Relative price adjustments in the euro area

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Motivation

- Imbalances in the euro area often approached from **inflation differentials.**
- These made some economies **competitive** (demand for their products rising) and others **uncompetitive** (demand shrinking). Ultimately this caused the imbalances in the trade and the current accounts.
- **Implications for the adjustment process**: inflation rates have to decline in relative terms in the deficit countries and to rise in the surplus countries to correct the imbalances.

Motivation

- **Problem**: No specification of the **underlying mechanisms.**
- **Prices are not ‘first movers‘!**
- The shifts in relative prices are reflections of underlying phenomena such as demand and supply (costs, technology), and sectoral adjustments to changing supply and demand conditions.
  - Corden (1989), Corden (1994), European Commission (2012)
- These underlying phenomena and their relation to prices **need to be determined**. This is our main research interest.

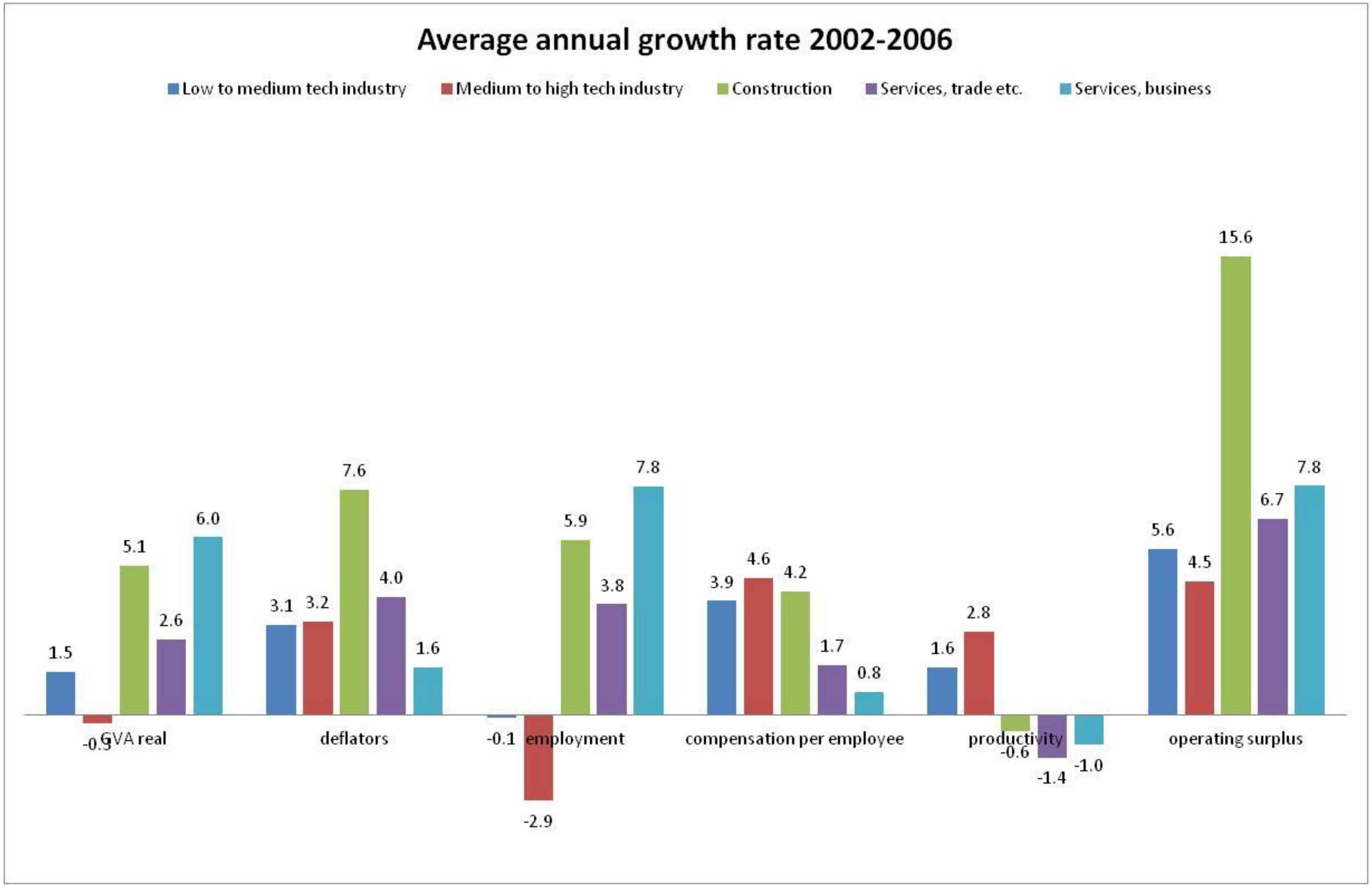
Starting point

- **Theoretical framework**: Absorption approach to imbalances
- Compares supply (GDP) with absorption (A)
  - CA = (GDP + i*NFA) – C – G – I)
  - CA = GNI – A.
- Supply and demand composed of **range** of goods and services **(specific market conditions).**
- One quite instructive decomposition is that into tradables and non-tradables (BUT: most products in their final stage are composite goods with tradable and non-tradable components)
- Open economy: composition of supply and demand can deviate.
- Adjustment necessary because **absorption > supply**, and **these have to be aligned**.

Assumed process of rising imbalances
(reference point is Spain)

- Starts from **demand shock** (real interest rate). **Demand increases** for tradables (can be imported) and non-tradables (own capacities).
- Output increases in **non-tradables**, potentially also prices (depending on respective market), potentially wages (depending on labour market), potentially profits. **Y↑, P↑, E↑, W↑.**
- Wage growth accelerates **economy-wide** (due to higher inflation, tighter labour market…)
- Affects **supply conditions** (cost curve, supply curve) in the tradables' sector. Less competitive firms closing down, more productive firms surviving. **W↑, P↑, Y↓, E↓.**
- Prices reflect supply and demand conditions in the individual markets.
- Structure of demand changes, structure of supply side changes. **Capacities shifted to non-tradables.** Labour market (potentially) cleared (at new wage level), related to this composition of supply and demand.

