ST ANDREW'S JUNIOR COLLEGE
JC2 H2 ECONOMICS 2024

FAVOURABLE BALANCE OF TRADE

We have thus far looked at the macroeconomic objectives of achieving economic growth, price stability and full employment. These are commonly referred to as the internal macroeconomic goals of a government. When these goals are achieved, there is internal economic stability within the country.

In this set of notes, we turn our attention to the external macroeconomic goal of governments – achieving a favourable balance of trade position. A favourable balance of trade position is achieved when there is avoidance of large and persistent balance of trade deficit or having an improved balance of trade surplus. We will study why governments would want to pursue such a goal as well as the issues and consequences of non-attainment of this goal. We will then study the various policies that can be adopted by governments to achieve the desired external equilibrium.

Important concepts and tools and analysis

- Balance of trade surplus and deficit
- Short term capital flows
- Long term capital flows – Foreign Direct Investment
- *Balance of Payments Account components – Current account, capital and financial account**

*Students are only expected to have an awareness of the components of the Balance of Payments.

Key questions to consider

1. What is the balance of payments and how is the balance of trade related to it?
2. What does having a favourable balance of trade position mean?
3. Why do governments want to have a favourable balance of trade position?
4. What causes an unfavourable BOT position?
5. What happens when countries do not achieve a favourable balance of trade position?
6. How do governments try and achieve a favourable balance of trade position?

Contents

What is the balance of payments and how is the balance of trade related to it?

1. The Balance of Payments

Before diving into why and how governments achieve a favourable balance of trade position, we need to know what the balance of trade is. The balance of trade is a component of the Balance of Payments (BOP). BOP is a much broader concept that includes the balance of trade in goods, the balance of trade in services, balance of primary and secondary income, as well as balance of payment on capital and financial account.

While it sounds rather overwhelming, do not panic! As part of your syllabus, you only need to know the components of the balance of payments and focus on the balance of trade.

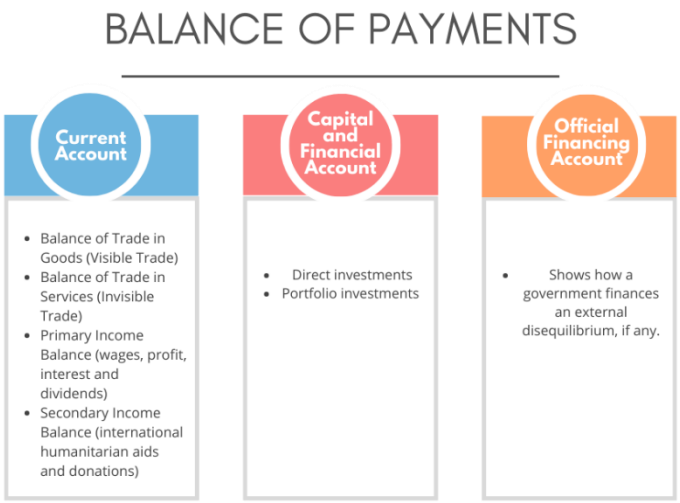
1.1. Overview of the Balance of Payments Account

What is the balance of payments? Let's look at the definition.

> The Balance of Payments (BOP) is a summary record of all the international transactions between the residents of a country and the rest of the world over a period of time, usually one year.

Transactions that a country makes with the rest of the world gets recorded in one of the accounts with the BOP. So, how are transactions categorised?

The transactions recorded in the balance of payments fall into the following three broad categories.



Note: The Balance of Payments always balances[1]. However, it may be in disequilibrium (i.e. deficit or surplus).

[1] Like any accounting statement, the BOP must balance on the whole. Since the BOP is based upon a system of double-entry book-keeping, the total debits must equal to total credits. This is because two aspects of each transaction recorded are equal in amount but appear on opposite sides of the balance of payments account. In this accounting sense, balances of payments for a country must always balance.

1.2. Structure of BOP

a) Current Account

The current account balance is the overall balance of all the four balances (i) to (iv) added together.

It is important to note that the current account records the flow of money between countries and not the movement of goods and services. For example, the sale of an electronic chip from Singapore to Malaysia (an export) would result in an inflow of money into Singapore and would be recorded as a positive (+ve) entry in Singapore's current account. Similarly, if a Singapore consumer buys a car made in Japan, this would result in an outflow of money and would be represented as a negative entry (-ve) in Singapore's current account.

i) Balance of Trade in Goods

This records the value of imports and exports of physical goods / merchandise. ***Exports*** result in an ***inflow*** of money and ***imports*** result in an ***outflow*** of money.

There is a surplus on the goods balance when total value of exports exceeds total value of imports and a deficit when total value of import exceeds total value of exports.

ii) Balance of Trade in Services

This records imports and exports of services such as civil aviation, banking, transportation, tourism and insurance. The purchase of a foreign holiday represents an outflow of money whereas the purchase of a Singapore insurance policy by a foreigner is an inflow.

iii) Primary Income Balance

This consists of wages, interest/dividends and profits due to economic production flowing in and out of the country. For example, dividends earned by a foreign resident from owning shares in a Singapore firm are recorded as an outflow of money. Profits earned by Singaporean businessmen from investments (FDI) overseas are recorded as an inflow of money.

iv) Secondary Income Balance (Unilateral Transfers Balance)

This involves government contributions to and receipts from international organisations, and international transfers of money by private individuals and firms with nothing received in return (e.g. money sent from parents in Greece to a Greek student studying in Singapore) Transfers out of the country are outflows while transfers into the country are inflows. Unilateral transfers are common in countries directing foreign aid, often from developed to less-developed nations. A U.N. shipment of food aid to North Korea to help feed its population is an example of unilateral transfer.

b) Capital and Financial Account

The capital account records the ***flow of funds***, into the country (inflows) and out of the country (outflows) which are associated with the acquisition or disposal of fixed assets (e.g. land), the

transfer of funds by migrants, and the payment of grants by the government for overseas projects and the receipt of money for capital projects in Singapore.

The financial account records cross-border changes in the holding of shares, property, bank deposits and loans, government securities[2], etc. In other words, unlike the current account which is concerned with money incomes, the ***financial account is concerned with the purchase and sale of assets***.

All of the inflows of money to Singapore in the capital account indicate an increase in liabilities, and would be represented by a negative entry in Singapore's capital and financial account.

i) Direct Investment (Long-Term Capital)

This is direct investment from one country to the destination country. If a foreign firm invests money in one of its branches or associated firms in Singapore, this represents an inflow of money when the investment is made. Since this transaction increases liabilities, it is a negative entry in the capital and financial account. If there is a net inflow of money, the capital and financial account is said to be in surplus.

