**Chapter 11 Unemployment**

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**1. Types of unemployment**

Meaning of Unemployment

* + - Refers to all individuals who are able and willing to work but not offered a job.

### Unemployment Rate

* + - The ratio of unemployed people to the labour force/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 $\frac{No.of Unemployed People}{Active Working Population (Labour Force)}$

### Labour Force

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

### Working Age Population

* + - Refers to all individuals, above 15 years of age, who are able and willing to work and are employed. (active working population and inactive working population)

### Labour Participation Rate (SG – 0.68 in 2016)

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

Labour Participation Rate = 100 x $\frac{Active Working Ppoulation (Labour Force)}{Total Working Pupulation }$

### Economically Inactive Labour Force

* + - Refers to the portion of the labour force who is not working, does not have a job to return to, and are not looking for a job.
		- E.g. Full-time students, housewife, the disabled, etc.

Qn: why must the country have a high labour participation rate?

**1.1 Frictional Unemployment**

- It occurs as result of poor information in the labour market which makes it difficult for workers to find employment and thus creates a time lag before workers find suitable jobs.

**1.2 Structural Unemployment**

- Structural unemployment is caused by the changing pattern of demand and/or supply in the economy as a result of sectoral adjustment, technological advancement, imperfect labour market and seasonal adjustment of production period.

**1.3 Sectoral Unemployment** (adjustment in sectors of the economy)

- Sectoral unemployment occurs when there is a change in pattern of demand and change in cost competitiveness within a particular sector of the economy Change in competitive advantage

**1.4 Technological Unemployment**

- Technological unemployment occurs as a result of a change in production techniques, usually with the introduction of new technology.

 Productivity dd for labour (displacement of workers due to use of capital)

skill incompatibility (new technology)

**1.5 Regional Unemployment**

- This form of unemployment occurs when a certain region experiences full employment but another region has unemployment.

- This is due to occupational and geographical immobility between regions of a country which occurs as certain regions are no longer able to attract investment to provide employment due to poor investment environment and higher wage rate.

**1.6 Seasonal Unemployment**

- Meetings, Incentives, Conferencing, Exhibitions (M.I.C.E.)

- It is caused by relatively regular and anticipated decline in business activity during a certain time period of the year.

**1.7 Demand-Deficient Unemployment**

- Demand-deficient unemployment occurs as a result of a fall in demand for labour caused by an economic recession under a condition of wage inflexibility where there is ‘stickiness’ in real wage rates as workers are unwilling to accept lower wages, stated by Keynes. (difficult to adjust downward)

- Also known as cyclical unemployment, which is contributed by a fall in export demand and foreign direct investment (FDI) which is affected by global trade and business cycle

**2. Why are governments concerned over the problem of unemployment? (Impact of unemployment) [10]**

Introduction

Define Unemployment - The unemployed refers to those who are currently without a job, but are actively seeking for one.

It is one of the main aims of government as the failure to prevent unemployment will create strong repercussions on the economy and it will be detrimental to the economy.

Main Body

A) Explain at least 3 problems of unemployment. (loss of NY, utilization of resources, welfare to individuals)

1. Lost Output

2.

• As human effort is the least durable of economic inputs and since the unemployed are valuable resources, the potential output of the unemployed workers is lost forever.

• This loss represents a serious wastage of resources.

• Economists measure the forgone output in terms of the GNP Gap.

• This gap is the amount by which the, actual GNP falls short of potential full employment GNP.

3. Loss of income to unemployed and lower SOL

• Most obvious cost of unemployment is on the unemployed themselves.

• E.g. direct financial cost of the loss in their earnings, measured as the difference between their previous wage and any unemployment benefit.

• This financial loss will impact their households in the form of lower standard of living.

• Some households may even face the problem of poverty as a result of unemployment

4. Loss to others (individual cost)

• Unemployment results in broader costs to the economy.

• The under-utilisation of resources leads to lower incomes for other people too.

• The government loses tax revenues, since the unemployed pay no income tax, and given that the unemployed spend less, they pay less expenditure taxes. The government may also incur higher expenditures in the form of unemployment benefits and the provision of other welfare benefits.

