# Notes 2012 Topic 2B: Unemployment

## List of Definitions

### 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?

### 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

* + - In Singapore, recession is due to global economic downturn (↓Xd/↓FDI), which will lead to a fall in aggregate demand and thus, a fall in national income. This will reduce production and lead to a fall in employment as there is a reduction in demand for labour (sg – Cyclical Un+)
		- (explained by the fall in Ad – decrease in NY – decrease in prodn – decrease in demand for labour – rise in unemployment

### Disequilibrium Level of Unemployment

* + - This occurs when there is an excess labour supply where the supply of labour does not equal to the demand for labour as the workers are unwilling to settle for lower wage rate.

Qty of Labor

Wage

Wo

S₀

D₁

D₀

* L₀🡪L₁

Disequilibrium UN+

* L₀🡪L₂

equilibrium level of UN+ (Structural UN+)

L₁

L₀

L₂

W₂

How to explain unemployment contributed by fall in Ad (demand deficient unemployment with AD-As Analysis?

(AD-AS)

decrease in XD – decrease in AD – decrease in national income – decrease in production and decrease in demand for labour – rise in unemployment

As seen from the diagram, the decrease in demand for labour from D0 to D1 will contribute to an excess supply of labour of L1L2. As labour market is sticky downward in wage adjustment, excess labour supply condition will prevail and disequilibrium level of unemployment will occur.

**Qn: Explain how the Singapore government can solve this form of cyclical unemployment due to reduction in export demand and foreign direct investment (FDI) (fall in external demand)?**

**Increase local AD components like government expenditure and local consumption – raise population -local consumption**

 **increase the production of the infrastructural development (a form of government expenditure – direct increase in AD – via k will raise real GDP and provide economic activities – increase in production and raise employment**

### Equilibrium Level of Unemployment

* + - This occurs when the labour market is in equilibrium but some workers of the **working are unwilling or unable to find work** at the current wage level despite the fact that DDL is equal to SSL

### Natural Rate of Unemployment (non-accelerating rate of unemployment)

* + - Due a combination of frictional and structural unemployment, the labour market will experience a condition of unemployment at a particular level of inflation rate. This rate of unemployment can exist even when the labour market demand equals to the labour market supply.

### 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.

### 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.

### 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

### 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)

**Qn: Why is technological unemployment inevitable in Singapore?**

**High dependency on capital and technology for economic growth – (high valued production – high growth rate and high wage employment) - likely to experience skills incompatibility and displacement of workers**

**sectoral adjustment to accommodate dynamic efficiency to raise competitiveness – utilize more machineries – move up the production ladder – overcome the economic competition from neighbouring countries**

### 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.

### Seasonal Unemployment – M.I.C.E.

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

### Displacement of Workers

* + - A replacement of a batch of workers due to certain reasons

### **Qn: Which types of unemployment are most common in Singapore? (CSQ)**

Cyclical unemployment / technological unemployment (structural unemployment)

## How to Increase Labour Force Participation Rate

* + - Provide more financial and social support to encourage female workers to join the labour force
		- Shorten the training and development process to allow new workers to enter the labour market at an earlier stage (Shortern NS to extend part-time workers)
		- Extend the retirement age to sustain labour supply
		- Reduce UN+ benefit/For Singapore, the government uses incentive (workfare) to encourage labour participation

**Why low rate of labour participation rate is undesirable?**

low active working population - reduce labour supply – increase wage rate – increase cost of production

* lower output level – slower economic growth
* lesser workers – rising social welfare expenditure/ lower tax revenue

## Impacts of Unemployment

### Rise in opportunity cost of idle resources seen in terms of loss of production and the need for more funding to finance the introduction of unemployment benefit

### Increase in cost of government expenditure

* + - Unemployment benefits have to be given out and there is a decrease in tax revenue since taxable income from employment and business activities will be reduced.
		- This will create budget strain as government expenditure will be greater than tax revenue.

### National income will be lowered which will lead to a reduction in real per capita income.

* + - Also, lower tax revenue will mean that there are lesser sources of tax revenue to finance public project to provide more public and merit goods to make life more comfortable, and improve qualitative aspect of SOL.

### Unemployment will also create social instability as illegal activities and crime rate will rise.

### Unemployment will also lead to unequal distribution of income as the excess labour supply will drive wage rate downwards, lowering the income of the workers and this will lead to social dissatisfaction.

### Unemployment will undermine the economy’s production capacity as resources are under-utilized.

* + - Actual economic growth measured in term of growth of GDP will decrease.
		- Lesser tax revenue will mean that the economy is unable to have more resources to generate potential growth as the government is unable to finance its infrastructural and institutional development to induce economic development for future growth.

### Unemployment is also an indication of the loss of competitiveness as the economy may cut production and reduce employment as it cannot sustain their comparative advantage in export demand and inflow of investment into the economy.