Note: Any subsequent profit from this investment that flows abroad will be recorded as an investment ***income*** *outflow on the* ***current account***.

Investments abroad by Singaporean firms, e.g., a Singaporean firm purchases a factory in China, represents an outflow of money as the Singapore firm will have to pay for its purchase when the investment is made. This is an acquisition of overseas assets and is recorded as a positive entry in the capital and financial account.

If a country purchases more foreign assets for cash than the assets it sells for cash to other countries, the capital and financial account is said to be in deficit as there would be a net outflow of funds.

Note: It is the acquisition or sale of ***assets*** *that are referred to here, e.g. a factory, or the takeover of a whole firm, not the imports or exports of equipment which is recorded in the Current Account.*

ii) Short-Term Capital

Transactions in this part of the Balance of Payments are purely ***monetary flows*** as there is no creation of physical assets. They consist of deposits, and short-term loans, e.g., treasury bills. These are highly liquid (i.e., the maturity dates of financial instruments are less than 1 year) as they can be moved from one country to another rapidly and is affected by changes in interest rates or expectations of changes in exchange rates. This is often referred to as **"hot" money**.

Long-term financial instruments are those with maturity dates of more than one year such as private or government bonds are also recorded under Portfolio Investment.

[2] A government security (or bond) pays a fixed sum of money each year. Some can be redeemed by the government on its maturity date at its face value. Some are undated, with no maturity dates. All can be traded in the market.

Transactions in this account can also involve changes in the holding of financial assets, such as company shares. Thus, if a Singapore resident buys shares in an overseas firm, this is an outflow of funds.

c) Overall Balance

The overall balance is calculated by summing the Current Account Balance as well as the Capital and Financial Account Balance.

This represents all the autonomous, or independently motivated, transactions, i.e. transactions which individuals or governments freely choose to make according to their priorities or according to business or profit motive.

A **net currency inflow** indicates a Balance of Payments **surplus** (i.e. BOP is positive).

A **net currency outflow** indicates a Balance of Payments **deficit** (i.e. BOP is negative).

d) Official Reserves

As mentioned earlier, the official reserves is an attempt to separate the autonomous from the accommodating transactions (transactions that must happen to correct surpluses or deficits in the overall balance) and shows how the monetary authorities have dealt with, or accommodated, the net currency flow.

If there is a net currency inflow (Balance of Payments surplus), the following can occur:

- Lending to the IMF or other central banks
- Repayment of past loans (if any)
- Increase in foreign exchange assets i.e. adding to Official Foreign Reserves

If there is a net currency outflow (Balance of Payments deficit), the following can occur:

- Borrowing from other central banks or IMF
- Drawing on foreign exchange assets

*How would an A-level question that requires you to explain the various types of unemployment look like? Look at the following question for a possible example. This corresponds to **CSQ 3** (2019 ASRJC H2 Prelims)) of your Favourable Balance of Trade Position Tutorial package.*

(a) (i) With reference to Table 1, summarise the trend in the US trade balance between 2014 and 2018. [2]

(ii) Explain one possible factor that might account for the trend. [2]

2. Balance of Trade Equilibrium

A balance of trade (BOT) equilibrium exists if the total international receipts from the export of goods and services are equal to its total international payments for the import of goods and services in a given year. In other words, inflows are equal to outflows.

However, economies tend to have a BOT disequilibrium, which is a persistent tendency for the trade outflows to be greater than (or smaller than) the corresponding trade inflows.

Thus, economies end up with either a BOT deficit or BOT surplus.

What does having a favourable balance of trade position mean?

3. MACROECONOMIC AIM: FAVOURABLE BALANCE OF TRADE POSITION

Now that we have explored what BOP is, we zoom into the macroeconomic aim of governments; a favourable balance of trade (BOT) position.

A favourable balance of trade position indicates 1) avoidance of large and persistent balance of trade deficit or 2) having an improved balance of trade surplus.

The balance of trade is one of the measures of the economic health of a nation. It tells us the relative performance of an economy in the global economy in terms of how successful its exports are in other countries.

Why do governments want to have a favourable balance of trade position?

3.1. Benefits of favourable BOT Position

The balance of trade is important because it affects the exchange rate, economic growth, employment and living standard of a country. A favourable balance of trade is desirable because:

- ♣ It prevents the country's foreign currency reserves from depleting.
- ♣ It also ensures a more stable exchange rate of the country's currency which is important for countries that rely on imports.
- ♣ Persistent balance of trade deficit can lead to several other undesirable consequences that impact consumers, producers and government. (This will be discussed later.)

For more information on causes of a disequilibrium in the Capital and Financial Account which together with the BOT and other components of the Current Account would affect the overall BOP position, refer to Annex B.

What causes an unfavourable BOT position?

4. MACROECONOMIC ISSUE: BALANCE OF TRADE DEFICIT

A **balance of trade deficit** occurs when the total international receipts from the export of goods and services are **less than** its total international payments for the import of goods and services in a given year.

4.1. Causes of a Balance of Trade Deficit

When there is a deficit in the BOT, the total currency flow into the economy due to export revenue is less than the total currency flowing out of the economy due to import expenditure.

Such a deficit could be due to a combination of the following factors:

a) Growing Domestic Income / Falling Foreign Income

In the wake of a global recession – such as the US sub-prime mortgage crisis that led to a financial crisis and subsequent recession in 2008 – national income of trading partners would fall. This would lead to a fall in purchasing power and demand for imports from trading partners. This decreases the export revenue of the domestic country.

Assuming the domestic country's balance of trade is in equilibrium initially, a fall in export earnings will bring about a balance of trade deficit.

Conversely, rising national income due to strong economic performance – such as the rapid economic growth that China enjoyed in the past two decades – would increase Chinese households' purchasing power and consumption expenditure. Demand for imports, and hence import expenditure by China would also rise.

Assuming China's balance of trade is in equilibrium initially, a rise in import expenditure will bring about a balance of trade deficit.

b) Falling international competitiveness

A country's goods and services are said to be competitive if their prices are relatively lower and if their quality, after-sales services, rates of innovation etc. are higher relative to substitute products made in other countries.

Consumers in a country with a **higher domestic inflation** relative to its trading partners will find its domestic goods relatively more expensive compared to imported goods. This will cause consumers to switch from domestic goods to imported goods. At the same time, its exports will be relatively more expensive than its trading rivals and hence there will be a fall in quantity demanded for its exports.

For example, when there is higher inflation in Singapore relative to its trading partners, its exports will now be relatively more expensive. The quantity demanded for its exports will fall.