• Firms lose the profits that could have been made, had there been full employment and a higher demand for consumer goods.

• Prolonged high unemployment rate will lead to an eventual lowering of-skills level of the country.

5. Social costs (Cost to the society)

• Unemployment is also a social problem. Severe hardships can be caused by prolonged periods of unemployment Social research has shown that crime, mental illness and general social unrest tend to be positively associated with unemployment.

Conclusion

**3. Reasons for governments to maintain low unemployment**

• Reduce opportunity cost of idle resources

• Present budget deficit/strain - UN+ benefit/tax

• Increase production capacity

• Maintain a high SOL (more people have income to spend/tight labour market will lead to rise in wage rate)

• Prevent unequal distribution of income – to maintain social stability

• Raise tax revenue to provide financing for infrastructural and institutional development

• Ascertain competitiveness

**4. Assess the measures which a government may use to reduce problems of unemployment. [15]**

Introduction

The measures used by the government depend on the type of unemployment the country is facing as the policies the government adopts will have specific implications on the economy.

Main Body

• **Explain Demand deficient unemployment (Cyclical unemployment) briefly.**

Demand-deficient unemployment is associated with economic recessions.

As the economy moves into recession, consumer demand falls. Firms find that they are unable to sell their current level of output will cut down production and thus demand for less labours. As workers continue to demand for wage at the current level, there is an excess supply of labour, contributing to demand-deficient unemployment. The deeper the recession becomes and the longer it lasts, the higher will demand-deficient unemployment become.

• **Explain the measures to reduce demand-deficient unemployment:**

a) Expansionary monetary

Monetary policy involves altering the supply of money and/or interest rates and credit in the economy. An expansionary monetary policy leads to a rise in consumption and investment, and therefore aggregate demand, which in turn increase ADNY employment

Some tools of expansionary monetary policy can take the following forms:

1. Decrease in the cash or liquidity ratio to be held by the commercial banks

2. Central Bank buys bonds in the open market to tighten credit and mop up excess purchasing power.

3. Decreasing the lending rates (bank rates) to commercial banks and other financial institutions.

4. Reducing the minimum interest rates at which loans can be obtained.

- Evaluation of the monetary policy

Monetary Policy may not be effective if it fails to increase the demand for loans. This is likely in the case of very low demand where the extra cost of borrowing is not offset by the low profits earned.

b) Fiscal Policy

• Explain how expansionary fiscal policy reduces unemployment.

• Evaluation of expansionary fiscal policy.

**• Explain briefly Frictional unemployment**

Frictional unemployment occurs when people leave their jobs and are unemployed for a period of time while they are looking for a new job. Some workers are "between jobs” because they are in the process of voluntarily switching jobs, while others have just been made redundant.

The main problem here is that information is imperfect and thus finding a new job takes some time. Employers are not fully informed about what labour is available; workers are not fully informed about what jobs are available and what they entail. Both employers and workers, therefore, have to search.

•  **Explain the measures to reduce frictional unemployment.**

- better job information. This could be provided by government centres, by private employment agencies, or by newspapers.

- reduce the level of unemployment benefits. This will make the unemployed more desperate to get a job and thus prepared to accept a lower wage.

• **Evaluation of measures that reduce frictional unemployment.**

- Costly to set up and run such agencies.

- Government agencies -Tax payers' money

- Newspaper: cost money to advertise so some do not advertise

 Clear definitions of jobs needed and most times not available leading frustrations and distrust etc

**• Explain structural unemployment.**

This occurs as the economy experiences structural unemployment whereby there is a change in the economy which will affect the labour market. The change in the economy will create sectoral unemployment and technological unemployment which will lead to unemployment as workers experience skill incompatibility and displacement of workers as less workers are needed due to greater usage of machinery.

**• Explain the policies to reduce structural unemployment.**

Reducing the amount of change

One way in which government attempts to reduce the impact of structural unemployment is by supporting the declining industries and allowing more time for adjustments. The supports can be in the form of subsidies or restricting imports of substitutes. Such supports are meant to allow the industries to decline over a longer time span, and lo allow the workers to move to other industries. This will reduce the impact of structural unemployment.