Gross value added, deflators, employment, profits, selected sectors, Spain

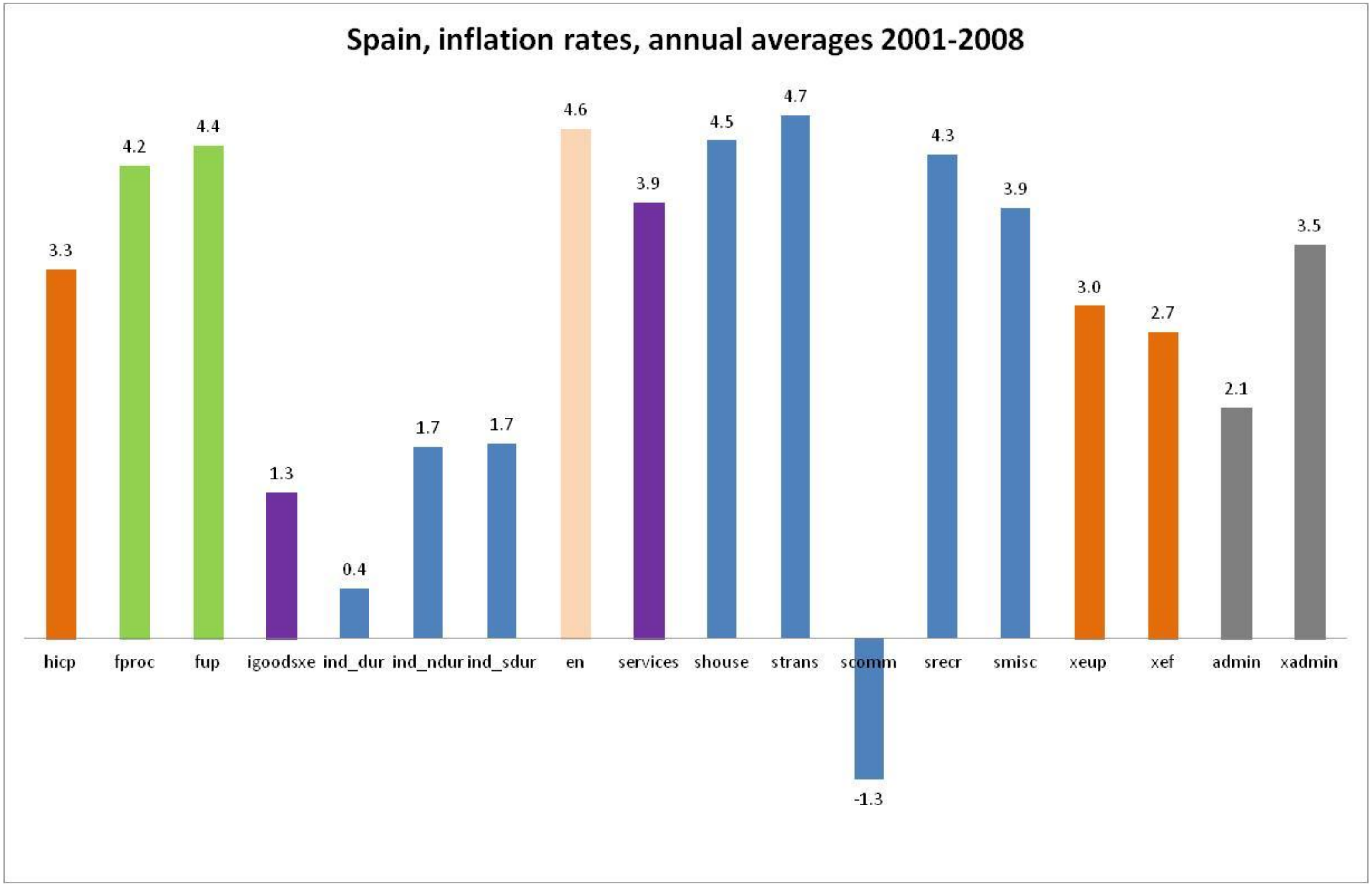


Role of prices, wages, profit shares

- Crucial relative “prices“: those that **reflect** the **structure** of supply and demand, and which affect the potential adjustment needs (e.g. when a demand shock hits).
- In boom: positive or negative relation between output/demand and prices (**deflators**) -> *elasticity tbd.*
- Reaction of **wages** (-> *elasticity*).
- **Profit shares** (how profitable are economic activities given the new price and wage levels).

  => Composition of supply/capacities given the new price and wage levels.
- Role of sales prices (CPI, PPI)? It is the **relation between volumes, prices, costs and profits that decides** about where resources are utilised.

Inflation rates from HICP: industrial goods prices ("tradables") and services ("non-tradables")