Assuming that the demand for Singapore's exports is price elastic, a rise in export prices will lead to a more than proportionate fall in quantity demanded, resulting in a fall in total export revenue/earnings.

At the same time, imports will be relatively cheaper than domestically produced goods. This will lead to an increase in demand for imports as consumers switch to foreign imports. The larger the cross elasticity of demand for imports with respect to the price of domestic goods, the larger the increase in demand for imports and hence import expenditure.

Assuming balance of trade is in equilibrium initially, a fall in export earnings and a rise in import expenditure will bring about a balance of trade deficit.

Productivity is an economic measure of output per unit of input.

Lower gains in productivity in a country, relative to other countries, leads to relatively higher unit cost of production, which translates to higher export prices.

Assuming demand for exports is price elastic, quantity demanded of exports will fall more than proportionately following the rise in export prices. As a result, export earnings fall.

At the same time, imports are relatively cheaper compared to domestic goods. This leads to an increase in demand for imports and import expenditure increases.

Assuming balance of trade is in equilibrium initially, a fall in export earnings and a rise in import expenditure will bring about a balance of trade deficit.

A country with a **lower rate of innovation** might produce less attractive products of lower quality. This would lead to a fall in demand for its exports. At the same time, local consumers would consume more imports which are of higher quality.

Assuming balance of trade is in equilibrium initially, a fall in export earnings and a rise in import expenditure will bring about a balance of trade deficit.

c) Improvements in the terms of trade

The terms of trade refers to the amount of domestically produced goods that must be given up in exchange for one unit of foreign goods.

Measurement of the Terms of Trade

$$\text{Terms of trade} = \frac{\text{Average price of exports}}{\text{Average price of imports}} \text{ X } 100$$

The terms of trade is expressed as an index where price changes are measured against a base year index which is 100.

For example:

If export prices increase by 5% since the base year and import prices remain unchanged,

$$Terms\ of\ Trade = \frac{105}{100}\ X\ 100 = 105$$

A terms of trade index of 105 here means that between the current period and the base period, the terms of trade has *improved* by 5%.

An improvement in terms of trade means that the country is able to obtain more foreign goods for the same quantity of domestically produced goods that is exported.

An improvement in a country's terms of trade could cause a balance of trade deficit, if $|PED_X|>1$ and $|PED_M|>1$. (Note: This is NOT Marshall Lerner Condition.) A rise in export prices will cause a more than proportionate fall in quantity demanded for exports. Export revenue decreases. A lower price of imports will cause a more than proportionate increase in quantity demanded for imports. Import expenditure increases.

Assuming that a country's balance of trade was initially in equilibrium, this results in a balance of trade deficit.

d) Over-valued exchange rate / Appreciation of currency

Some economists believe that a balance of trade deficit stems from the exchange rate being too high. In a fixed exchange rate system, this is referred to as an over-valued exchange rate.

In a flexible exchange rate or managed float regime, when currency appreciates (due to reasons such as influx of short-term capital flows), the price of exports in foreign currency rises. This causes a fall in the quantity demanded of exports. On the other hand, the price of imports in domestic currency decreases. This causes the quantity demanded of imports to increase. Assuming that Marshall-Lerner condition holds i.e., $|PEDx+PEDm|>1$ holds, the balance of trade will worsen.

Assuming that the balance of trade was initially in equilibrium, the worsening of the balance of trade will result in a balance of trade deficit.

Note the various assumptions made in the analysis with respect to initial BOT position and PED of exports and/or imports.

How would an A-level question that requires you to explain the causes of an unfavourable BOT position (BOT deficit) look like? The following question provides a possible example.
*This corresponds to **EQ 2** (2023 CJC H2 Prelims)) of your Favourable BOT position tutorial package.*

Japan's trade deficit roughly quadrupled to a record $160 billion USD in fiscal year 2022, imports jumped 32.2% from a year earlier, while exports increased 15.5%. Japan had a trade surplus with the United States but a much higher deficit with China.

Source: *asia.nikkei.com/Economy/Japan-posts-record-160bn-trade-deficit-for-fiscal-2022*

(a) Explain the factors that contribute to an increasing balance of trade deficit. [10]

What happens when countries do not achieve a favourable balance of trade position?

4.2. Consequences of a persistent BOT Deficit

A **balance of trade deficit** can have a **contractionary effect** on the economy. For example, a balance of trade deficit reduces the level of aggregate demand.

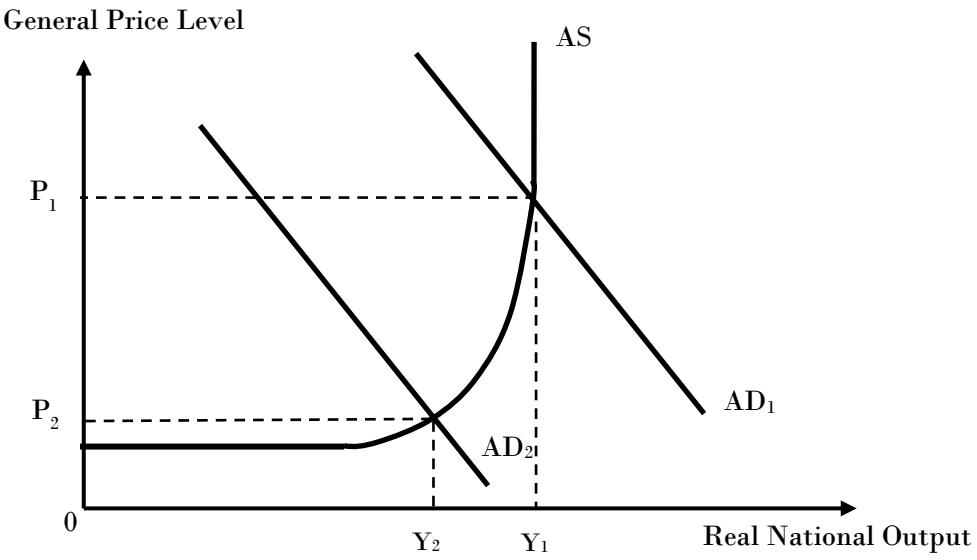


Figure 1: Illustration of A Fall in National Output, General Price Levels and Employment

Assuming the economy is at or near full employment, this fall in aggregate demand, ceteris paribus, will cause a fall in national output from Y_1 to Y_2, a fall in general price level from P_1 to P_2 and an increase in unemployment due to lower output levels as illustrated in Figure 1. Eventually, the initial fall in net exports will result in a greater decrease in national income through the multiplier process, leading to negative economic growth.

