Chapter 1: Introduction

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Learning Objectives Chapter 1

After this chapter you should know

a) that the development of GDP fluctuates over time.

b) how supply policies try to influence the growth potential.

c) how demand policies try to smooth the business cycle.

d) how monetary and fiscal policies can be used to influence the business cycle.

e) some negative side effects: Policies are not a free lunch.

f) how uncertainties and disruptions in the transmission mechanisms make it difficult to accurately forecast the effects of policy actions intended to smooth the business cycle.

Business cycle

- Macroeconomics is the study of the economic activity at the aggregate level, which analyzes the entire economy and not just individual households, companies, or markets.
- Business cycle: Development of the economy over time.
  - Consists of booms and recessions,
  - causes changes in consumption levels & consumption structure, and
  - influences the investment decisions of companies

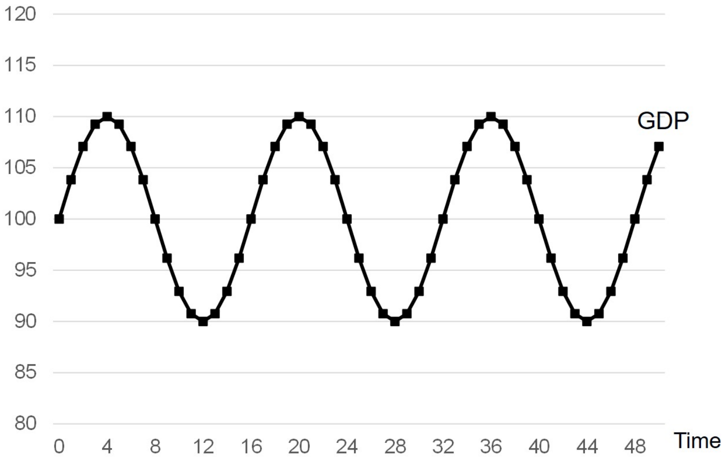
Predicting the business cycle and adjusting to it is crucial for the financial success of a company.

DIW 2009: Problems with the forecast

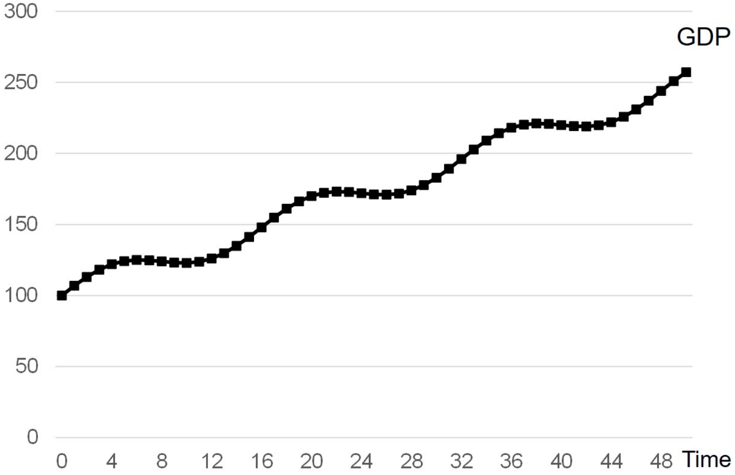
Pressemitteilung des DIW Berlin vom 14.04.2009

Schlagzeile	**DIW Berlin: Derzeit keine Prognose für das Wachstum 2010** **Zimmermann: „Was müssen Ökonomen leisten, wenn sie am dringendsten gefordert sind?“**
Zusammenfassung	Das DIW Berlin wird in seiner morgigen Frühjahrsanalyse der Wirtschaft auf die Präsentation einer Wachstumsprognose für das Jahr 2010 verzichten. Das Institut reagiert damit auf die jüngste Serie drastisch nach unten korrigierter Konjunkturprognosen aller Prognostiker. Dies hatte zu einer öffentlichen Debatte über Sinn und Funktion von Konjunkturprognosen geführt.
Details	In der gegenwärtig noch immer anhaltenden Situation extrem großer Unsicherheiten sei eine quantitative Prognose für das nächste Jahr derzeit nicht sinnvoll, so das Institut in einer heute veröffentlichten Erklärung. „Seit der Verschärfung der Finanzkrise laufen alle

