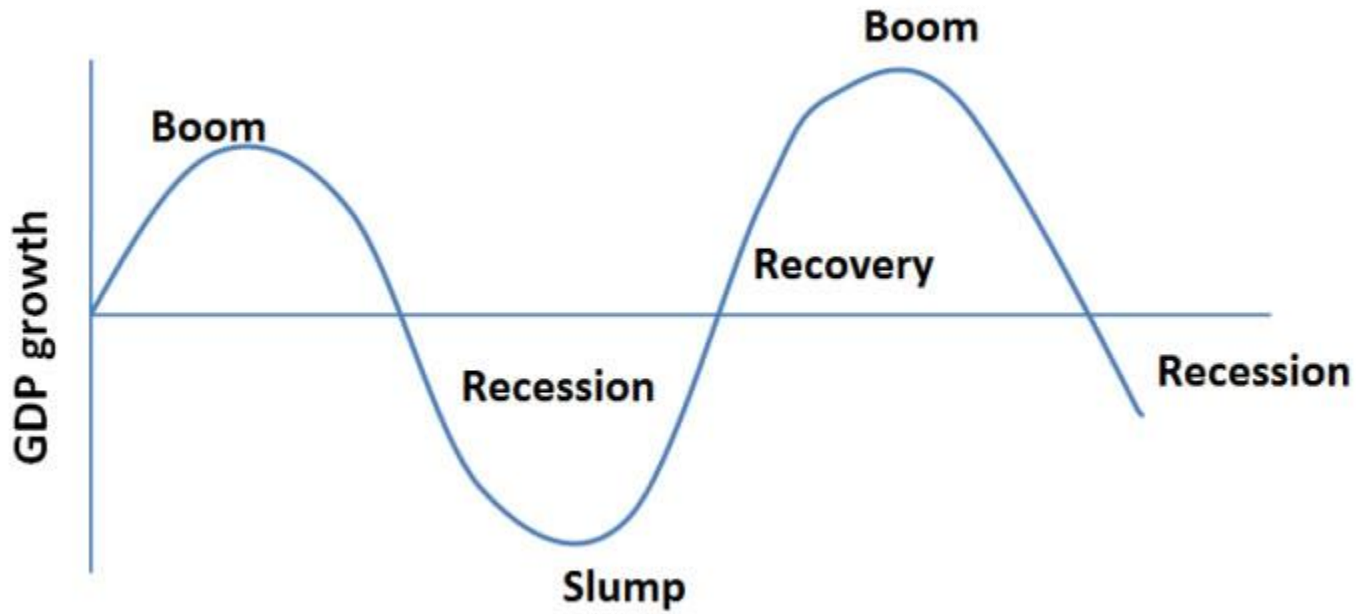
History of 20th century macroeconomics

- Almost no interest in macroeconomic issues late in 19th century and early in 20th century
- This continued until 1930s (the times of the Great Depression)
- Since 1930s to late 1970s macroeconomics focused on the problem of business cycles.

Ups and downs of business cycle



History of 20th century macroeconomics

- 1930s: Keynesian Revolution
  - John Maynard Keynes proposed a new theory of business cycles, which rejected almost all classical and neoclassical views.
- 1940s – 1960s :
  - dominance of neoclassical synthesis (a combination of neoclassical and Keynesian macroeconomics
- 1970s- 1980s:
  - reaction against Keynesian macro. Monetarism and New Classical Macroeconomics.
- Since 1980s on: New Keynesian Macroeconomics
- 1990s:
  - the rise of new economic growth theories (endogenous growth); problem of business cycles lost much of its appeal … until the Great Recession that started in 2007

The state of macroeconomics before 1930s

- Very little interest in economic growth since Adam Smith

- Joseph Schumpeter (1883-1950), *Theory of economic development*, 1934
- Main arguments:
  - Main factors of growth are non-economic ones. They belong to institutional structure of the society.
  - Growth is the effect of the activities of entrepreneurs. They are those businesspersons who take risks of starting new firms, introduce innovative products and new technology in the economy.

Economic growth according to Schumpeter

- Invention versus innovation according to Schumpeter.
- Invention is the creation of something new, a new idea, technique, technology, but what really matters for economic growth is...
- Innovation - the act through which these new ideas are successfully introduced to the market.
- Economic growth is accelerated in the institutional framework of the economy, which is friendly to entrepreneurs (private property, laissez-faire economic policy).

