Economic Growth

Forms:
Year on year
Quarter on quarter

EG rates **fail** to inform us about the level of real GDP
EG rates only reflect rate of change of GDP

$$EG = \frac{real\ GDP_2 - real\ GDP_1}{real\ GDP_1} x\ 100\%$$

Desirable vs Undesirable rate of EG

① Positive/ negative or weak growth rate
② Within/ beyond anticipated range govt forecasted

Causes of undesirable rate of EG:
1. Excessive increase in AD
2. Fall in AD
3. Fall in SRAS
4. Weak increase in AD
5. Increase AD with limited increase in Y_F

LDC
Lack tech knowledge and resources to produce capital goods + low savings → low investment → limited capital → limited/ no increase in LRAS → limited/ no increase YF even as AD increase → no actual growth once YF reach → trapped at low level NY

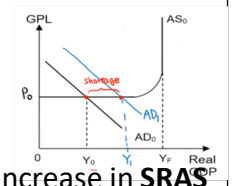
DCs (weak growth)
Structural rigidities (e.g. seniority wages system in japan and contract, high employment protection in EU) → impede increase in qly of L → impede increase in productivity → limited increase LRAS → limited increase in Y_F → even as AD increase → slowdown of growth to very slow levels

Singapore:
Goal: Sustained, Inclusive, Sustainable EG
Result: Positive and stable actual growth with constant/ decreasing Gini coefficient over time

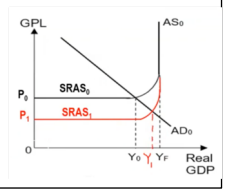
Types of EG

Actual

Increase in **AD**

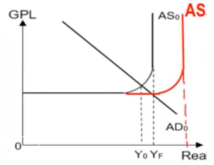


Increase in **SRAS**



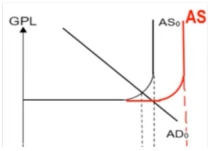
Can be caused by increase in **LRAS** provided economy <u>nearing full employment</u>

Increase in **LRAS**



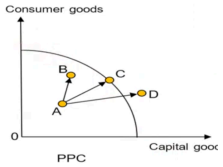
Potential

Increase in **LRAS**



If **economy operating close to full Em**, actual and potential growth may be achieved at the same time.

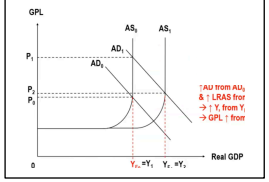
★ Determinant: **CELL** …
→ ↑ **Qty/qly** of CELL
→ ↑ LRAS
→ ↑ Y_F



B,C- actual growth
D- potential growth

Sustained

Increase in **LRAS + AD**



Benefits of EG:
1. Higher SOL
2. Increase C and I
3. Settles debt and accumulates reserves

Sustainable

Does not <u>decrease qty/ qly of CELL</u> and <u>compromise Y_F</u> for future generation
Methods: Encourage low-carbon transport, use of renewable energy for power generation, implementing carbon tax, long term planning to optimise use of resources

Cost of EG:
1. Social Cost
2. Environmental Cost
3. Personal Cost
4. Opportunity cost of growth
5. Depletion of nature resources
6. Conflict with other macroeconomic objectives

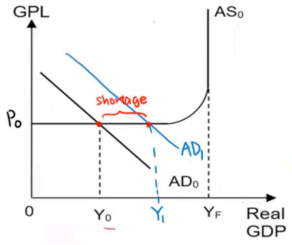
★To link to sustained EG:
Increase qly of CELL → increase LRAS → increase Y_F → allow for actual growth as AD continues to increase

★To link to inclusive EG:
Boost income of low wage workers by providing a means for SGreans to upgrade skills to qualify for higher paying jobs/ by supplementing income → to avoid increase or even help to decrease income inequality as EG is achieved.

Inclusive

Definitions:

- Economic growth is the rate of increase in real GDP over a period of time.
- Actual growth is the annual percentage increase in national output actually produced: it is the rate of growth in actual o/p.
- Sustained economic growth refers to a rate of actual growth that is maintained over time (possible only if there is **increase in LRAS**)
- Sustainable economic growth indicates a rate of economic growth that can be maintained without causing other significant economic problems, particularly for future generations.
- Inclusive economic growth indicates a rate of growth that is sustained over a period of time, is broad based across economic sectors, and creates productive employment opportunities for the majority of the country's population.
- Land refers to all natural endowments, which can be used for the production and distribution of g/s
- Labour is the mental and physical effort measured in man-hours that people apply to the pdtn of g/s.
- Capital is man-made aids to further production.
- Entrepreneurs organise and coordinate FOP to produce g/s, ecplore new markets, innovate and take risks in anticipation of DD.
- Human capital refers to the knowledge and skills that workers acquire through education, training and experience.

