management policies to raise both AD and AS respectively.

As seen from the diagram, the increase in aggregate demand from AD0 to AD1 \*will raise Real GDP from Y0 to Y1 but price level will increase from P0 to P1. With corresponding increase in supply, the LRAS will expand from AS0 to AS1, and thus, lowering cost condition to decrease price which will induce increase in AD on a quantity basis. Consequently, the real GDP will increase from Y1 to Y2 while price falls from P1 to P2 without incurring inflationary effect where sustained economic growth is attained.

 Due to the deluge of foreign workers and foreign capital in Singapore economy

**6.2. Explain how supply-side policies like manpower development will lead to both increase in AS and rightward shift of LRAS?**

Manpower development will provide more skilled labour and then expand the supply of resources in terms of supply of labour which will contribute to the rightward shift of the LRAS. At the same time, the efficiency of the industries will improve and this will raise the productivity of work and lower average cost of production, contributing to the increase in AS.

**6.3.** **Explain how resources of the economy can be expanded to raise potential growth**

 Manpower development policy

 Infrastructural development

 Trade development Policy

 fiscal stimulation

Investment – raise AD as it part of economic activities that affect AD.

The infrastructural development programme will expand the availability of facilities to raise the convenience and efficient utilization of resources. This will improve the mobility of resources and labour supply, enabling the expansion of the availability of resource. The efficiency of workers will be enhanced, and cost of production will be lowered, allowing the economy to attained actual and potential growth.

Explain How the growth in Investment leads to growth of the economy.

1. Economic causation – how the AD and AS are increased? By policies or economic activities
2. draw diagram
3. description of diagram
4. evaluation – depending factors – value of k determines economic growth / potential growth (the efficient administration of the government)

**7. Desirable Economic Growth**

* To achieve desirable growth, the growth of the production capacity must satisfy the following aims:
	+ - Sustainable Growth
* The economy needs to ensure that there are adequate resources for production in the short and long term. There is also the need to ensure that there is no excessive depletion of resources and environmental degradation to reduce the resource capacity of production in the future.
	+ - Dimensional and Diversified Development
* A more dimensional and diversified growth will provide greater scope of growth for the economy and thus, ensuring a more stable economic development. This manner of growth will also provide integration of the industries in the economy which will strengthen the economy to become a critical hub in the global and regional economy.
* A more diversified economic development will create a greater variety of employment opportunities
	+ - Benefits of economic growth is triggered downward and widely distributed – achieve inclusive growth (high economic growth to encompass the welfare of all individuals in the society – high growth rate to enable wide distribution)
* The benefits of growth must be well distributed to prevent unequal distribution of income and wealth so that there will be no social dissatisfaction. Furthermore, the multiplying effect is greater and more dimensional when wealth is spread over the different sectors of the economy.
	+ - Minimization of opportunity cost between standard of living and growth rate and between industries
* There is a need to ensure that the attainment of growth will not reduce the level of standard of living in the short run and also deprive the economy the necessary resources for future growth. There is also a high tendency for the economy to divert resources to certain industries as the country tends to adhere to specialization to promote growth. Consequently, the growth is loped-sided and at the expense of certain industries which will lead to structural unemployment.

## 8. Obstacles to Economic Growth

* + - Lack of financing – low collection of tax revenue and reserve built up from previous budgets will mean less funds for the government to use to finance their projects.
		- Lack of capable and efficient government bodies to develop and implement plans to achieve the aims – the absence of manpower due to low salaried and poor manpower development in the government agencies will mean that policies are badly developed and executed. This shortage of efficient and capable manpower is also the result of brain drain in the economy. Furthermore, some governments are corrupted and thus this undermines the development of sound strategy that will benefit the society.
		- Restraint of the economy – small economy with deprived resources may find it hard to achieve the aims as the policies are constrained by the nature of economy such as the lack of resources to implement their plans. (E.g. size of population will undermine the economy from having a skilful working population)
		- Constraints of the policies – the policies are faced with certain inadequacies as a result of the unfavourable conditions. For example, Singapore’s demand management policies are not effective as we have a small multiplier effect, thus demanding a large change in aggregate expenditure to achieve the aims.

eg. small multiplier

* + - Inability to control systemic factors – Certain international political and economic events that may affect the country is beyond the control of the economy and the nation can only adapt but are incapable to remove the causes that will affect the development of sound policies.

**Qn: Explain why certain economies are unable to attain higher economic growth than other economies**

**Qn: Discuss how the government can attain inclusive sustained economic growth and why this is imperative to the economy.**

**9. Areas of Discussion
9.1. Explain why economic growth is the most important aim to Singapore.**

1) Economic growth provides government higher tax revenue derived from corporate economy and higher personal revenue which will enable the government to finance government project and build up reserve for future development and funding for economic crisis management. Economic growth will mean a higher level of employment as production capacity will expand, induced by rise in export demand and foreign direct investment.

2) Economic growth will enable the government to introduce more public expenditures to help lower income group and improve infrastructural development and facilities to raise standard of living for lower income group. This will help to promote social and political stability as social dissatisfaction will be minimised.

3) Economic growth will generate greater market demand and stimulate inflow of foreign direct investment. Tax revenue attained can be used as a source of financing to raise infrastructural and facilities support and development of manpower to raise international competitiveness.

4) Economic growth in terms of actual and potential growth will enable Singapore government to expand the supply of goods and resources to curb inflationary impact.

5) As growth in Singapore is external based, there will be improvement in balance of trade and balance of payment to ensure external stability, implying that there will be exchange rate stability.

**9.2 Why Singapore cannot completely focus on economic growth despite its benefit.**

1) Will create structural unemployment as our economic growth is based on our dynamic comparative advantage – constant needs to adjust the economic structure to enhance competitiveness – therefore, structural unemployment arises (sectoral adjustment, technological unemployment.)

2) Rising inflation – Excessive economic activities – rise in demand for more resources – cost-push inflation. Secondly, asset-based inflation due to increase in income, fuelled by speculation. Thirdly, misallocation of resources if the economic development is inappropriately delayed. – inflation occurs.

3) Unequal distribution of income and wealth. Structural unemployment will undermine the lower income group and less-skilled workers while excessive appreciation of assets will benefit the higher income group – widening income gap.

4) Economic growth may lead to structural unemployment if growth is concentrated with high-yield industry which may provide for employments due to high degree of capital intensity and high technological skill requirement.