Economic growth according to Schumpeter

- This framework (favourable to innovations) was present in early capitalism (18th -19th century), but in mature capitalism it changes so much that <u>economic growth will stop.</u>
- Why?
  - the role of entrepreneur will diminish because in mature capitalism big corporations appear and they become risk averse
  - entrepreneurs are replaced by bureaucratic committees or hired managers.
  - political support for capitalism will die out in the long run.
  - wealthy capitalism will produce a class of intellectuals, who in general hold leftist views, criticize capitalism, and advocate socialism.
- So, innovations will become a rare thing, and economic growth will stop. Capitalism will turn into socialism in the end.

Theory of the general level of prices

- Quantity theory of money (QTM):
  $MV = PY$, where
  - M – supply of money
  - V – velocity of money
  - P - general level of prices
  - Y – real national income

- V and Y are determined by non-monetary factors (that is other than M or P)

- Thus, QTM says that in the long run the rise in M will only increase P, and will not influence Y.
- Implication: monetary policy in neutral with respect to real variables like real national income or unemployment.

Views on business cycles before 1930s

- Michail Tugan-Baranovsky (1865-1919), *Industrial Crises in England*, 1894.
- Tugan-Baranovsky's contribution to our understanding of business cycles:
  - that economic fluctuations are inherent in capitalist system, because they are the result of forces within the system
  - that the major causes of business cycles are to be found in the forces determining investment spending.

John Maynard Keynes (1883-1946)

- No theory of business cycles in economics before Keynes
- One of the most important figures in the entire history of economics
- Revolutionized macroeconomic theory and practice of economic policy in the 20th century

John Maynard Keynes (1883-1946)

- Main work: *The General Theory of Employment, Interest and Money,* 1936
- Son of John Neville Keynes, British economist
- Educated at Cambridge
- Not only an economist, held several government posts; also engaged heavily in drama and literature
- Able mathematician, in 1921 published well-received *A Treatise on Probability*

John Maynard Keynes (1883-1946)

- Invested in stocks privately – went from near bankruptcy in 1929 to the wealth of ca 13.5 million US dollars (current prices) in 1940s
- Policy-oriented economist
- Published two books on the economic consequences of peace and war
- Represented Britain at the peace conference after The First World War

John Maynard Keynes (1883-1946)

- In 1926 published *The end of laissez-faire*, in which he rejected Smith's vision of the invisible hand of markets.
- In 1944 contributed to the establishment of IMF and the World Bank
- In *General theory…* Keynes argued that <u>classical and neoclassical macroeconomic theories</u> are special cases in his more *general* framework.

Keynes's methodology in *General Theory*

- Avoided mathematics (worked in Marshallian tradition)
- Complex, ambigious, imprecise work
- There are multiple interpretations of the *General theory*
- Here only a conventional account of it will be offered

Keynes vs. Neoclassical economics

- Neoclassical economics assumed that in the long-run equilibrium at macro level can be achieved only at full employment of resources, especially labour.
- Deviations from equilibrium are possible (even likely) but they will be temporary and short-lived
- So in the lon run unemployment is either <u>voluntary</u> (people don't want to work at market wage), or it is <u>caused by government intervention</u> (for example minimum wage legislation).