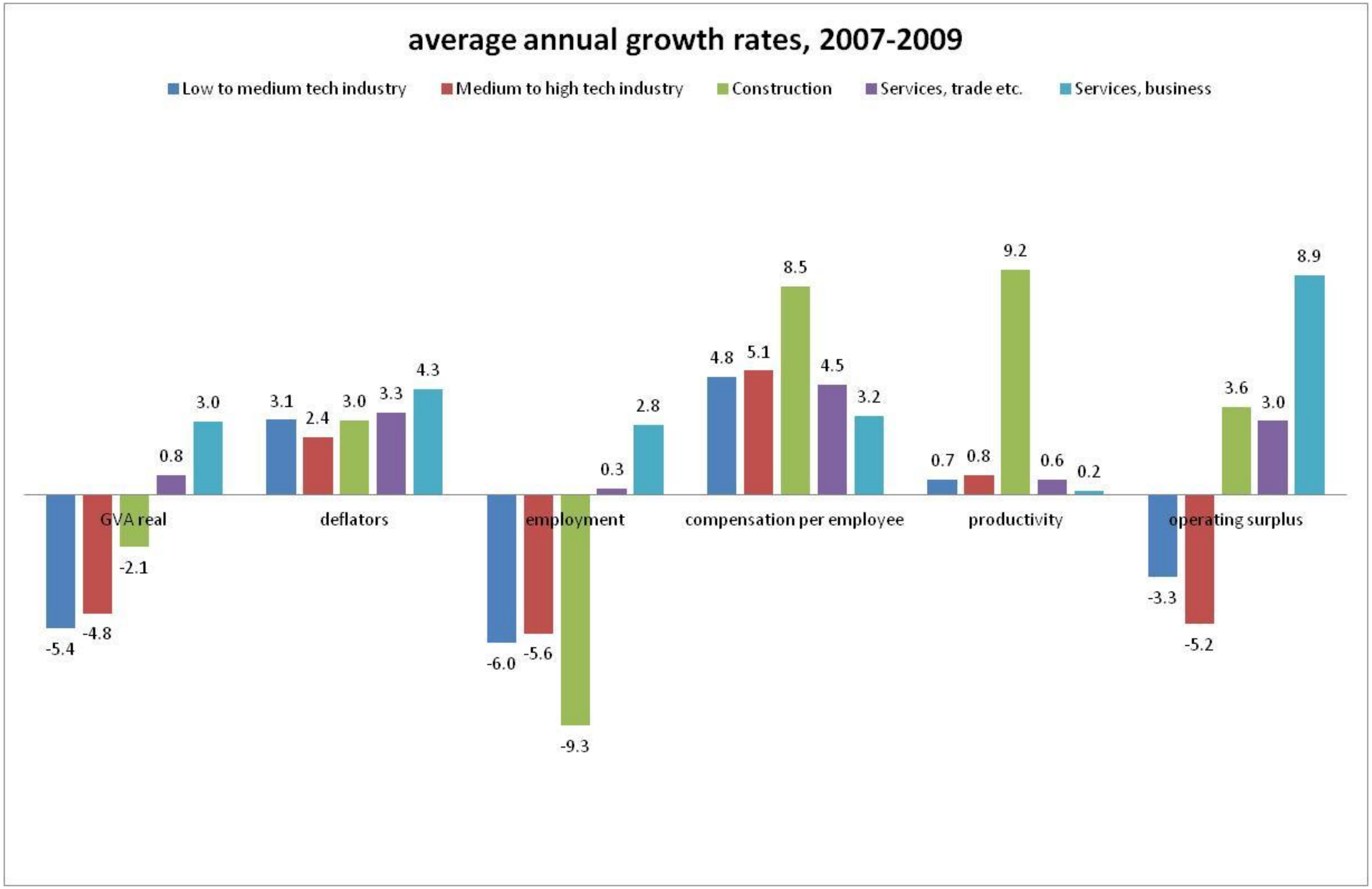
Adjustment process

- Starts with negative demand shock
- In Spain, actually two negative demand shocks
  - World trade (2008)
  - Domestic demand (credit cycle, starting in 2007)
- Demand falls in tradables and non-tradables. At given cost level, supply curves unchanged => volumes down, employment down. (Imports down.)
- Internal disequilibrium (labour market: unemployment, product markets: excess capacities in non-tradables).