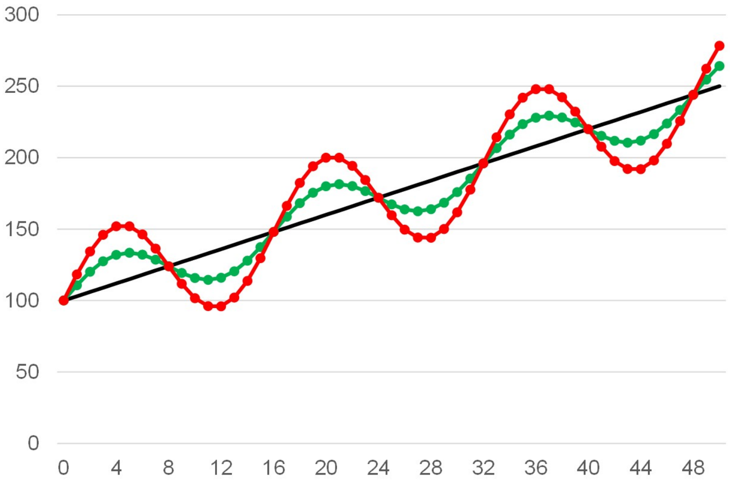
Stylized business cycle without growth



Stylized business cycle with growth

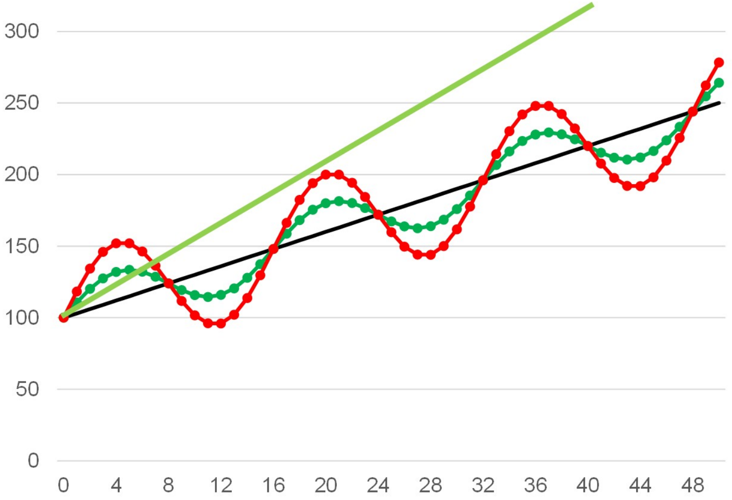


Demand sided policies: Smoothing volatility



Red: Business cycle without government intervention. Green: Business cycle with government intervention.

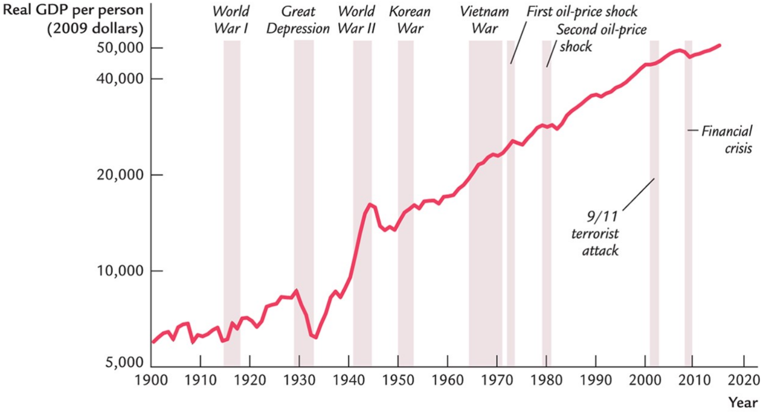
Supply sided policies: Increasing the growth trend