The consequences of a **persistent** balance of trade deficit, can also be analysed through the different perspectives of consumers, producers and governments.

a) Impact on consumers

The fall in national income will induce a fall in consumption by households because household incomes have fallen, thus they have lower purchasing power. A lower level of consumption of goods and services could lead a reduction in households' material standard of living.

With lower household income (and hence lower disposable income), the level of household savings would also change. Should households have to spend a larger proportion of their disposable income to maintain their existing level of consumption of necessities and essential services, the level of savings could fall. Alternatively, should households feel pessimistic about

the economic outlook, they may decide to save more in anticipation of the possibility of a further reduction in income in the future.

b) Impact on producers

Because of the fall in consumption by households, firms will decrease production further. Should this trend of lower consumption persist, producers would expect lower demand for their goods or services. As this continues, producers could lose confidence and might reduce investment expenditure.

c) Impact on Government

i) Impact on other macroeconomic objectives

A fall in investment level and production level will lead to *rising unemployment* in the economy, as firms reduce their demand for labour and other factors of production. This may further trigger contraction in both consumption and investment expenditure, *further affecting economic growth negatively* as consumers' and investors' confidence further deteriorates.

ii) Depletion of foreign exchange reserves

When a country has a balance of trade deficit, it has to use its gold and foreign currency reserves to finance the deficit. This cannot continue indefinitely as the stock of official reserve assets is limited.

iii) Rise in External Debt

When the country runs out of means to finance its deficit, it might have to borrow from international organisations such as International Monetary Fund (IMF) or from other countries. In this case, it incurs an external debt. These loans are usually granted under stringent conditions. A large and rising external debt due to persistent balance of trade deficit implies that an increasing share of future domestic incomes must be paid out to foreigners to service the debt. With this, huge opportunity cost is incurred as funds used to repay debts could instead be utilized to improve productive capacity and promote economic growth.

iv) Changes to exchange rates – Depreciation

In a flexible/managed float exchange rate regime, a persistent balance of trade deficit will result in a depreciation of the country's currency as this would lead to a fall in the demand for and an increase in the supply of the domestic currency in the foreign exchange market.

With the depreciation, imported inflation may result if the economy is heavily dependent on imports, leading to higher cost of living and higher cost of production. This would be detrimental to both actual and potential economic growth.

4.3. Is a BOT deficit always a cause for concern?

As mentioned in the previous section, a balance of trade deficit can have a contractionary effect on the economy. Assuming the economy is at or near full employment, this fall in aggregate demand, due to a fall in export earnings and rise in import expenditure, will cause a fall in

general price level ceteris paribus. This may have a positive impact on economies experiencing demand-pull inflation.

Furthermore, a balance of trade deficit may allow a nation's consumers to enjoy a higher standard of living in the short term if consumers are enjoying more quantity of imported goods and services.

Whether or not a balance of trade deficit is a problem depends on the following:

a) Size of the Deficit

The larger the deficit, the greater the amount of foreign reserves required to reduce it. This may deplete the amount of foreign reserves available for future use and the country could fall into debt if the country has to resort to borrowing from abroad.

b) Duration of the Deficit

A short-term balance of trade deficit is likely to pose a smaller problem for the government than a persistent one that lasts for years or even decades.

While short-term balance of trade deficits may be due to reactions by economic agents to policies implemented by local or foreign governments, a long-term balance of trade deficit indicates a more fundamental problem/concern inherent within the economy e.g. severe/permanent loss of competitiveness of its goods/services.

For example, in the short term, a balance of trade deficit can allow a country's consumers to enjoy a higher standard of living. A **cyclical deficit** may occur during the recovery or boom stage of the business cycle due to higher levels of demand for imports. This is not a major cause for concern if balanced against balance of trade surpluses at other stages of the economic cycle (e.g. recession). However, in the long term, a persistent deficit, in particular, a **structural deficit**, could show that the country is "living beyond its means". It might be a symptom of a weakening domestic economy and a lack of international competitiveness.

c) Causes of the Deficit

A persistent balance of trade deficit can be a cause for concern if it is a result of the loss of competitiveness of the country's goods and services. If this is the case, then structural changes of the economy may be needed to reverse the trend in the balance of trade.

On the contrary, if a persistent trade deficit is due to imports of productive assets, such as machinery and equipment, this is favourable for a country since productive assets will improve the economy's productivity over the long run.

To conclude, whether the balance of trade deficit is a concern depends on the causes of the deficit.

How would an A-level question that requires you to explain the causes of an unfavourable BOT position (BOT deficit) look like? The following question provides a possible example.
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Source: *asia.nikkei.com/Economy/Japan-posts-record-160bn-trade-deficit-for-fiscal-2022*

(a) Explain the factors that contribute to an increasing balance of trade deficit. [10]

How do governments try and achieve a favourable balance of trade position?

5. MACROECONOMIC POLICIES: CORRECTING A BALANCE OF TRADE DEFICIT

When the balance of trade deficit is small or temporary, the government may not take any corrective measure. However, when faced with a large and persistent balance of trade deficit, governments generally adopt the following types of policies:

- Expenditure-Reducing Policies
- Expenditure-Switching Policies
- Supply-Side Policies

5.1. Expenditure-Reducing Policies

An expenditure-reducing policy aims to reduce the demand and limit spending on imports by reducing overall expenditure in the economy. This results a fall in aggregate demand and in turn, national income falls.

When national income falls, the demand for imports will also fall, since import expenditure is income induced. This in turn reduces the balance of trade deficit. An expenditure-reducing policy involves the use of

- Contractionary Fiscal Policy, and/or
- Contractionary Monetary Policy.

5.1.1. Contractionary Fiscal Policy

A contractionary fiscal policy involves raising taxes (e.g. personal income taxes, corporate income taxes) and reducing government expenditure which directly decreases G.

An increase in personal income taxes will lead to a fall in disposable income. This will lead to a fall in the level of consumption expenditure (C). An increase in corporate income taxes will lead to a fall in post-tax profits which results in a fall in the level of investment (I).

a) Effect of a fall in AD on imports

The fall in the level of government expenditure (G), consumption expenditure (C) and investment expenditure (I) will reduce the level of aggregate demand (AD), resulting in a fall in national income. This will induce a fall in demand for imports, hence leading to a fall in total import expenditure.

Assuming that the balance of trade is initially in a deficit, this results in a reduction in balance of trade deficit.

b) Effect of a fall in AD on exports

In the longer term, the reduction in AD is deflationary and would reduce the general price level especially if the country is near full employment level of income. The downward pressure on general price level improves the price competitiveness of exports and increase the quantity demanded for exports.