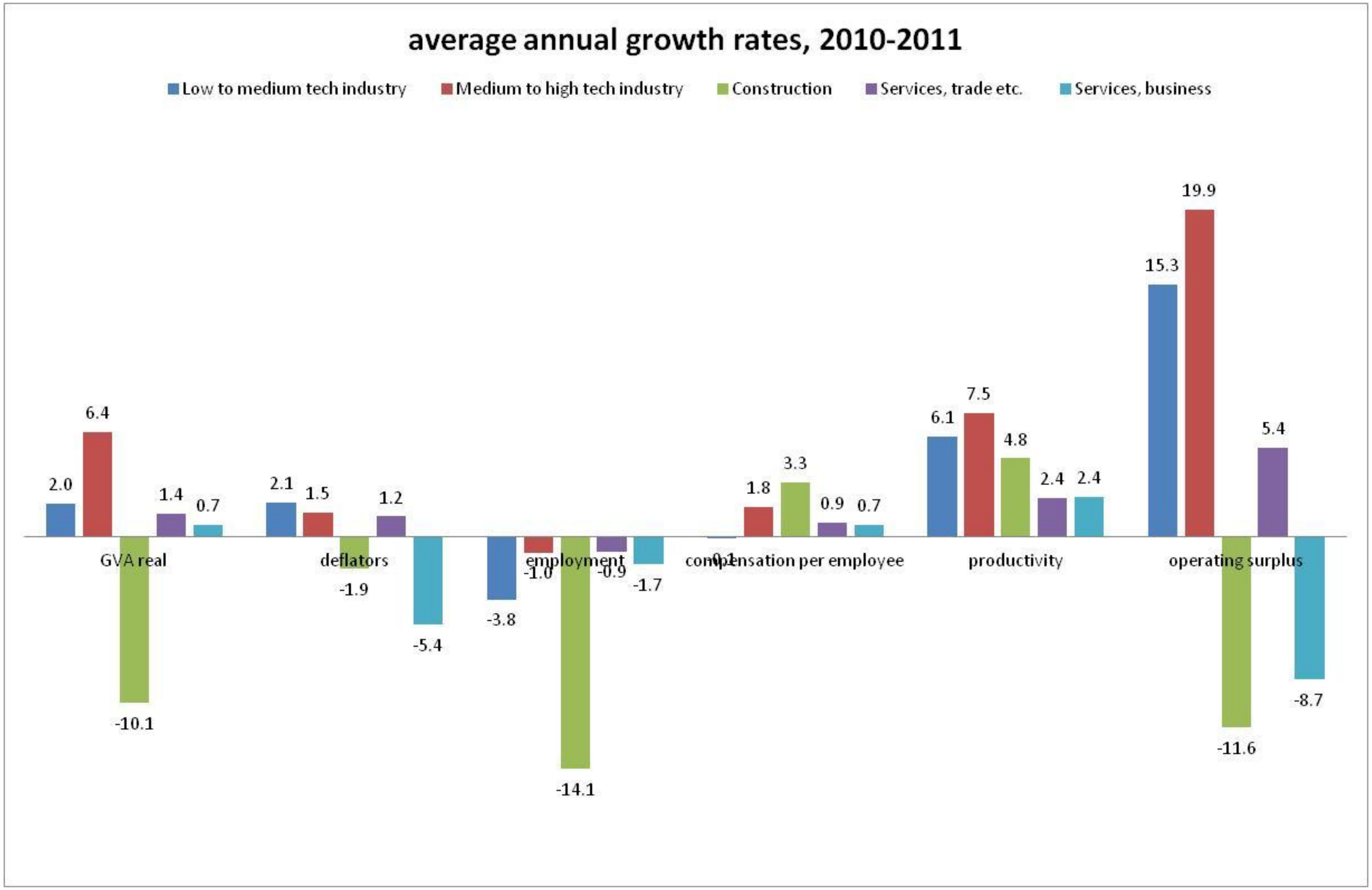
Adjustment process

- Adjustment requires **“switching“** (Corden)
  - Supply must switch to tradables (requires increase in relative profitability).
  - Demand has to switch to non-tradables (requires lower relative price); capacities in construction will have to shrink outright.
- Wage level has to decline to **increase resource utilisation** given lower level of demand.
- Problem: world demand weak, capacities in the tradable‘s sector closed down during boom period AND after world trade shock
  - new investments, new products etc. needed;
  - wage/price adjustment alongside broadening of product range
- The prices of existing products may have to decline to generate more demand, but this adjustment has also an “extensive“ dimension (“net creation of new varieties“, Corsetti et al. 2011).