Supply-oriented policy tools

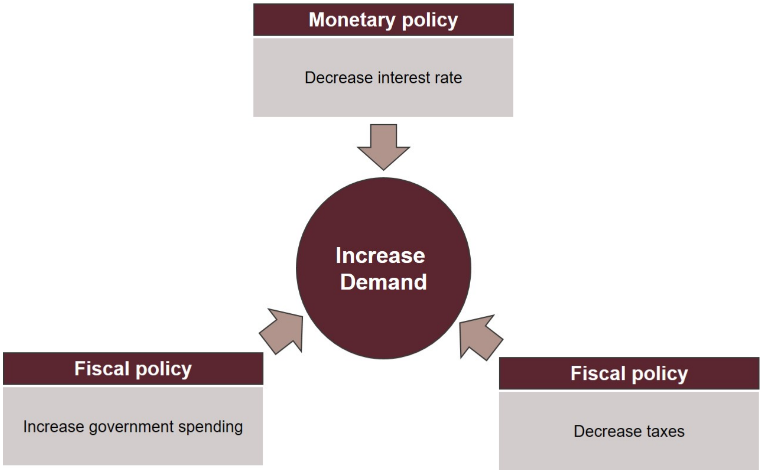
- Capital stock through more investment.
- Innovation through more R&D.
- Deregulation of labor market.

Real GDP per capita: USA long run perspective

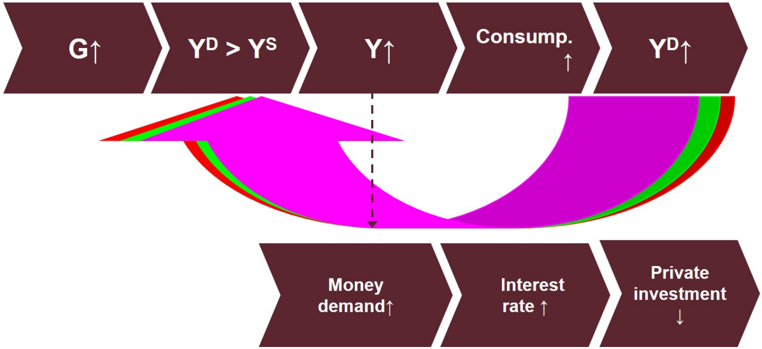


Mankiw, *Macroeconomics*, 10e, © 2019 Worth Publishers

Demand-oriented anti-cyclical policy tools



Transmission mechanism: Expansionary fiscal policy in form of an increase in government expenditures ($G \uparrow$)



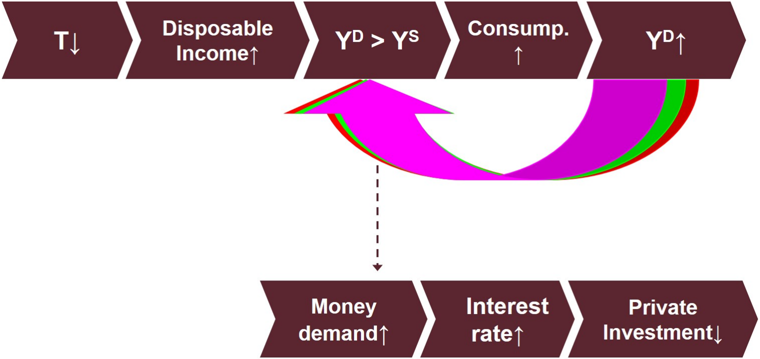
Transmission mechanism: Expansionary fiscal policy in form of an increase in government expenditures ($G \uparrow$)

Government increases its expenditure ($G \uparrow$) $\Rightarrow$ Demand for goods increases ($Y^D \uparrow$) $\Rightarrow$ excess demand ($Y^D \uparrow > Y^S$) $\Rightarrow$ Companies produce more (Supply of goods increases $Y^S \uparrow$) $\Rightarrow$ The income generated in the production process increases (Income = Wages + Profit income) ($Y \uparrow$) $\Rightarrow$ consumption depends positively on income ($C \uparrow$) $\Rightarrow$ Demand for goods increases once again ($Y^D \uparrow$) $\Rightarrow$ *positive* multiplier process occurs

- multiplier: Y increases by a multiple of the first impulse ($G \uparrow$).
- But... negative side effects:

Increase in income increases demand for money ($M^D \uparrow$) $\Rightarrow$ interest rate increase ($i \uparrow$) $\Rightarrow$ Private investments decrease *("interest rate induced crowding-out of investments")*

Transmission mechanism: Expansionary fiscal policy in form of a decrease of the taxes ($T\downarrow$)