Assuming the demand for exports is price elastic, this will result in a rise in export earnings.

Assuming balance of trade is in deficit initially, this results in a reduction in balance of trade deficit.

5.1.2. Contractionary Monetary Policy

A contractionary monetary policy **raises the level of interest rates**, thereby increasing the cost of borrowing money for consumption and investment.

A rise in interest rate makes it more costly to borrow money for consumption and investment purposes. This would reduce the level of consumption and investment. Consequently, as the level of national income decreases, the demand for imports also decreases. As a result, there would be a fall in total import expenditure.

Assuming balance of trade is in deficit initially and this results in a reduction in balance of trade deficit, thus there will be an improvement in overall balance of trade position in the long run.

Note: Effect of a rise in interest rate on flows of "hot" money

The higher interest rates may also lead to short-term capital ("hot" money) inflow, as foreign residents will want to earn the higher interest income from their funds. This would lead to a reduction in capital and financial account deficit.

Assuming balance of payment is in deficit initially and there is no impact on the other components of balance of payments, this results in a reduction in balance of payments deficit and thus an improvement in the overall balance of payments position in the long run.

5.1.3. Evaluation of Expenditure-Reducing Policies

- The use of an expenditure-reducing policy to reduce the balance of trade deficit is most appropriate when rapid economic growth accompanied by demand-pull inflation is the cause of the deficit.
- An expenditure-reducing policy to reduce the general price level and export prices may not necessarily increase the revenue from exports if the demand for exports is price inelastic. Hence, this may worsen the deficit.
- An expenditure-reducing policy will be more effective in reducing the balance of payments trade deficit if the demand for imports is income elastic. However, if the demand for imports

is income inelastic, then there must be a very large fall in income to induce a desired fall in imports.

- ♣ Expenditure-reducing policies can improve the balance of trade position but may increase unemployment and cause a fall in national income due to their contractionary effect. Thus, this results in a conflict of macroeconomic objectives.
- ♣ Thus, the policy may conflict with the macroeconomic objectives of economic growth and full employment and thus may not be appropriate if the country is also experiencing recession. This policy might only provide a short-term solution and may not tackle the underlying causes of persistent BOT deficit such as a lack of competitiveness.

5.2. Expenditure-Switching Policies

Expenditure-switching policies are implemented to switch the expenditure of domestic customers away from imports towards domestically produced goods.

The aim of this policy is to change the relative price of domestic goods and foreign goods so that people will substitute foreign goods with domestic goods.

An expenditure-switching policy involves the use of

- ♣ Exchange Rate Policy, and/or
- ♣ Import Controls.

5.2.1. Exchange Rate Policy

The exchange rate of an economy affects balance of trade through its effect on export and import prices, and policy makers may take advantage of this connection.

When faced with a balance of trade deficit, the central bank can choose to lower the value of its currency relative to other currencies to resolve the deficit.

It would undertake a ***depreciation*** of its currency if the currency is under a ***managed float exchange rate system***.

If a country's currency were to depreciate, this will cause its exports to become cheaper in terms of foreign currency and imports to become more expensive in terms of domestic currency. As a result, foreigners will demand more of the country's exports while domestic economic agents will switch away from imports towards domestically produced goods.

Assuming Marshall Lerner condition (i.e., The price elasticities of demand for exports and imports, $|PED_X+PED_M|>1$), this would lead to the balance of trade deficit or the shortfall between the value of exports (PxQx) and the value of imports (PmQm) to be reduced.

5.2.2. Limitations of Exchange Rate Policy

a) Assumption of the Marshall-Lerner condition

The policy of currency depreciation assumes the Marshall-Lerner condition is met (i.e., $|PED_X + PED_M|>1$), for a reduction in balance of trade deficit to materialise.

However, in the short run, depreciation may actually increase the balance of trade deficit. The demand for exports and imports tends to be price inelastic in the short run due to contractual obligations as well as the need for time to source for substitutes and to change consumption patterns.

In such a situation, the depreciation of the currency might actually increase the balance of trade deficit.

However, in the long run, as the demand for both exports and imports becomes more price elastic (lapse of contracts and change in patterns of consumption), the balance of trade deficit decreases.

b) Retaliation by other countries

Depreciation will increase the country's volume of exports and this may prompt foreign countries to retaliate by depreciating their currencies or by imposing trade barriers to discourage the consumption of the exports of the country that depreciated its currency.

If foreign countries retaliate, the result is competitive depreciation. This will reduce the effectiveness of the initial depreciation to reduce the balance of trade deficit.

c) Depreciation may bring about undesirable effects on the economy:

i) Inflation

Depreciation can result on cost push and imported inflation because of the rise in prices of imported raw materials and prices of imported goods and services respectively. This is especially true when a country is highly dependent on imports.

In addition, the rise in the demand for the country's exports can lead to demand-pull inflation, especially when a country is near full employment level of income.

Inflation reduce the real incomes of the citizens, hence lowering material well-being.

ii) Worsen external debt-servicing problem

The country's external debt-servicing problem will worsen. The country may have borrowed in foreign currencies. When its currency depreciates, the size of its external debt in foreign currency remains the same but the amount of domestic currency needed to service the same debt will increase.

iii) Redistribution of incomes

Depreciation can lead to a redistribution of income.

Depreciation benefits producers in the export and import-competing sectors (trading sector) but imposes losses on the consumers.

These losses are due to increased general price prices with no compensating increase in income.

5.2.3. Import Controls (otherwise known as protectionist measures)

Import controls have an expenditure-switching effect on the balance of payments.

Some examples include tariffs, quotas and embargoes.

a) Tariffs[3]

Tariffs or import duties discourage expenditure on imports by increasing the price of imports.

When an import tariff is imposed, the price of the imported good in the country will rise. This will reduce the quantity demanded for the imported good. At the same time, the tariff makes the domestically produced goods, which are substitutes for the imported good, relatively cheaper. This will reduce import expenditure and reduce the balance of trade deficit.

b) Quotas

Import quotas limit the volume or supply of imports by specifying the maximum amount of a foreign-produced good that is permitted into the country over a specified period of time.

When a country imposes a quota on an imported good, it reduces the supply of the imported good in the country. As a result, the price of the imported good rises, leading to a fall in the consumption of the imported good. On the other hand, the demand for the domestically produced import substitute will rise. This will reduce import expenditure and reduce the balance of trade deficit.

c) Embargoes

Embargoes are total government bans on certain imports. As a result, the demand for the domestically produced import substitute will rise. This will reduce import expenditure and reduce the balance of trade deficit.