AD Increase in components of AD → shortage → stimulate firms to increase o/p and reduce slack in economy → short run actual EG Likewise, decrease in components of AD → increase stocks of unsold goods → firms tend to reduce output → negative actual EG	

Potential growth:

Determinants	Explanation	Remarks
Land	Increase adoption of technology in farming → increase qly of land → increase productivity → increase productive capacity → increase LRAS → increase Y_F	To increase qty of land: - In LR, land reclamation/ initiatives to discover new minerals - Trade N.B. Fixed in SR
Labour (*)	Training to upgrade and acquire skills → increase qly of labour → raise productivity → increase productive capacity → increase LRAS → increase Y_F	To increase qty of labour: - Extend retirement age, create incentive to employ older workers, encourage housewives to return to enter labour force - Reduce PIT/ make ctry a great place to live → attract talented immigrants - Limitation of above: Takes time to changing mindset of locals to make them receptive to foreign talent and help talents better integrate to local community (social cohesion) AND infrastructure (e.g. housing and transport) might not be able to handle the increase in population Increasing qly of labour require huge amount of funding, time, change in mindset
Capital (*)	Provision of R&D support → firms come up with better technology → increase qly of capital → increase productive capacity → increase LRAS → increase Y_F Rapid capital accumulation → increases amount of capital available to each worker → worker can produce more and better qly pdts at faster rate	Investment in social capital (roads, telecom) → facilitate and integrate all forms of economic activity → increase efficiency increase qly of capital + attract FDI increase qty qly of capital → increase in productive capacity (less time on congestion/ coordination of supply chain) More energy efficient machines Recycling technology: increase qly of capital → able to reuse what used to be non-reusable resources
Entrepreneurial skills	More dynamic pool of entrepreneurs → better management of scarce resource → more viable enterprises + better able to exploit market opportunities and innovation → increase qly of entrepreneurs→ increase potential o/p	Difficult to achieve in SR → involves changing education curriculum, mindset and laws governing bankruptcy and the financial sector

Benefits of Economic Growth:

1. Higher SOL
   Real GDP increases → assuming increase in real GDP greater than increase in population → increase final g/s produced and made available for an average resident to consume → increase material well being
   Increase quality in healthcare + increase in life expectancy (bring in NYA SOL expln)→ increase in non-material well being

2. Increase C and I
   Higher EG boosts confidence of consumers and producers → increase consumption and investment → fuel further economic growth and employment level → increase SOL

3. Settles debt and accumulates reserves
   Higher employment levels during periods of EG → increase income of HH and profits of firms → raise tax revenue + reduce govt transfers → improve budget position

   → allows countries to settle debts borrowed internationally → (don't need to increase in tax in the future) →minimise future decrease in C and future SOL

   → allows countries to accumulate reserves to better respond to emergency situations that could possible arise in the future

Cost of Economic Growth:

1. Social Cost
   If higher EG is achieved through cuts in higher rates of income tax, with little/ no benefits trickling down to the poor → widening income inequality

   EG → increase rate of obsolescence of production method, machinery and labour skill → increase structural UnE (especially for low skilled labour) → increase disruption and unpleasant breaks in one's working life → widen income inequality

2. Environmental Cost
   Industrialisation often done at expense of environment (i.e. water pollution) → decrease current non-material SOL and threaten future EG

3. Personal Cost
   Higher EG → increase stress level

4. Opportunity cost of growth
   Increase EG → increase I → increase pdtn of capital goods → forgo next best alternative of producing consumer goods → satisfy current satisfaction (SOL)

5. Depletion of natural resources
   If growth is centred on using an increasing quantity of resource, rather than increasing quality of resource by using the same amount of resources more efficiently → certain non-renewable resource will face shortage in LT → impede future EG

6. Conflict with other macroeconomic objectives
   If AD increases faster than AS
   → higher EG → demand pull inflation
   → higher EG → increase spending on M →worsening BOP

Measures adopted by Singapore to achieve its desired Economic Growth:

	Measures and Rationale	Details
Sustained and Inclusive Growth	Support income of workers	**Wage Credit Scheme** government co-funds wage increases made to employees to allow biz to free up resources to invest in productivity and to share productivity gains with their employees **Workfare Income Supplement** encourage eligible SGreans to continue working to supplement their income through cash payment and CPF contributions **Workfare Skills Support** encourages SGrean workers to attend training to improve their skills and employers to send workers to training **Progressive Wage Model** aims to increase salaries of workers throughs kills upgrading and productivity improvements **Silver Support Scheme** supplement income of seniors who had lower incomes over their lifetimes and have less retirement support
	Reduce dependency on low wage, low skilled workers → encourage buisnesses to increase productivity of labour	Increase foreign worker levies Reduce dependency ratio ceilings Tighten eligibility requirement for S pass and employment pass