Increasing adaptability to change

The changes that accompany growth can be accepted and policies designed to increase the speed of the adjustments. This can include refraining facilities to help labour move among jobs and between geographic areas. Policies can also be taken to encourage firms to move into potential growth sectors which will provide employment opportunities.

**• Evaluate the policies to reduce structural unemployment.**

Workers are not receptive to retraining and upgrading.

Employers may not want to spend money on retraining/upgrading the skills of their workers as workers may job-hop after training.

• **Explanation and evaluation of other policies**, e.g. wage flexibility system and Job credit scheme.

• **Conclusion**

5. ASRJC H1 2019 Prelim Question 2

**The United States Economy**

**Figure 1: Manufacturing and non-manufacturing employment from 1998 to 2018**

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Source: *Microeconomics Insights*, accessed 3 August 2019

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# **Extract 7: Understanding the decline in manufacturing employment**

The US manufacturing sector started shedding jobs in huge numbers in the early 2000s, coincident with a sharp appreciation of the dollar and a widening trade deficit. Yet, statistics seem to show the sector’s output keeping up with the rest of the growing economy. Many economists saw this as a sign that high productivity growth allowed manufacturing output to expand even as the workforce dwindled. This view points to automation, not rising consumption of imports, as the main cause of manufacturing’s job losses.

However, Vice-President and Director of Research of the Upjohn Institute, Susan Houseman, cited recent research suggesting otherwise. The apparent strong growth was driven by a single industry within manufacturing: computer and electronics products. And while people have been buying more manufactured products, these products are increasingly made overseas where cost of production is lower. This shift to buying imports is further compounded by an appreciating exchange rate, which makes domestic manufactured products more expensive to local buyers and also hampers the export competitiveness of these products.

The Economic Policy Institute’s research director, Josh Bivens addressed the importance of managing the exchange rate to minimise damage to the economy. “There needs to be real credibility that the US is now committed to never again allowing the dollar to just destroy the US manufacturing sector,” Bivens said. He also echoed Houseman’s call to expand vocational training programmes to improve the skills of workers in manufacturing.

Source: W.E. Upjohn Institute for Employment Research, June 2018

**Extract 8: Time to capitalise on rare earth abundance in the US**

The Chinese government has threatened to stop shipments of strategically vital rare earth minerals to the US to gain leverage in the ongoing trade dispute. Not only does this potentially affect costs of production, but this has also sparked fear and uncertainty in US businesses.

Rare earth minerals are essential in the production of numerous 21st century technologies, from mobile phones and solar panels to electric batteries and military weapons systems. The good news is that these minerals are actually quite abundant, especially in the US. The bad news is this treasure chest of vital minerals remains in the ground due to extreme environmental rules.

The Japanese announced last year that they found minerals off their coast that are so large, they described the supply as “semi infinite” and seem primed to take on Chinese dominance in rare earth minerals. Though it will take time to get the minerals out of the ground and build the infrastructure to get them to market, China’s recent threats should be a wakeup call for US to get going now. A new investment into the American mining industry will create tens of thousands of new jobs and over time tens of billions of dollars of added output.

Source: Stephen Moore and Nicolas Loris, *The Hill* website, 6 April 2019

**Extract 9: Reimagining rare earth elements in a sacrifice zone-free future**

The rare earth elements may not be rare, geologically speaking, but they are hard to get in large quantities, as they are difficult and costly to separate and purify. The industrial separation processes produce heaps of nasty byproducts, including concentrated acids and radioactive waste. As the Chinese government pursued a policy that led to the country’s dominance in world exports of rare earth, it knowingly accepted terrible costs to the health of the people around the region’s mines and grievous damage to the environment. Scholars call this approach the creation of a "sacrifice zone".

A more just way forward begins with the principles of green chemistry. Can we redesign processes and products to make rare earth production less toxic and impactful upon the environment? Research suggests some ways to do that. An acid-free technique for dissolving and recovering rare earths from shredded hard drives has emerged, developed by researchers at Ames Laboratory.