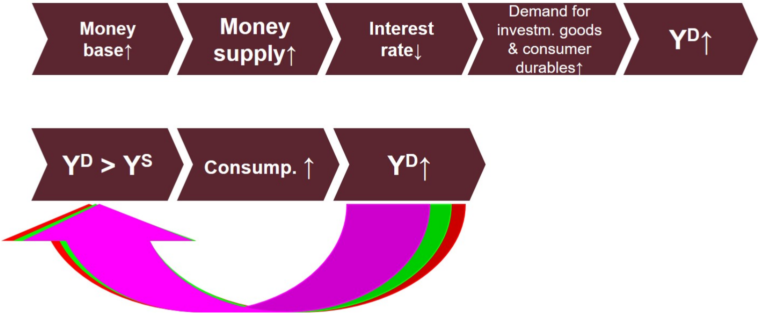
Transmission mechanism: Expansionary fiscal policy in form of a decrease of the taxes ($T\downarrow$)

Government reduces taxes ($T\downarrow$) $\Rightarrow$ Disposable income increases $(Y - T\downarrow)\uparrow$ $\Rightarrow$ Demand for consumer goods increases ($Y^D\uparrow$) $\Rightarrow$ excess demand ($Y^D\uparrow > Y^S$) $\Rightarrow$ Companies produce more (Supply of goods increases $Y^S\uparrow$) $\Rightarrow$ The income generated in the production process increases (Income = Wages + Profit income) ($Y\uparrow$) $\Rightarrow$ consumption depends positively on income ($C\uparrow$) $\Rightarrow$ Demand for goods increases once again ($Y^D\uparrow$) $\Rightarrow$ *positive* multiplier process occurs

- But... negative side effects:

Increase in income increases demand for money ($M^D\uparrow$) $\Rightarrow$ interest rate increase ($i\uparrow$) $\Rightarrow$ Private investments decrease *("interest rate induced crowding-out of investments")*

Transmission mechanism: Expansionary monetary policy ($H \uparrow$)

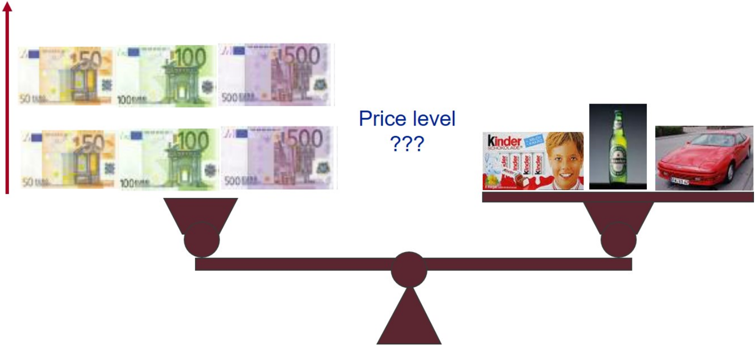


Transmission mechanism: Expansionary monetary policy ($H \uparrow$)

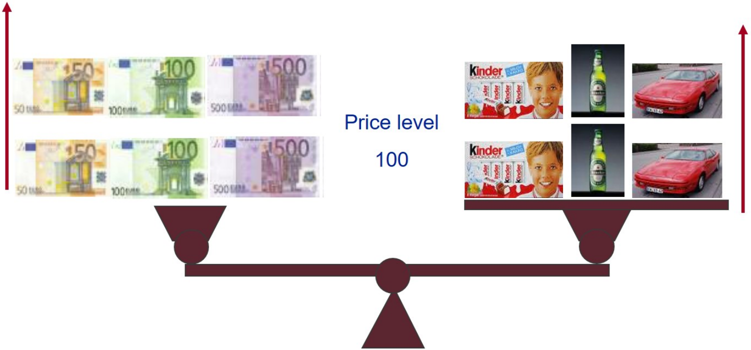
Central bank increases the monetary base ($H \uparrow$) $\Rightarrow$ Commercial banks grant loans and create money ($M^S \uparrow$) $\Rightarrow$ interest rate decreases ($i \downarrow$) $\Rightarrow$ Demand for capital goods increases ($Y^D \uparrow$) $\Rightarrow$ excess demand ($Y^D \uparrow > Y^S$) $\Rightarrow$ Companies produce more (Supply of goods increases $Y^S \uparrow$) $\Rightarrow$ The income generated in the production process increases (Income = Wages + Profit income) ($Y \uparrow$) $\Rightarrow$ consumption depends positively on income ($C \uparrow$) $\Rightarrow$ Demand for goods increases once again ($Y^D \uparrow$) $\Rightarrow$ *positive* multiplier process occurs