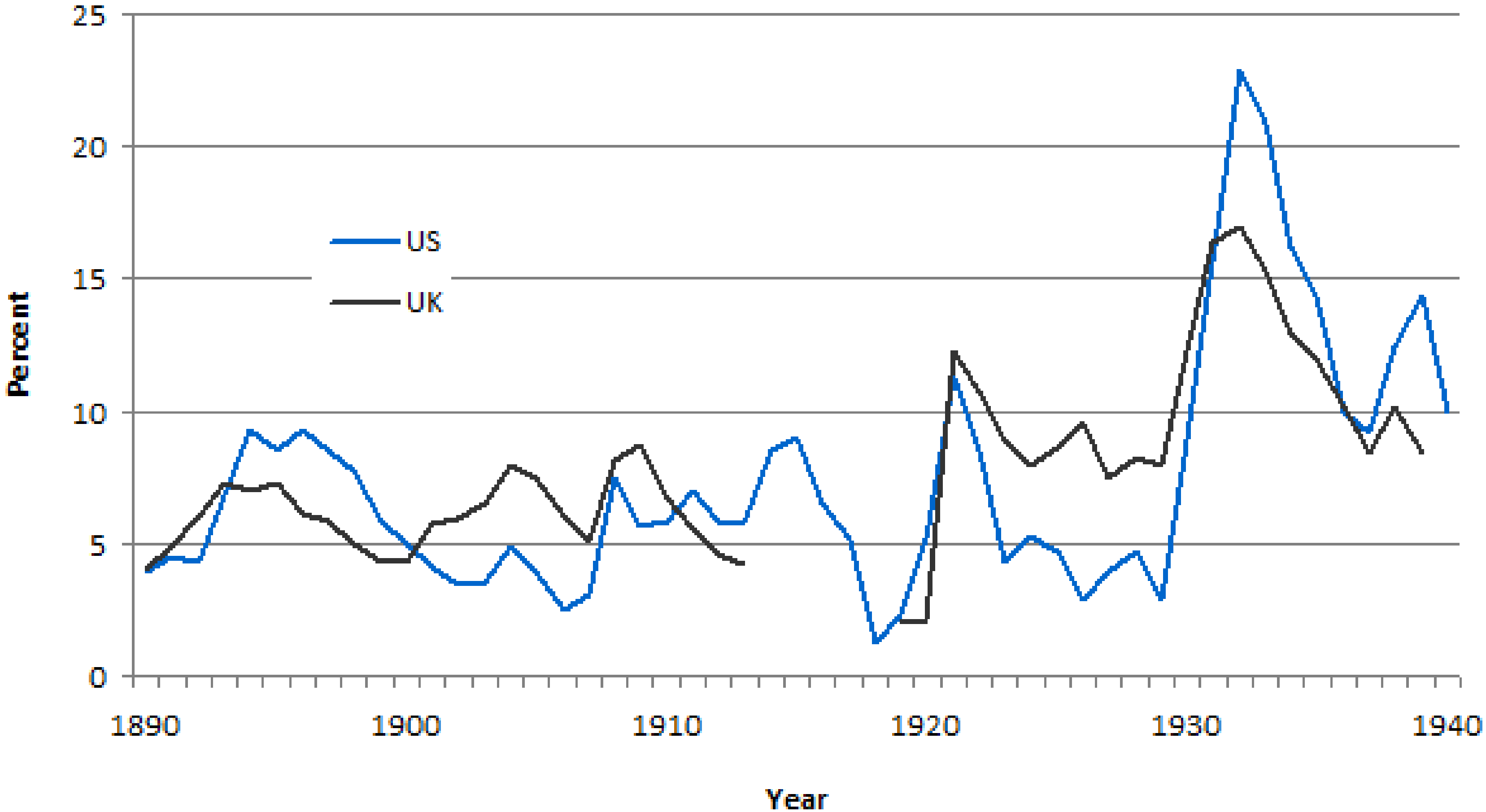
Keynes vs. Neoclassical economics

- For Keynes, <u>equilibrium at less than full employment</u> can exist for a long period. Full employment of resources (esp. labour) is very special and not very likely case.
- Keynes <u>rejected</u> the view that capitalism is a stable and self-adjusting economic system (with respect to unemployment at least).
- He thought that (neo)classical economics was <u>unable</u> to explain such facts as high and long-lasting unemployment, business cycles, severe depressions etc.

The Great Depression of 1930s

- Worst economic slump in history
- Unemployment rate rose in the US from 3% in 1929 to <u>25%</u> in 1933
- US production level dropped by about 30% in 1929-1930
- Occurred in all industrialized countries
- Lasted for about a decade

Unemployment in the US and the UK during the Great Depression



(Neo)Classical Macroeconomics

- Economic perturbations are short-lived
- Markets operate relatively quickly and restore full employment equilibrium
- Government intervention is neither necessary nor desirable – could only generate greater instability
- Assumptions:
  - Economic agents are rational and maximize (profits or utility)
  - Markets are perfectly competitive (agents are price-takers)
  - Agents have perfect knowledge and stable expectations