Businesses also can be an important player in pioneering new methods of recovering rare earth elements. Apple is experimenting with a robot named Daisy to disassemble returned products to more efficiently recover the various metals, including rare earths.

Source: Robert Turner, *GreenBiz* website, 6 Feb 2019

**Extract 10: Quality of life in the US**

The US performs very well in many measures of well-being, according to the Organisation for Economic Co-operation and Development (OECD). The average household income per capita is US$45,284 a year. But there is a considerable gap between the richest and poorest – the top 20% of the population earn nearly nine times as much as the bottom 20%.

In terms of employment, 70% of people aged 15 to 64 in the US have a paid job while some 11% of employees work very long hours. In terms of pollution level, the level of atmospheric PM2.5 – tiny air pollutant particles small enough to enter and cause damage to the lungs – is 10.1 micrograms per cubic meter.

Source: OECD Better Life Index, accessed 15 Aug 2019

(b) (i) Using Figure 1, compare the trends in employment data from 1998 to 2018. [2]

Answers

Manufacturing employment generally fell while non-manufacturing employment generally rose. [1]

Both non-manufacturing and manufacturing employment fell 2008 before rising in 2010. [1]

(ii) With reference to Extract 7, explain two causes of the general trend in manufacturing employment as identified in (b)(i). [6]

Answers

With automation (Ext 7) being more efficient [1], the demand for manual labour, a substitute, decreases. Because they lack the skills to perform jobs linked to automation, such skills mismatch will result in structural unemployment. [1]

With an appreciation (Ext 7) [1], assuming Marshal-Lerner condition holds where PEDx + PEDm > 1, (X-M) will fall. [1] AD falls, therefore causing derived demand for labour to fall, causing demand-deficient unemployment. [1] OR

With consumers increasingly buying imported goods (Ext 7) [1], M increases. Ceteris paribus, X-M falls. [1] AD falls, therefore causing derived demand for labour to fall, causing demand-deficient unemployment. [1] OR

Consumers consume imported manufactured goods instead of local goods (Ext 7) [1]. C falls [1], AD falls, therefore causing derived demand for labour to fall, causing demand-deficient unemployment. [1]

Max 5 for an answer that provides 2 examples of demand-deficient unemployment.

For each cause, evidence/identify [1] + explanation [2].

(iii) Assess the policies the US can adopt to boost manufacturing employment. [8]

Answers

Since one of the causes was due to appreciation (Ext 7), the US could **depreciate its currency**. This will result in a fall in the foreign price of exports and a rise in the domestic price of imports. Assuming MLC holds where PEDx + PEDm > 1, this will lead to an increase in (X-M). This translates to an increase in AD, causing firms to step up production and to employ more factors of production including labour. This will therefore reduce demand-deficient unemployment and boost employment. This policy is also supported by Bivens call to manage “exchange rates to minimise damage to the economy” (Ext 7).

However, in the very short run, it is likely that the MLC may not hold, since contractual obligations may reduce the availability of substitutes to exports and imports, thereby causing the demand for exports and imports to be very price inelastic. This may mean that depreciation may first worsen the employment before improving it, so the US has to be mentally prepared to bear with it. Using such a policy also begs the question about the nature of the US economy, i.e., how significant (X - M) is as a proportion of AD. If this

proportion is small, then the effect on employment may be rather limited. Finally, a depreciation of the currency may be taken as a sign of impending weakness in the economy. If not well-communicated, this depreciation may trigger a loss of confidence among consumers and businesses, thereby causing a further fall in AD and a fall in employment.

Another policy that the US can adopt is the **training and retraining of workers**, a proposal echoed by Houseman (Ext 7). This will help to improve the skills of workers and the quality of labour. Not only does this potentially allow the structurally unemployed to be equipped with the relevant skills to complement the drive to automation, it may also prepare workers to move to a new (sunrise) industry. Also, with the quality of labour falling, this may translate into lowered costs of production across the economy, allowing for SRAS to increase, causing actual growth and allowing for derived demand for labour to increase.