5.2.4. Limitation of Import Controls Policy[4]

Import controls lead to distortion in resource allocation, which leads to inefficiency. They breed inefficient domestic producers because of reduced competition from abroad. There is hence little incentive for domestic producers to seek more efficient methods of production to reduce the price of goods. In addition, the welfare of citizens is reduced because import controls distort market forces, resulting in higher domestic prices and thus prevent consumers from benefiting from all the advantages of international specialisation and trade (such as products of better quality and lower prices for goods or services).

Import controls may result in retaliation and trade wars as other countries whose exports were affected by the given country's policies may similarly impose restrictions on the country's

[3] Further details will be covered in the topic on "International Trade and Protectionism".
[4] These are similar to the arguments against protectionism.

exports of goods or services. This could then result in a decline in opportunities for export-led growth for the countries involved in the dispute.

5.3. Supply-Side Policies (to improve export competitiveness)

To reduce the balance of trade deficit, the government can introduce measures to lower the costs of production and boost the productivity of the factors of production.

For example, SkillsFuture is a national movement to enable all Singaporeans to develop to their fullest potential, as well as realise their aspirations by taking advantage of a wide range of opportunities. The second of the four Key Thrusts of SkillsFuture is to develop an integrated high-quality system of education and training that responds to constantly evolving needs.

The improvement in the quality of the labour force can raise the labour productivity and hence lead to a rise in LRAS. Also, assuming the increase in labour productivity would bring about a fall in per unit labour cost, cost of production decreases and this causes an increase in SRAS. This would bring about a fall in the general price level of domestically produced goods and services and in turn lead to a rise in the price competitiveness of exports. Assuming that demand for exports is price elastic, this will increase export revenue and reduce the balance of trade deficit.

The government may also look to provide subsidies for research and development. Firms would be encouraged to undertake research and development in the areas of process innovation or product development.

a) Process Innovation

Process innovation is one way to improve a country's export price competitiveness. Process innovation is the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software during the production process. Through process innovation, more efficient ways of producing existing products or delivering existing services would bring about reduced cost. This reduction in cost of production would make the country's exports more price competitive. When the country's exports become more price competitive, its volume of exports will increase. Assuming that demand for exports is price elastic, this will increase export revenue and reduce the balance of trade deficit.

b) Product Development

Product development involves the launching of new or improved goods or services to the market which will improve a country's export non-price competitiveness.

For example, reduction in a country's production costs and intensive research and development successes leading to Singapore becoming a leader in high-technology exports. High-technology exports are products with high R&D intensity, such as in aerospace, computers, pharmaceuticals, scientific instruments, and electrical machinery. With competitive exports this will increase export revenue and reduce the balance of trade deficit, ceteris paribus.

Furthermore, as domestically produced goods and services are more attractive relative to foreign goods and services. There could be a reduction in import expenditure as consumers

switch from imported goods and services to domestic goods and services. The balance of trade deficit will be reduced.

c) Export Incentives

Governments may correct the balance of trade deficit by giving export incentives like tax exemption on exporting industries and investment grants to help the export sector to modernise and increase efficiency, increasing the price competitiveness of exports and therefore, increasing the volume of exports. Assuming that demand for exports is price elastic, this will increase export revenue and reduce the balance of trade deficit.

5.4. Limitation of Supply-side Policies

- Firms may not be willing to send workers for training as there will be loss of output during training. Firms may also underestimate the true benefits of education and training. Hence, the amount of training undertaken may be less than socially optimal.
  Workers also face difficulties in learning new skills, especially the older workers.
- In most cases, the government needs to increase its spending on subsidies on training and incentives for research and development. As such, these policies can drain the government's resources, diverting resources away from other areas of competing needs.
- There is a time lag in the implementation of supply-side policies, which may compromise its effectiveness as economic conditions are very dynamic. Even so, such policies should still be undertaken to ensure a long-term improvement in the country's balance of payments.

How would an A-level question that requires you to explain the causes of an unfavourable BOT position (BOT deficit) look like? The following question provides a possible example.
*This corresponds to **EQ 2** (2023 CJC H2 Prelims)) of your Favourable BOT position tutorial package.*

Japan's trade deficit roughly quadrupled to a record $160 billion USD in fiscal year 2022, imports jumped 32.2% from a year earlier, while exports increased 15.5%. Japan had a trade surplus with the United States but a much higher deficit with China.

Source: *asia.nikkei.com/Economy/Japan-posts-record-160bn-trade-deficit-for-fiscal-2022*

(b) Discuss alternative policies that may be employed to reduce a country's trade deficit. [15]

6. Macroeconomic Problem: BOT Surplus

A balance of trade surplus occurs when the total international receipts from the export of goods and services are more than its total international payments for the import of goods and services in a given year.

6.1. Causes of a Balance of Trade Surplus

When there is a surplus in the BOT, the total currency flow into the economy due to export revenue is more than the total currency flowing out of the economy due to import expenditure.

Such a surplus could be due to a combination of the following factors:

a) Growing Foreign Income/Falling Domestic Income

A rise in the national income of trading partners will increase the demand for the country's exports.

For example, due to the economic recovery of the global economy in 2010, there was an increase in demand for Singapore's exports. The more income elastic the demand for exports is, the greater will be the rise in Singapore's exports and export earnings.

Assuming balance of trade is in equilibrium initially, a rise in export earnings will bring about a balance of trade surplus.

Additionally, a falling domestic national income may lead to lower demand for imports which improves the balance of trade. The extent of the fall in imports due to a fall in the level of domestic income depends on the income elasticity of demand for imports.

Assuming balance of trade is in equilibrium initially, a rise in the export earnings will bring about a balance of trade surplus.

b) Increasing International Competitiveness

A country's goods and services are said to be competitive if their prices are relatively lower and if their quality, after-sales services, rates of innovation etc. are higher relative to substitute products made in other countries.

A country may enjoy strong demand for its exports due to **lower cost of production** and **higher efficiency** than its competitors, thus leading to a surplus in the balance of trade.

For example, Singapore enjoys comparative advantage in high value-added industries such as petrochemical and electronics due to its higher efficiency caused by efficient infrastructure and skilled labour. As such, there is a high demand for our high value-added exports which increases our export earnings and if inflows exceed outflows in the balance of trade, a balance of trade surplus results.

Consumers in a country with a **lower domestic inflation** relative to its trading partners will find its domestic goods relatively cheaper compared to imported goods. Thus, consumers will switch from imported goods to domestic goods.

At the same time, its exported goods will be relatively cheaper than its trading rivals and hence there will be a rise in quantity demanded for its exports.