(Neo)Classical Macroeconomics

1. Output (national income) is determined by real factores (stock of capital, quantity of labour, technology)
2. Quantity theory of money
3. Say's Law operates – supply creates its own demand; production creates income and purchasing power; so demand is always sufficient to purchase all output which is produces

- In other words, there is an automatic tendency for full employment of resources (esp. labour)

Keynes's economics

- Keynes constructed a new basis for macroeconomic theory
- He rejected classical concept of Say's Law – supply creates its own demand.
- Keynes argued that it is not production which generates demand, but it is rather that production adjusts to demand. (Turned classical theory upside down)
- Production and employment are determined by the so called effective demand, that is the sum of investment and consumption expenditures by firms and households:

  $E = I + C$
- The last statement is Keynes's principle of effective demand.

Keynes's effective demand

- Most powerful implication of this principle is that the level of production determined by effective demand is at equilibrium point, but this equilibrium does not have necessarily to be at full employment of resources (e.g. labour).
- This occurs when effective demand is too small.
- In such a situation we face involuntary unemployment – people want to be employed at the market wage rate, but can not find jobs.
- But why effective demand can be insufficient to generate full employment of labour? What is the reason for inefficiency of capitalism in terms of unemployment?

Why effective demand can be insufficient?

- Keynes focused on investment spending.
- Investments, for Keynes, depend on the interest rate and MEC (marginal efficiency of capital).
- MEC is <u>expected</u> (by businesspeople) rate of return on capital (expected profits)
- MEC estimates are based on expectations about the future, which are influenced by psychological, irrational factors.
- Those expectations are volatile, change quickly and irrationally.

Keynes on investment decisions

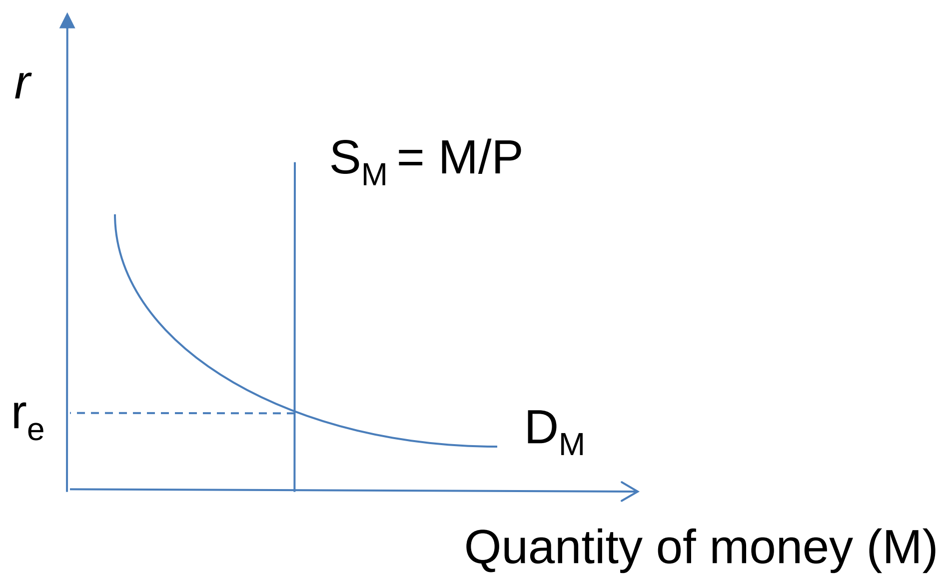
- Investors' moods, irrational waves of optimism or pessimism, states of confidence and 'animal spirits' govern investors' decisions.
- By animal spirits Keynes meant intuitive, unconscious mental actions, irrational actions, not based on economic calculation.
- <u>Investment decisions</u> governed by animal spirits are therefore <u>not fully rational.</u>
- And therefore, effective demand, in a part, also depends on uncontrollable, and extremely unstable factor – animal spirits.
- Investment decisions are not rational → unstable investments → unstable effective demand → unstable levels of production and employment (**that is why business cycles occur**)