### **Why government needs to maintain low rate of unemployment?**

### reduce opportunity cost of idle resources

* prevent 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

low unemployment rate will prevent unequal distribution of income as this will mean that there is a large group of people in the economy who are working, and thus, this implies that they have a source of income. This will imply that the income gap is lesser since the lower income group has a higher level of income. Consequently, there will be lower degree of social dissatisfaction and will prevent the economy from experiencing social instability that will undermine economic development.

Qn: Why Singapore government needs to focus on maintaining low rate Unemployment?

## Solutions

The measures used by the government depend on the type of unemployment the country is facing:

* + - 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 will find that they are unable to sell their current level of output. Therefore will cut down production, this will lead to decrease in demand for labour, contributing to a rise in unemployment.

MP cannot solve demand-deficient unemployment caused by ↓ in Xd/FDI as domestic demand is unable to compensate the loss from external demand, since monetary policy cannot induce export demand and foreign direct investment (FDI) directly

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

**4.1 Expansionary monetary**

In an expansionary monetary policy, the central bank will increase the money supply through the quantitative or qualitative monetary tools so as to lower interest rate which will lead to lower cost of borrowing. This will lower the cost of credit consumption which will induce higher level of consumption while the cost of borrowing will make investment more profitable, leading to higher level of investment. Consequently, there will be a rise in aggregate demand which will induce rise in national income and production via the multiplier effect. This will lead to higher level for employment in term of demand for labour resources.

Some tools of expansionary monetary policy can be introduced on a qualitative basis:

1. lower Y₁🡪encourage local Internet and local demand (40% of the firms are small-medium enterprises)

2. offering credit facilities to SME-provide financial liquidity to prevent business failure-sustain production and employment (qualitative approach-specific towards the areas contributing to UN+)

\*Complement with Job Credit Scheme

🡪prevent business failure🡪prevent retrenchment

**Evaluation of the monetary policy in solving unemployment**

Effectiveness of Monetary Policy

* + - Able to induce more permanent source of employment as it induces market-based investment
		- can induce more efficient and innovate production due to market-based economic activities as seen in R&D based industries
		- can create stabilizing effect on the industries due to liquidity provided through monetary policy
		- Provide a greater variety of employment for investment in new industries
		- Its strength lies in its impact on the influence on the level of investment which is a critical source of employment

Ineffectiveness of Monetary Policy

* inability of the government or central bank in controlling money supply due to liberalisation of the banking system and the influence of inflow of hot money (difficult for the economy to set capital control)
* inelastic MEI – Investment is based on FDI and low interest rate will not lead to rise in FDI as local interest rate does not affect FDI
* small multiplying effect – undermining the MP from expanding the economy (high MPM and MPS)
* increase in local investment may not be able to compensate the loss in production due to fall in external demand (70% of the production in Singapore is directly or indirectly linked to external demand)

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, especially in the situation where the MEI is interest inelastic.
(↓ investment rate 🡪 ↑ investment extensively 🡺 Production will not ↑employment opportunities and is not influenced by interest rate) – high dependency on Xd/FDI for employment

**CSQ Qn: Why some economies like India may find it difficult to solve unemployment with expansionary monetary policy?**

**4.2 Fiscal Policy**

The variations of the fiscal tools of government expenditure and taxation to affect resource and production capacity so as to raise employment

4.2.1 Explain how expansionary fiscal policy reduces unemployment.

* The expansionary fiscal policy will increase the aggregate demand by raising government expenditure and lowering taxation which will contribute to the rise in the national income that will raise the production level, leading to rise in employment. Through the building of infrastructural development and provision of public services, production of goods and services will lead to more employment
* Lowering of taxation will induce investment which will lead to more production and thus, solving demand deficient unemployment

**Evaluation**

Advantages of Fiscal Policy

* Direct impact on production and thus, can raise employment directly through the provision of more public services and the development of infrastructure
* Have a dimensional effect – can raise the income of lower income group and improve standard of living / it will also raise the efficiency of these industries which can be achieved through government spending on infrastructural and manpower development

Disadvantages of Fiscal Policy

* The provision of government expenditure will increase government debt and taxation if it requires financing (sovereign debt)
* The amount of increase in government expenditure cannot compensate the fall in production due to the fall in FDI and export demand.
* Other limitation of expansionary FP.

-Time lag

-Crowding out effects occurs due to excessive government borowing, which will create a contractionary effect on the expansionary fiscal policy as Investment will fall The level of investment will decrease as the cost of borrowing is higher and there is deprivation of fund for private investment – (weak planning by the government will undermine the effectiveness of the fiscal policy) borrowing)

-Excessive infrastructural development will create redundantly for the public facilities

-effectiveness depends on efficiency of the government

* + - measures to reduce frictional unemployment.
* Solution – (SS-side FP). Institutionalization of Employment Agency🡪to facilitate information about the labour market

🡪Work Development Agency (WDA)

* 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
* Can use workfare to encourage more workers to work
	+ - 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

4.2.3 Explain how supply side management policies are used to solve structural unemployment

1. Explain 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.

Supply side policies will attempt to adjust the structures of the economy so as to expand the economy to increase production and thus raise employment and accommodate the changes needed in the production of the industries so as to eradicate the adverse effects of structural changes that will affect employment

1. (i) Explain how SS-side policies solve structural unemployment

To solve structural unemployment, the government will introduce manpower development like Work Skill Qualification (WSQ) or use Skill Development Fund to help workers to upgrade their skills to equip them with new skills to work in new industries or sustain their employability

New industries are also developed with infrastructural development to provide more employment opportunities to help workers who are retrenched as there will be direct increase in production capacity. Furthermore, the infrastructural development will also raise the physical mobility of workers which will solve regional unemployment due to structural rigidities.