Assuming that the demand for its exports is price elastic, quantity demanded will rise more than proportionate to the price fall, thus causing its export revenue to rise.

Given the fall in import expenditure and rise in export revenue is such that the inflow exceeds the outflow in the balance of trade, a balance of trade surplus results.

A country with a **higher rate of innovation** might produce more attractive products of higher quality. This would lead to an increase in demand for its exports. At the same time, local consumers would consume more domestic products and import less.

Assuming balance of trade is in equilibrium initially, a rise in export earnings and a fall in import expenditure will bring about a balance of trade surplus.

c) Worsening of terms of trade

Technological advancements can bring about improvements in techniques of production which can decrease the cost of production. Export prices could then fall.

Assuming there is no change to import prices, this then brings about a worsening of a country's terms of trade.

However, a worsening in a country's terms of trade could cause a balance of trade improvement, if $|PED_X|>1$ and $|PED_M|>1$ ***(Note: This is NOT Marshall Lerner Condition)***. A fall in export prices will cause a more than proportionate increase in quantity demanded for export. Export revenue increases.

Assuming that a country's balance of trade account was initially in equilibrium, this will bring about a balance of trade surplus.

d) Under-valued exchange rate / Depreciation of currency

Some economists believe that balance of trade surpluses could be due to under-valued exchange rates in a fixed exchange rate system.

In a flexible exchange rate or managed float regime, when currency depreciates (due to reasons such as outflow of short-term capital flows), this causes price of its exports in terms of foreign currency to be lower while price of imports would become relatively higher in terms of domestic currency.

Assuming initially that the balance of trade was in equilibrium, the rise in export revenue and fall in import expenditure will result in an improvement in the balance of trade, given the Marshall-Lerner condition (i.e., $|PED_X + PED_M| > 1$) holds.

6.2. Consequences of a Balance of Trade Surplus

A country with a balance of trade surplus experiences a rise in its foreign exchange reserves. Generally, a balance of trade surplus usually presents fewer problems compared to a deficit.

However, a persistent and excessive balance of trade surplus may also present problems to an economy.

A **balance of trade surplus** can have an **expansionary effect** on the economy. For example, a balance of trade surplus as a result of a rise in export earnings and a fall in import expenditure increases the level of aggregate demand.

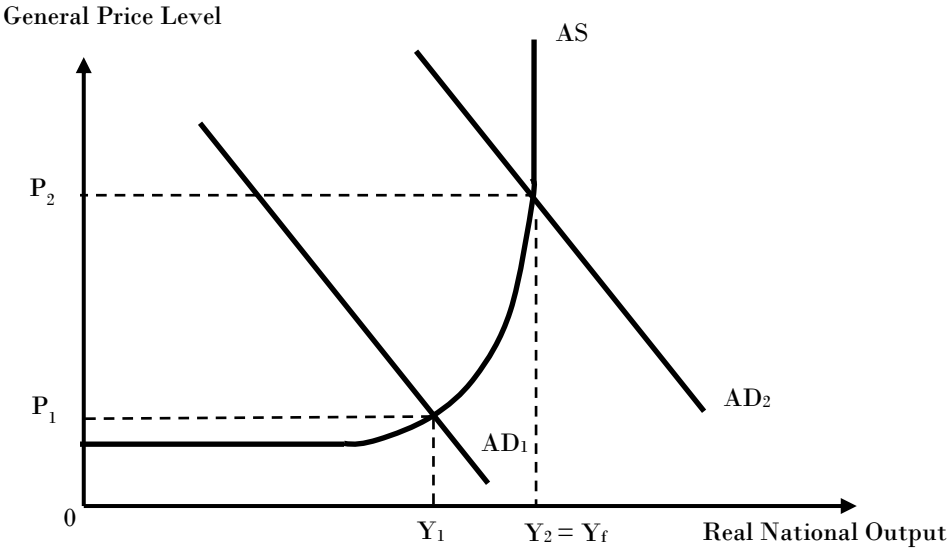

Figure 3: Illustration of A Rise in National Output, General Price Levels and Employment

Assuming the economy is initially operating below full employment, this rise in aggregate demand, ceteris paribus, will cause a rise in national output from Y1 to Y2, a rise in general price level from P1 to P2 and a reduction in unemployment due to higher output levels as illustrated in Figure 3. Eventually, the initial rise in net exports will result in a greater rise in national income through the multiplier process, leading to positive economic growth.

Again, the perspectives of consumers, producers and governments will have to be considered, in analysing the consequences of a persistent and excessive balance of trade surplus.

a) Impact on consumers

The rise in national income will induce a rise in consumption by households because household incomes have risen thus they have higher purchasing power. A higher level of consumption of goods and services could lead an improvement in households' material standard of living.

Furthermore, under a flexible exchange rate system, a balance of trade surplus (i.e. total currency inflow is more than total currency outflow) will lead to an appreciation of the country's currency. Currency appreciation will result in imports becoming cheaper in domestic currency.

Assuming that the demand for imports is price elastic, import expenditure would increase. The consumption of a larger quantity and variety of goods and services (if imported goods add variety to domestically produced goods) would lead to an improvement in households' material standard of living.

With higher household income (and hence higher disposable income), the level of household savings would also change. Should households now spend a smaller proportion of their disposable income, the level of savings could rise. Higher savings increases the amount of loanable funds which would reduce the cost of borrowing and thus increase investment expenditure. Alternatively, should households feel optimistic about the economic outlook, they may decide to reduce savings (and increase consumption) if they are confident of further increment in income in the future.

b) Impact on producers

Because of the rise in consumption by households, firms will increase production further. Should this trend of higher consumption continue, producers would expect higher demand for their goods and services. As this continues, producers would be confident to increase investment expenditure.

On the other hand, the appreciation of the country's currency (due to the balance of trade surplus) may lead to loss of its export price competitiveness. Its exports thus become more expensive in foreign currency. This is problematic if demand for exports is price elastic as export revenue would then fall.

c) Impact on government

i) Impact on other macroeconomic objectives

A rise in investment level and production level will lead to *falling unemployment* in the economy, as firms increase their demand for labour and other factors of production. This may further incentivise increases in both consumption and investment expenditure, further *promoting economic growth* as consumers' and investors' confidence continues to improve.

ii) Currency speculation (Dutch Disease)

A large and persistent balance of trade surplus may lead to greater confidence and speculation on a country's currency, attracting large amounts of hot money inflow. This will cause the country's currency to appreciate sharply leading to loss of competitiveness of other products in the export market.