	Allows workers to continue their education and training → highly skilled and competitive workforce → allow SGreans to improve their skills and incomes throughout their career → higher SOL	**SkillsFuture Study Awards** supports SGreans with deep specialist skills to develop and deepen competencies needed by future economic growth sectors **SkillsFuture Fellowships** recognises SGreans who have acquired deep skills through significant work experience, champion lifelong learning and are deeply committed to contributing to skills development of others **SkillsFuture Employer Awards** recognise employers who have made significant efforts in investing in employee's skills development and the development of structured skills-based career pathways for their employees
Sustainable Growth	Incentivise emissions reduction in production of g/s across all sectors.	**Carbon Tax** Took effect in 2019, applying uniformly to all sectors w/o exemption, covering 80% of SG's total emissions.
	Decrease cost of qualifying products undertaken in sustainability development, resources optimisation, sustainability standards adoption and product development	**SG Green Plan 2030: Enterprise Sustainability Programme** encourage SG biz (esp SMEs) to use resources more efficiently, adopt environmentally friendly practices and develop green products and technologies.

Constraints:

1. Reserves
2. Government Debt
3. Budgetary Policy
4. Balancing spending on present needs and securing the interests of future generations

Glossary of EQs

(1) Since the economic crisis of 2008, rates of economic growth across the world have differed considerably.

(a) Explain the key determinants of actual and potential economic growth (10m)

Structure:

1. Explain determinants of actual EG (↑ AD/ SRAS/ ~~LRAS~~)
   - For ↑ AD (x1): Optimism in economy which affects C and I/ Changes to income level of trading partner which affects X
   - For ↑ SRAS (x1): External SS shock which affect i/p pxes / Reduction in wgs
2. Explain determinants of sustained EG ((↑LRAS)
   - For ↑ LRAS (x1): Increase in qly/ qty land/ Increase in qly/ qty labour

Do try to provide examples
E.g. Reduction of wgs due to labour mkt reform in JPY

Alternative has no meaning in EC EQ

(b) Assess the alternative economic policies that the Singapore government could adopt to maintain a sustained rate of economic growth (15m)

Structure:

1. Explain how sustained growth is achieved using diagram (↑ AD + ↑LRAS)
2. Explain how EFP achieve actual growth + limitations + evaluation[1]
3. Explain how EMP is not relevant for SG
4. Explain how gradual appreciation stance help achieve actual growth + limitation + evaluation
5. Explain how SSP help achieve potential growth + limitation + evaluation

Playing down limitation considered EV

Point 4 (GAS):

Achieving actual growth

- **Price stability**: Strong SGD → (missing link in e/r P) → price stability → attract FDI → increase I → increase AD + increase qty/ qly of FOP → increae LRAS → tgt, sustained growth

Limitations:

- **Hamper actual growth**: As MLC holds in SG, given rise in P of X in FC and fall in P of M in DC, decrease NX and AD.
- **Not all industries require imported FOP** → these industries hit adversely if SGD remain strong → cannot make use of cheaper m/p to mitigate loss in X competitiveness

[1] refer to FP Notes on SG FP if needed

Currently has unemployed resources or resources not efficiently utilised

(2) (a) Explain two ways in which an economy might move from a point within its PPC to a point on it (10m).

Be careful if you talk about training here. You want to (re-)train the structurally UnE only else to avoid shifting PPC right which is part (b).

Structure:

1. Reduce unemployment
   Explain EMP, EFP. Increase in AD → increase in pdtn → previously UnE resources e.g. labour are being employed → reduces UnE

2. Reduce underemployment
   Workers working part time or in jobs that don't allow them to use their current occupational skills fully, despite desiring to work full time and be in jobs that use their skills more fully → not maximising their potential
   Reasons: ①Deficiency in DD (above-mentioned DD mgmt policies will help) ②Factor immobility (to reduce the cost of relocating) → workers easily move to areas where skills are better utilised → impt for big ctries where cost of relocation is huge consideration

Consider effectiveness of policies and time taken for policy to take effect

(b) Discuss the most effective economic policies to move the PPC outwards (15m).

Structure: Discuss how to improve qty/ qly of CELL (page 3)

Possible evaluation points:

- Effectiveness depends on conditions facing economy, like current level of development
  More developed ctry → less scope for infrastructure development → policies less effective in shifting PPC outward vs less developed ctry
- Should adopt a policy mix to ensure steady outward shift in PPC over time
  SR: Increase qty of labour more effective, LR: Skills training

EV (temporary):
Projecting into the future, SG ageing population could diminish the attractiveness of Singapore to MNCs. Thus, Singapore will have to ensure SMEs are ready to drive SG's EG. This also means that we must keep our workforce competitive, so that Singaporeans can compete with foreign professionals in the labour market.