(ii) Explain how SS-side policies solve frictional unemployment

To solve frictional unemployment, institutionalization effort has been introduced to eradicate the market imperfection and employment hindrances that will undermine retrenched worker from seeking employment. In Singapore, the Worker Development Agency (WDA) was set up to help workers fund employment

(iii) Explain how SS-side policies solve demand-deficient UN+

(long term/indirect measure)

To solve the demand-deficient unemployment, the SS-side policies are able to induce more demand for labour by inducing more investment and export demand through raising efficiency and expansion of resource capacity. (↓COP-induce profit-increase investment-raise production-increase employment)

(short term/direct measure)

In the short term, the implementation of infrastructural development will raise production and create employment to compensate the loss in production due to fall in external demand (increase in government expenditure will raise aggregate demand, via the multiplier effect which will raise production and employment

* + - 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.
(difficulty in retaining training benefits)
* High cost in adjusting the structure of the economy (increase in taxation – politically unfavourable/may increase government debt)
* Inherent constraint- limited resources
* Time lag –unable to solve unemployment in SR
* Depends on efficiency of public bodies
* Saturation of infrastructural development; because of maturity of economic development
	+ - Explanation and evaluation of other policies e.g. wage flexibility system.

The introduction of the wage flexibility system (fixed and variable wage) will help the firms to cut down production cost so as to dampen the effects of rising cost condition and thus, prevent business failures. This will lower down the possibility for firms to conduct retrenchment. Such a policy will raise the level of employability for the workers.

The recent introduction of Job Credit Scheme (form of Fiscal Policy) also aims to lower down the cost of wages so as to encourage the firm to sustain employment. (part of fiscal policy🡪↓COP [subsidy to the firm. 12.5% of wage up to 2500]

The government must develop an economic direction where there is wider level of diversification of the economy as this will provide the labour market a wider range of employment opportunities.

## Explain why unemployment is more important than other aims

* + - Unemployment may reduce the production capacity needed to propel economic growth as there is under-utilization of resources
		- Unemployment may not enable the people to overcome inflation due to lower purchasing power or lack of income
		- Unemployment may create inequality of distribution of income
		- curbing unemployment is more critical than curbing inflation

🡪cost of unemployment to the government is greater than the cost of inflation as the cost of unemployment benefit and the opportunity cost of the idle resources is too high

## Explain why other objectives can be more important than unemployment

* + - External disequilibrium is likely to affect unemployment rather than the other way round
		- Fall in Xd 🡪 fall in production 🡪 fall in I 🡪 increase in unemployment (Singapore is dependent on Xd/FDI for production which will create cyclical unemployment when there is adverse global economic downturn (as the economy tries to increase production, it will induce increase in demand for resources and the rise in cost-push inflation)
		- Exchange rate fluctuation due to the fluctuation in flow of capital 🡪 unstable external prices 🡪 undermine trading activities, investment, external debt 🡪 undermine production 🡪 undermine employment
		- Excessive focus on unemployment may lead to excessive inflation 🡪 fall in real wage of workers 🡪 may not encourage work efficiency 🡪 no real increase in output
		- Focus on high economic growth – will lead to structural unemployment as the economy focuses on high-valued production, which is capital-intensive and technological-based. Consequently, skill incompatibility and displacement of workers will occur as a result of technological advancement and sectoral advancement.

On the other hand, if the government introduces contractionary FP or MP to decrease AE will lead to a reduction in the production capacity which will mean the rise of unemployment.

This implies that a trade-off exist between attaining lower level of unemployment and inflation which means that the government must select an optimum level of unemployment and inflation rate the economy can sustain.

In the long run, such a trade-off will not exist as any attempt to reduce unemployment will only lead to rise in inflation without any adjustment of the natural rate of unemployment. As expansionary policy reduces the unemployment rate and raise price level, it will decrease the real wage. This will induce to reduce their labour supply and thus adjust the unemployment condition to original natural rate of unemployment at a higher inflation rate.

## Using AS-AD analysis to show the possibility of conflicting aim of government in using demand management policy to solve inflation and unemployment condition

Y₂=Y₀

YF=Y₁

P₁

Real GDP

P₂=P₀

AD₁

AD₀=AD₂

AS

GPL

AS-AD –Conflicting aspect of curbing inflation/UN+

↑AD🡪↑production🡪↑NY🡪↑N+ but ↑P

↓AD🡪↓P🡪↓production🡪↓NY🡪↓N+ (↑UN+)

🡪Solution: Corresponding SS-side policy🡪expand resource capacity🡪curb rising cost condition and sustain employment