However, such training programmes typically takes a long time. Skills are not learnt overnight, and time is also needed for workers to become accustomed to those new skills. In the short run therefore, this policy on its own may not significantly boost employment.

*Other policies:*

The US could also impose a tariff on manufactured products. This raises the cost of importing and thus supply will fall, causing the price of imported products to increase. This will then increase the demand for locally manufactured products, which in turn leads to an increase in the derived demand for labour, boosting manufacturing employment.

However, Extract 8 has shown how China is contemplating to reduce the shipment of rare earths to US, in response to tariffs being imposed. Imposing tariffs on other manufactured products may likewise cause the same issue to US, causing higher costs of imported factors of production, which may lead to imported inflation.

Additionally, should the tariffs be on factors of production like steel, this will translate into higher costs of production for companies requiring steel like the automobile industry, adversely impacting their profits.

**Evaluation:** In conclusion, given how there are two causes of unemployment seen in Extract 7, in order to ensure that the decline of manufacturing unemployment is fully addressed, the US can pursue both the monetary policy to boost employment in the short run, and couple it with supply-side policy to start the shift towards a longer-term and more sustainable pattern of employment.

6. CJC H1 Prelim 2019 Question 2

**Macroeconomic Issues in the U.S and Singapore**

**Extract 5: Unemployment in the U.S.**

U.S. job growth slowed in May and employment gains in the prior two months were not as strong as previously reported, suggesting the labour market was losing momentum despite the unemployment rate falling to a 16-year low of 4.3 percent. Non-farm payrolls only increased 138,000 last month as the manufacturing, government and retail sectors lost jobs, the Labour Department said on Friday. The economy created 66,000 fewer jobs than previously reported in March and April.

Employment outlook is bleak in the U.S. The unemployment rate fell slightly and that was because 429,000 people dropped out of the labour force. Job growth has decelerated from the 181,000 jobs monthly average over the past 12 months as the labour market nears full employment. There is growing anecdotal evidence of companies struggling to find qualified workers. With the reality of Trump providing fiscal stimulus almost gone and the Federal Reserve (Fed) raising interest rate, the job market will be held back.

Source: *Reuters*, 2 June 2017

**Extract 7: Unemployment in Singapore**

Should Singapore be hit by higher unemployment, it will be because of a shortage of skills — as a result of the widening jobs-skills mismatch — and not a lack of jobs. But the Government is determined not to let it come to pass, Manpower Minister Lim Swee Say said yesterday. “We are not going to allow this to happen to us,” he said.

The prospect of unemployment creeping up as the economy matures has made the headlines in recent weeks, with both Prime Minister Lee Hsien Loong and Manpower Minister Lim previously weighing in on the issue.

To succeed in this journey, the Government will have to help businesses transform faster, and Singaporeans adapt better. Otherwise, “the mismatch between jobs and skills will widen as we run faster,” he said. Mr Lee said the unemployment rate has climbed to 2.3 percent because of economic restructuring, but the figure is low compared with other developed countries. To keep Singapore prospering, the Government will help businesses create new jobs, get displaced workers re-employed and train employees to deepen and broaden their skills in their current roles.

Singapore has in place major national programmes such as the SkillsFuture movement and the Adapt & Grow initiative, which help those without work adapt to changing job demands and acquire the necessary skills to find new jobs. Mr Lim also noted a growing fear around the world that technology may eventually take over more jobs, making many more workers redundant. While intelligent technology will progressively take over many “jobs of today” that can be done cheaper, better and faster with technology, Mr Lim pointed out that technology will concurrently create many “jobs of tomorrow” — ranging from data analytics and cyber security to robotisation engineering, revenue management and innovation development. Some economies will see net job gains, while others will see net job losses.