Money supply, supply of goods and price of goods

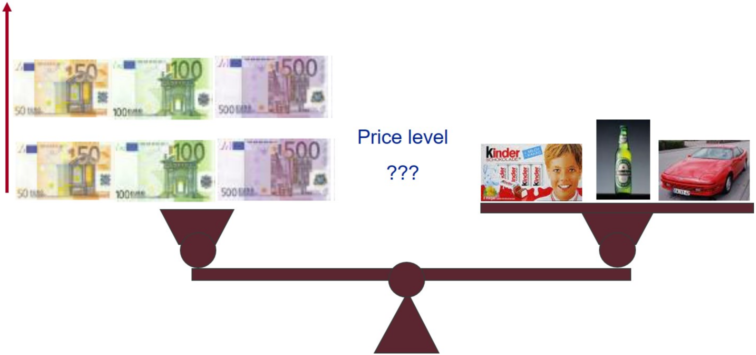
What happens to the price level if money supply increases...



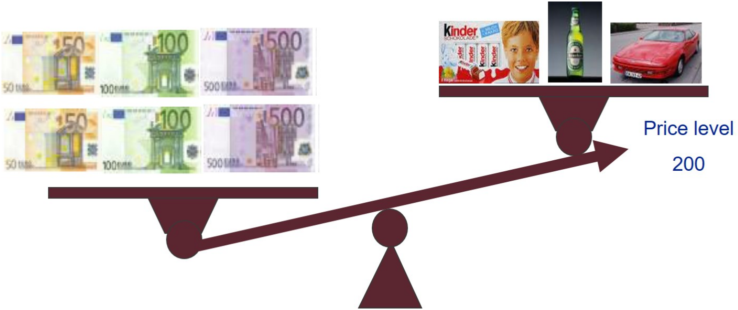
...nothing, if goods supply also increases!



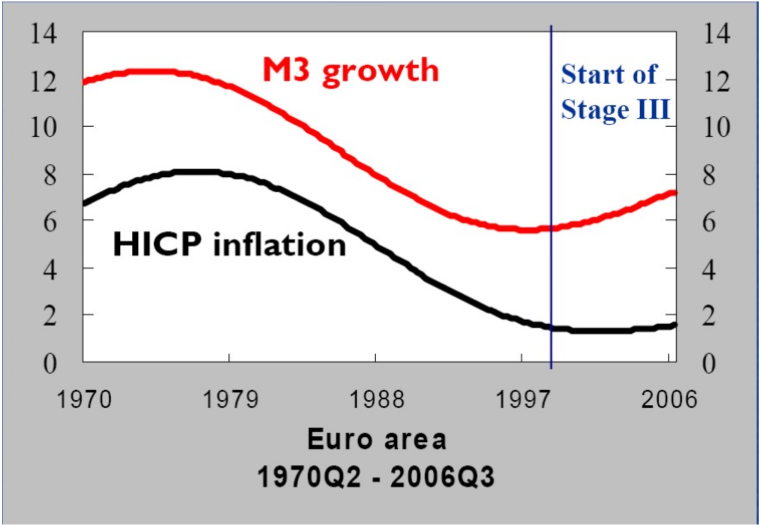
What happen to the price level if money supply increases and goods supply is constant?



Constant goods supply: Money supply increase leads to price increase



Money growth and inflation



Definitions: Monetary aggregates

- M1 is the sum of currency in circulation and overnight deposits;
- M2 is the sum of M1, deposits with an agreed maturity of up to two years and deposits redeemable at notice of up to three months; and
- M3 is the sum of M2, repurchase agreements, money market fund shares/units and debt securities with a maturity of up to two years.

Characteristics

- .
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Summary

- What is the objective of macroeconomic policy?
- Demand versus supply sided macro policies.
- Transmission mechanisms.
- Negative side effects.

Negative side effects

- Inflation.
- Interest rate induced crowding out effect.
- Government budget deficit.