Keynes on (in)stability of free markets

- So, there is a possibility of crises (increasing unemployment) because of a rapid fall in investments
- But why there is no automatic tendency to recover to full employment as postulated by classical theory
- According to classics, interest rate must have fallen (because investments are down) and consumption has to rise
- But in Keynes's system:
    1. Consumption does not depend on the interest rate (but on income)
    2. Interest rate is determined outside savings and investments market
- Therefore a fall in investments <u>cannot</u> decrease an interest rate and encourage consumption

Keynes on interest rate – *r* - (price of capital)

- For classical economists interest rate, *r* , was real (non-monetary) phenomenon
- For Keynes interest rate is a purely monetary phenomenon, determined by the demand for money (cash) of the public and the supply of money determined by monetary authority
- D_M: people speculate between holding cash and other financial assets (e.g. bonds) – if *r* (reward for bonds) is high, they hold little cash and vice versa.



Keynes on the neutrality of money

- Classical theory: QTM implies that money is neutral with respect to real variables (e.g. national income, unemployment etc.)
- In Keynes's system:

  Increase in money supply (M/P ↑)→ r↓ → I ↑ → E ↑ →

  → Y ↑ and L ↑
- So, money is non-neutral for Keynes – income and employment can be increased through this mechanism
- Potentially, this mechanism can bring back the full employment of resources in the economy (a remedy for crises)

How unemployment can be cured in Keynes's theory?

- If there is a crisis and growing involuntary unemployment then theoretically the folllowing mechanism automatically restores full employment of resources:

  Employeers cut down nominal wages (w↓) → P ↓ →

  (M/P) ↑ → r ↓ → I ↑ → E ↑ → Y ↑ and L ↑

- This mechanism is known as 'Keynes effect' – shows how market forces bring back macroeconomic equilibrium with full employment in Keynes's theory

Why Keynes effect does not work?

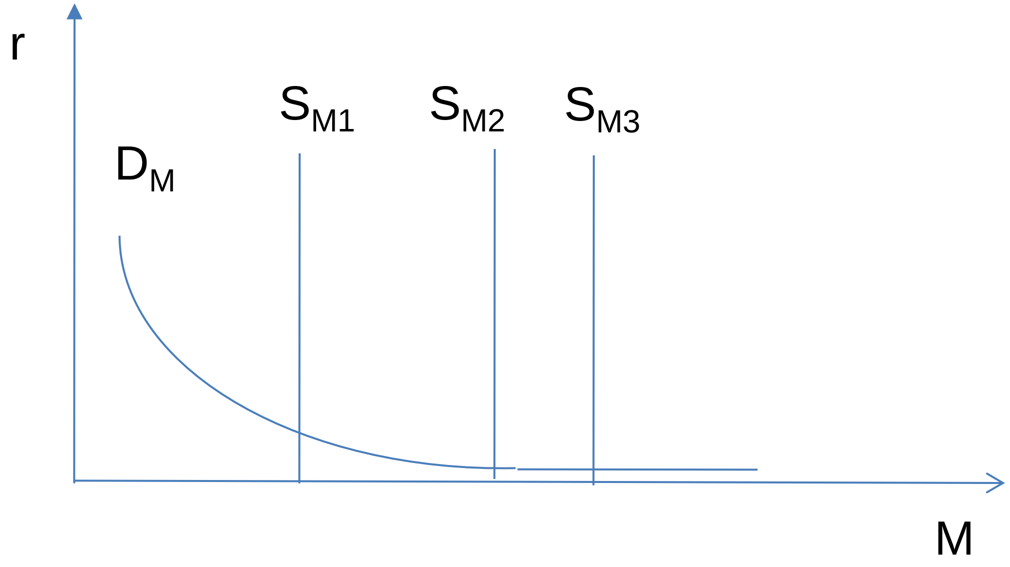
- But, of course, Keynes wanted to show that markets fail to provide full employment of resources
- So, he had to show that 'Keynes effect' sometimes (or rather often) is unable to deliver its promise
- Keynes introduced two reasons why 'Keynes effect' might fail:
  - 'liquidity trap'
  - Interest-inelastic demand for investments

Why Keynes effect fails (1): liquidity trap

Keynes effect:

(w↓) → P ↓ → <u>(M/P) ↑ → r ↓</u> → I ↑ → E ↑ → Y ↑ and L ↑

Interest rate is so low that demand for (cash) money is perfecly elastic with respect to r, so money is not channelled to bond market and r does not fall – Keynes effect fails, unemployment will not be decreased.