 Source: Today Online, 2 May 2017

(b) Using Extract 5, account for the change in unemployment rate in the U.S. [5]

**Answers**

**- Identify the change**: The unemployment rate fell to a 16-year low (Ext 5). [1]

**- Evidence**: This was due to new jobs being created (“Non-farm payrolls increased 138,000 last month”)

**- Explanation:** With more jobs created, more people would have been able to find a job, leading to a fall in unemployment rate. **OR**

**- Evidence**: This was because “429,000 people dropped out of the labour force”

**- Explanation**: Since unemployment rate is calculated as a % of labour force, with a smaller labour force due to some unemployed dropping out, the unemployment rate would decrease.

(e) Extract 7 states that “should Singapore be hit by higher unemployment, it will be because of a shortage of skills.” To what extent do you agree with the above statement? [8]

**Answers**

**Identify** the unemployment in Extract 7: Structural unemployment which arises because of a mismatch of skills (the skills demanded by employers do not match the skills of those unemployed)

**Thesis:** Agree that structural unemployment is caused by shortage of skills

**Case evidence:** “Should Singapore be hit by higher unemployment, it will be because of a shortage of skills — as a result of the widening jobs-skills mismatch”

This leads to **occupational immobility** which refers to the situation where people are unable to take up jobs in another industry or occupation because they lack relevant skills or education. Such mismatch of skills is caused by market failure in the training market. Employers are often reluctant to provide training for fear of workers moving to another firm. Workers may also be reluctant to take up training because they are unable to afford the direct training costs and also the opportunity costs incurred due to the income forgone while they are being trained.

**Possible Thesis**

Shortage of skills can also arise because of economic restructuring.

Case evidence: “unemployment rate has climbed to 2.3 per cent because of economic restructuring”

With the growth of international competition, this has become an important cause of unemployment in Singapore which has seen industries shifting production bases to countries where theproduction costs are lower. Workers become unemployed as there are no jobs at all or they lack the skills required by other industries. The outsourcing of factories and jobs to developing countries in the region is another cause of structural unemployment in Singapore.

**Another Possible Thesis**

Technological unemployment is a type of structural unemployment resulting from the successful growth of new industries using labour-saving technology e.g. automation. Advances in automation have been blamed for rising structural unemployment.

*Case evidence:*

“Growing fear around the world that technology may eventually take over more jobs, making many more workers redundant.”

**Anti-thesis:** On the other hand, other reasons such as poor economic growth can also account for higher unemployment (cyclical unemployment) in Singapore.

Case evidence: Extract 8: “Singapore's economic growth sagged in 2014 to its weakest in five years.”

As the economy slows down, aggregate demand falls due to a fall in consumption and investment. Firms find that they are unable to sell their current level of output at the current general price level. They will have to cut back on production and the amount of labour they employ (since labour is a derived demand). This results in cyclical unemployment, Cyclical unemployment can also be due to spill over effects if US economic growth falls. Singapore’s exports will be indirectly affected resulting in a fall in export revenue → fall in AD → higher cyclical unemployment.

Conclusion

**Stand:** Overall, I do not agree with the statement.

**Substantiation:** While structural unemployment may be caused by mismatch of skills, there are other causes of structural unemployment. Furthermore, if Singapore experiences slow economic growth or a recession, cyclical unemployment may also result. Furthermore, the Singapore government has already put in place measures to address structural unemployment, for example, the SkillsFuture movement and the Adapt & Grow initiative which help those without work adapt to changing job demands and acquire the necessary skills to find new jobs.

7. GCE A Level H2 Economics 2016 Paper 2 Qsn 5

(a) Explain why macroeconomic policy decision-making is made more difficult by possible conflicts between government objectives. [10]

(b) Assess the relative effectiveness of the alternative macroeconomics policies that the Singapore government could adopt to maintain a low rate of unemployment. [15]

8. CJC Prelim 2019 Qsn 5

As much as one-third of the United States workforce could be out of a job by 2030 thanks to automation, according to new research from McKinsey. Meanwhile in Samoa, a small developing country, the tourism industry is badly hit with poor outlook globally.

Source: CNBC, 29 Nov 2017 & Samoa Observer, 26 May 2017

(a)Explain the various causes of unemployment across different countries. [10]

(b) Discuss the extent to which the nature of an economy affects a government’s choice of macroeconomic policies in addressing unemployment. [15]