For example, the growth of the UK's oil trade surplus in the 1970s and 1980s led to speculation and huge hot money inflow into the UK. As a result, the pound's exchange rate rose to a level that was greatly overvalued which caused a loss of competitiveness in its non-oil manufacturing exports. Thus, the UK's manufacturing industries lost world markets and suffered acutely from import competition. This was a major cause of the deindustrialisation of the UK economy.

Note: This is also an example of "Dutch Disease" (refer to Annex A), which occurs when a large influx of currency leads to appreciation of the currency and reduces a country's export competitiveness.

iii) Beggar-thy-neighbour effect

A persistent surplus in one country's balance of trade account also means a balance of trade deficit for the trading partners. Trading partners with a large and persistent balance of trade deficit may retaliate through discriminatory protectionist measures such as import tariffs on exports from the country with a persistent balance of trade surplus. Such measures reduce exports from the country, strain the political and trade relationships between the trading countries.

7. Conclusion

It is important for the government to understand the usefulness and limitations of all the measures which can be used to achieve the macroeconomic aim of a favourable balance of trade.

Ultimately, to achieve a favourable balance of trade, it is important for the government to accurately identify and then address the root of the problem, rather than merely dealing with the symptoms.

8. Annex A

8.1. OTHER CAUSES OF A BOP DISEQUILIBRIUM

While we have focused on the causes and effects of a Balance of Trade (BOT) disequilibrium, as well as the policies to correct an unfavourable BOT, the BOT is part of the larger Balance of Payment (BOP) which also consists of the Capital and Financial Account. In this section, we will be looking at the causes of a disequilibrium in the Capital and Financial Account.

8.1.1. Capital & Financial Account Disequilibrium

When the currency outflow is greater than the currency inflow on the capital and financial account, there will be a capital and financial account **deficit**.

When the currency inflow is greater than the currency outflow on the capital and financial account, there will be a capital and financial account **surplus**.

Disequilibrium in the capital and financial account can be caused by changes in the short-term capital flows (hot money) or long-term capital flows.

Changes to short-term capital flows, caused by the following, could result in a disequilibrium on the capital and financial account:

a) Changing relative interest rates

Ceteris paribus, a fall in interest rates in a country relative to those in other countries will result in short-term capital outflow as financial institutions/individuals choose to place their funds in countries that can offer higher interest rates.

Assuming the capital and financial account is in equilibrium initially, such outflow of "hot" money will bring about a capital and financial account deficit.

Conversely, if a country's interest rate is higher than foreign countries' interest rate, this will lead to capital inflow in the form of hot money as both citizens and foreigners will want to park their funds with the banks in this country to earn a higher interest return.

Assuming that the capital and financial account was initially balanced, this will lead to a surplus in the capital and financial account should the currency inflow exceeds the outflow.

b) Expectations of future changes in the value of currency

When the domestic currency depreciates or is expected to depreciate, capital flight may take place. This is because investors will not want to hold on to a currency whose value is falling or is likely to fall. Hence, they will buy foreign currencies and sell the domestic currency. This results in a short-term capital outflow.

Assuming the capital and financial account is in equilibrium initially, such outflow of "hot" money will bring about a capital and financial account deficit.

Similarly, when there is an expected rise in external value of money i.e. an appreciation, a country's capital and financial account will improve due to hot money inflow.

Assuming that the capital and financial account was initially balanced, this will lead to a surplus in the capital and financial account should the currency inflow exceeds the outflow.

Changes to long-term capital movements, caused by the following, could result in a disequilibrium on the capital and financial account:

a) Changing international competitiveness

Factors such as higher labour cost, rising rentals, higher energy prices, or slow gains in productivity could result in rising average cost of production. Such could happen as a result of a change in government policy (a reduction in fuel subsidy or higher prices for utilities) or rising import prices of raw materials or energy. This could lead to a fall in export price competitiveness.

The level of investment, especially direct and portfolio investment, depends on the expected rate of return. If the expected rate of return to investment in the country falls *relative to that in other countries*, this may result in an increase in net foreign direct investment outflow.

Assuming the capital and financial account is in equilibrium initially, such outflow of capital will bring about a capital and financial account deficit.

Technological advancement; successful process innovation via research and development; or gains in labour productivity could result in reductions in average cost of production of a country. Export competitiveness could then increase. Together with a pro-business environment, made possible by a reduction in red tape, all these will likely to increase direct investment from abroad.

Assuming that the capital and financial account was initially balanced, this will lead to a surplus in the capital and financial account should the capital inflow exceeds the outflow.

b) Change in foreign income/ Economic outlook

With a global recession (such as the 2008 recession sparked off by the US sub-prime mortgage crisis) and the consequent reduction in consumption by households in both the domestic and foreign sectors, producers and exports face lower demand for their goods and services. Under such conditions, the level of direct investment from abroad would also be reduced as foreign investors pull out their investments. This leads to capital outflow.

Assuming the capital and financial account is in equilibrium initially, such outflow of capital will bring about a capital and financial account deficit.

During times of global economic recovery or economic boom, business sentiments tend to be positive. Households and producers are likely to be optimistic of future incomes and profits, respectively. With higher profits and expectations of a positive economic outlook, a country could receive higher direct investment from foreign firms looking to expand their operations or break into newer markets.

Assuming that the capital and financial account was initially balanced, this will lead to a surplus in the capital and financial account should the capital inflow exceeds the outflow.

9. Annex B – 'Dutch Disease'

Negative consequences arising from large increases in a capital inflow. Dutch disease is primarily associated with a natural resource discovery, but it can result from any large increase in foreign currency inflow, due to foreign direct investment, foreign aid or a substantial increase in natural resource prices. More importantly, the capital inflows lead to currency appreciation, making the country's other products less price competitive on the export market.

Dutch disease has two main effects:

a) ***A decrease in the price competitiveness, and thus the export, of the affected country's goods and services***
b) ***An increase in imports – In the long run, both these factors can contribute to jobs being moved to lower-cost countries. The end result is that non-resource industries are hurt by the increase in wealth generated by the resource-based industries.***

The term "Dutch disease" originates from a crisis in the Netherlands in the 1960s that resulted from discoveries of vast natural gas deposits in the North Sea.

The capital inflow leads to currency appreciation, making exports of all non-oil products less competitive on the world market.

In the 1970s, the same economic condition occurred in Great Britain, when the price of oil quadrupled and it became economically viable to drill for North Sea Oil off the coast of Scotland.

By the late 1970s, Britain had become a net exporter of oil; it had previously been a net importer. The pound soared in value, but the country fell into recession when British workers demanded higher wages and exports became uncompetitive.