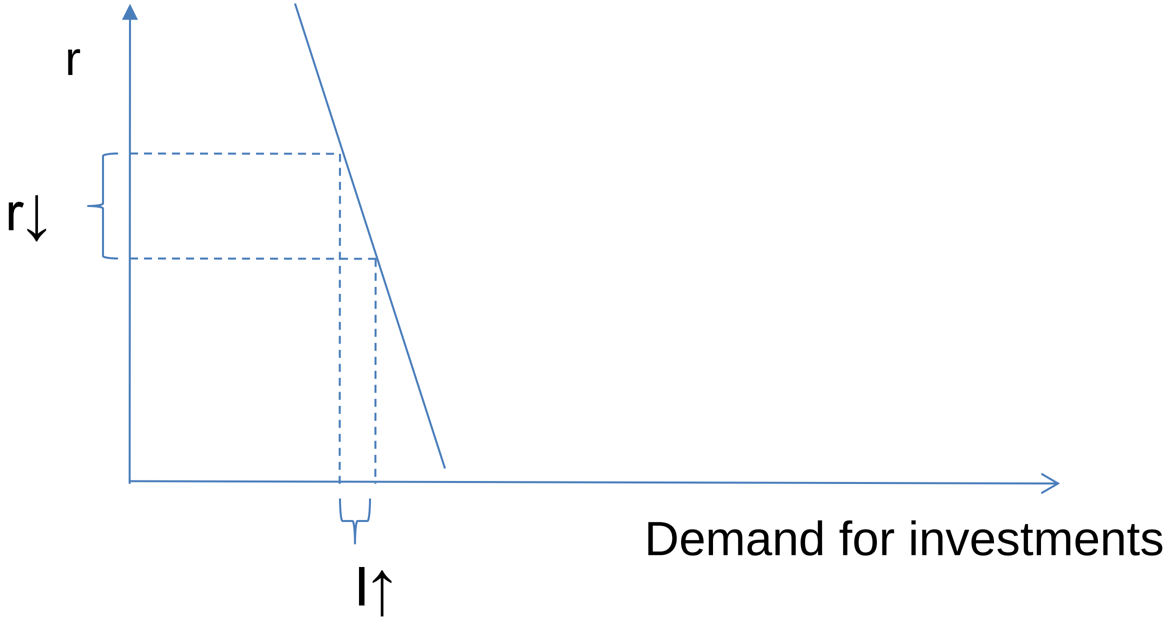


Why Keynes effect fails (2): Interest-inelastic demand for investments

Keynes effect:

(w↓) → P ↓ → (M/P) ↑ → <u>r ↓ → I ↑</u> → E ↑ → Y ↑
and L ↑

I increases, but it is insufficient to restore full employment

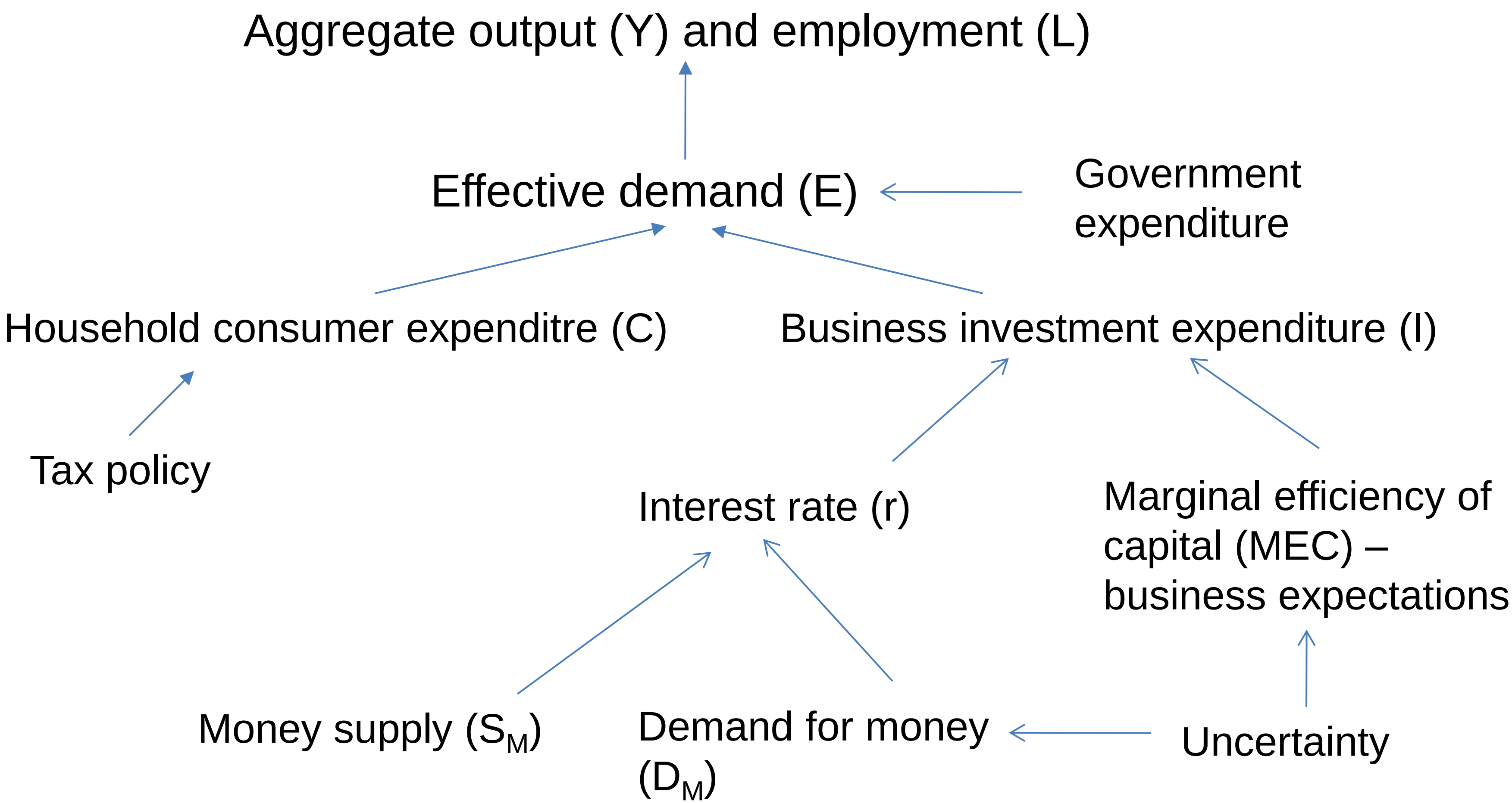


How to acheive full employment when Keynes effect fails?

- In presence of any of those two situations, market forces will be too weak or inefficient – aggregate demand (E) will not be sufficient to produce full employment

- The only solution is stimulate E (E = C + I): (a) directly through encouraging investment (I) *by increased government expenditure*; (b) indirectly by tax changes that stimulate consumer spending (C) by rising households incomes.

Determination of output and employment in Keynes's system



Economic policy according to Keynes

- In *General Theory* presented extreme opposition to laissez-faire policy
- Advocated extensive, active and permanent government interventionism
- Specific policy obligations of governments in Keynes' vision:

  1. control the level of interest rates, tending to lower it in order to increase investments
  2. socialization of investment (to stabilize levels of employment and production).

     Probably meant some kind of public (or public-private) investments in the economy.
  3. use fiscal policy to lower economic inequalities (in incomes and wealth)

Economic policy according to Keynes

- Keynes was accused of being <u>socialist</u>, but himself thought that he was rather <u>conservative</u>.
- Not aimed at radical changes, only wanted to get rid of <u>two biggest evils of capitalism for him: unemployment and inequality.</u>
- Thought that his proposals would leave the biggest advantages of capitalism – like personal liberty, private property – intact.
- Thought that the continuation of laissez-faire policy would lead to revolt, socialism or totalitarian state.
- Rejected socialist and totalitarian visions of economic system.

Economic policy according to Keynes

- Argued that personal freedom and private property associated with capitalism produce in general economic efficiency, innovative economy, variety of life etc.
- In general, Keynes can be called a proponent of a third way between capitalism and socialism, an advocate of refined capitalism (without involuntary unemployment and big inequalities)
- Was against laissez-faire policy, but was rather liberal, not radical or socialist.