AS-AD MODEL

In previous models (Keynesian model, IS-LM) we mostly considered the demand side of the economy and how it influences the level of product. Any increase in output was only caused by an increase in aggregate demand (aggregate expenditures). We did not consider supply aspects such as effects of technological improvements, changes in factors of production (quantity, quality and their prices), etc. In these models, there was an assumption of fixed price level.

In model AS-AD, we leave the assumption of fixed price levels and we aim to describe the process of estimating **the level of real product (Y) and price level (P)**.

The model assumption: flexible price level -> need to make difference between the real and nominal variables.

1. Recall what are nominal and real variables in economy:

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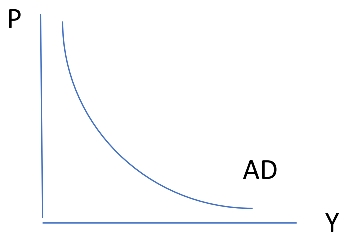
The model consists of **aggregate supply (AS)** a **aggregate demand (AD)**.

1) **AGGREGATE DEMAND (AD) –** shows the total amount of goods and services (Y) demanded for a given price level (P) in economy.

$$\boxed{\mathbf{AD = C + I + G + NX}}$$



2. Why does AD have negative slope?

Interest rates effect:

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Wealth effect:

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International trade effect:

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Besides moving down on the AD curve, there are factors which make the whole AD curve to move left (decrease of AD) or right (increase of AD). The AD can increase if one of its components (C, I, G, NX) increases. Similarly, the AD can decrease if one of its components (C, I, G, NX) decreases. For example, if housholds get lower income due to increase in taxes, then their consumption (C) decreases which results in decrease of AD as whole.

These changes which lead to the movements of whole AD curve are called demand shocks. Negative demand shocks make AD move to the left (decrease). Positive demand shocks make AD curve move to the right (increase).

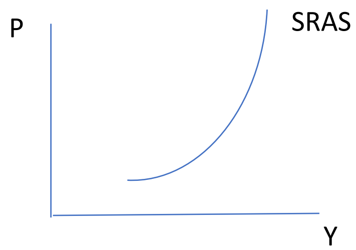
3. Decide whether given situation is a negative or positive demand shock:

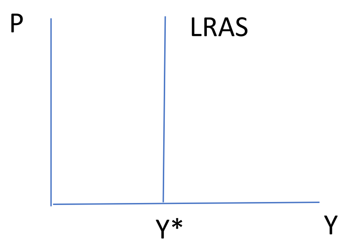
Increase of import tariffs	Government decides to build a highway
Increase of real income abroad	CB increases interest rates
Increase of expected inflation	Increase of personal income tax rate
Arrival of significant investor	Arrival of war refugees

2) AGGREGATE SUPPLY (AS) - shows the total amount of goods and services (Y) produced at a given price level (P) in economy. Quantity supplied in an economy depends on labor employed, amount of capital used, technological level, human capital (health, knowledge) of its workers, efficiency in production, institutional support (such as good government or well defined property rights) and so on.

In short-run a change in prices changes the real cost of labour, affecting the productive capacity of the economy but in long-run the productive capacity is not depended on the prices aka the capacity is influenced only by quantity and quality of the factors of production available.

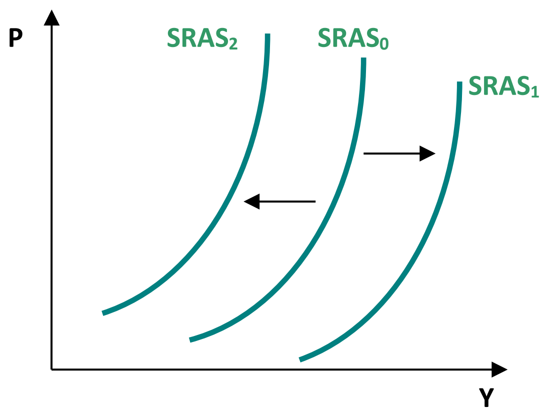
Therefore we differentiate between the short-run AS (SRAS) and long-run AS (LRAS):
SRAS – positive slope → with increasing price level (P) a higher level of output (Y) is supplied.
LRAS – in long-run the aggregated supply reflects the level of potential output (Y*).

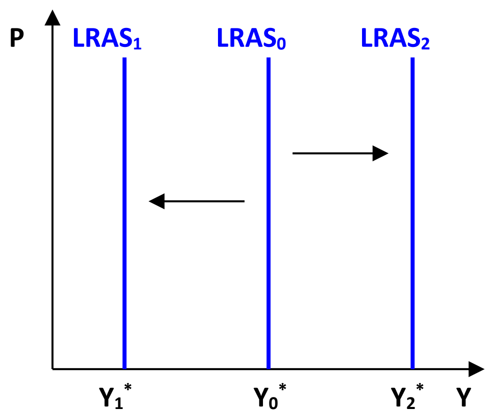




Potential output (Y*) is **the maximum amount of goods and services an economy can turn out when it is most efficient**—that is, the economy is working at full capacity. Often, potential output is referred to as the production capacity of the economy.

MOVEMENTS OF AS CURVES:





FACTORS INFLUENCING SRAS:

- Production factors prices (decrease in production factor price, e.g. decrease of wage → increase of SRAS)

FACTORS INFLUENCING SRAS AND LRAS:

- quantity of production factors (e.g. increase of labour force or capital quantity → increase of AS)
- productivity of production factors, human capital and technologies (increase in labour productivity or new technology → increase of AS),
- sources of raw materials (new natural sources, e.g. new gold deposits → increase of AS),
- natural conditions,
- business/enterpreneur conditions and regulations and environment.

MACROECONOMIC EQUILIBRIUM

Macroeconomic equilibrium is the situation in economy when economic agents are satisfied with price level and the level of demanded and supplied output. There are three kinds of macroeconomic equilibrium:

1. Long-term equilibrium

2. Inflationary gap (when potential output is lower than real output → $Y>Y^*$)

3. Recessionary gap (when potential output is higher than real output → $Y<Y^*$)

4. Based on the lecture knowledge, draw:

Long-term equilibrium:

Inflationary gap:

Recessionary gap:

Neoclassical model of AS – AD

Neoclassical model of AS – AD considers economy to be a stable system which in case of deviation from long-run equilibrium is able to automatically return back to the level of potential output. This model assumes prices and wages to be perfectly flexible.

(Neo)keynesian model of AS – AD

(Neo)keynesian model of AS – AD considers economy to be an unstable system in which there are tendencies to not use production capacities fully which leads the systém to mantaining the equilibrium at the level of real product which is lower than the potential output. This model assumed limited or imperfect flexibility of prices and wages, especially with wages being downward inflexible.

PROBLEM 1: Draw how decrease of investments changes the AS-AD model if economy was initially producing output at the natural rate of unemployment.
Discuss what kind of solution neoclassical and (neo)keynesian approaches offer if long-run equilibrium is to be mantained again.

PROBLEM 2: Draw how decrease of government spending changes the AS-AD model if economy was initially in inflationary gap.
Then decide if this policy is considered monetary or fiscal and if it's expansive or restrictive. Discuss whether this policy was well-chosen or not.

PROBLEM 3: Draw how decrease of transfer payments changes the AS-AD model if economy was initially in recessionary gap.
Then decide if this policy is considered monetary or fiscal and if it's expansive or restrictive. Discuss whether this policy was well-chosen or not.