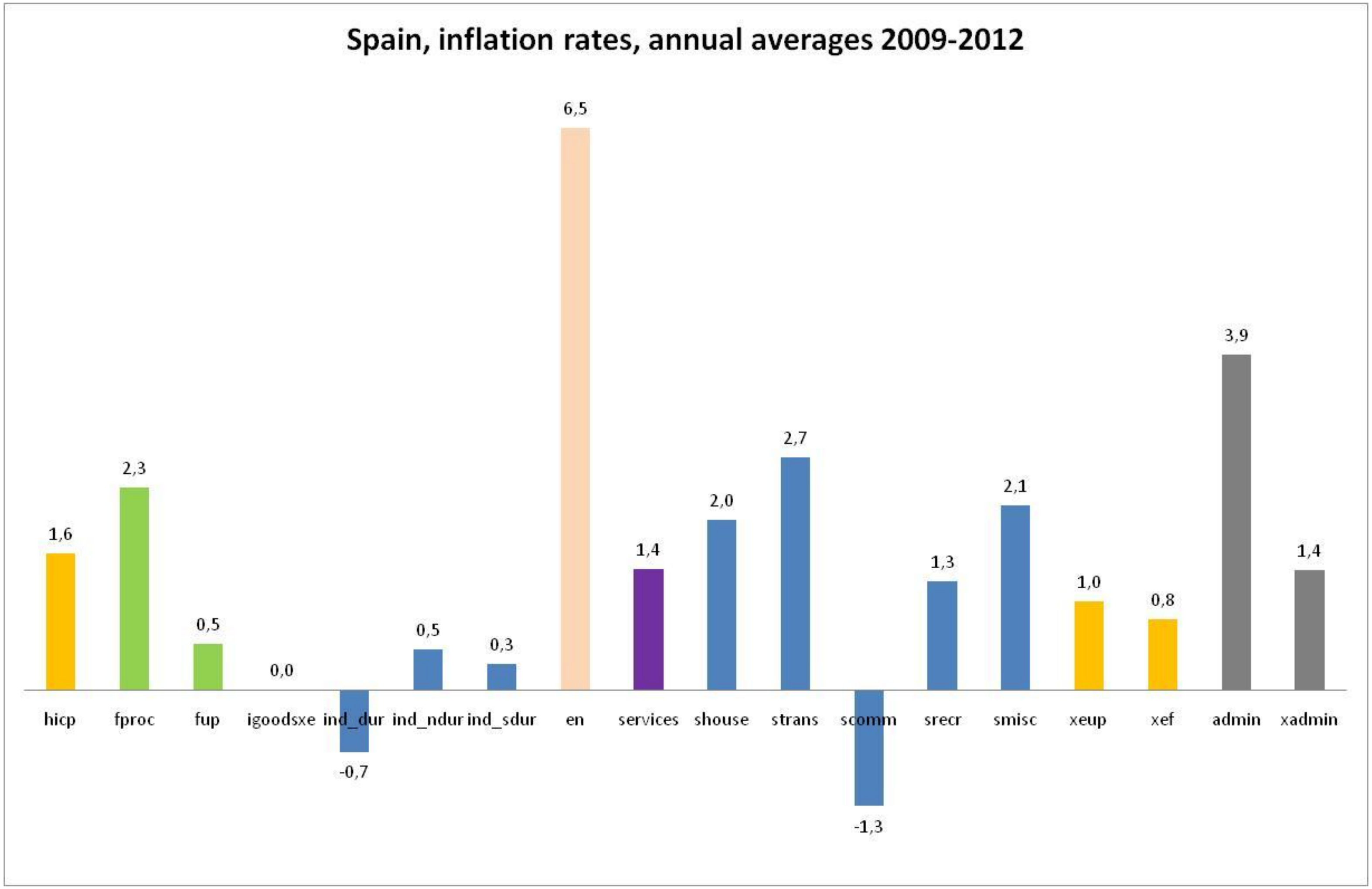
Two negative demand shocks



Adjustment process



HICP: Adjustment in relative prices small so far

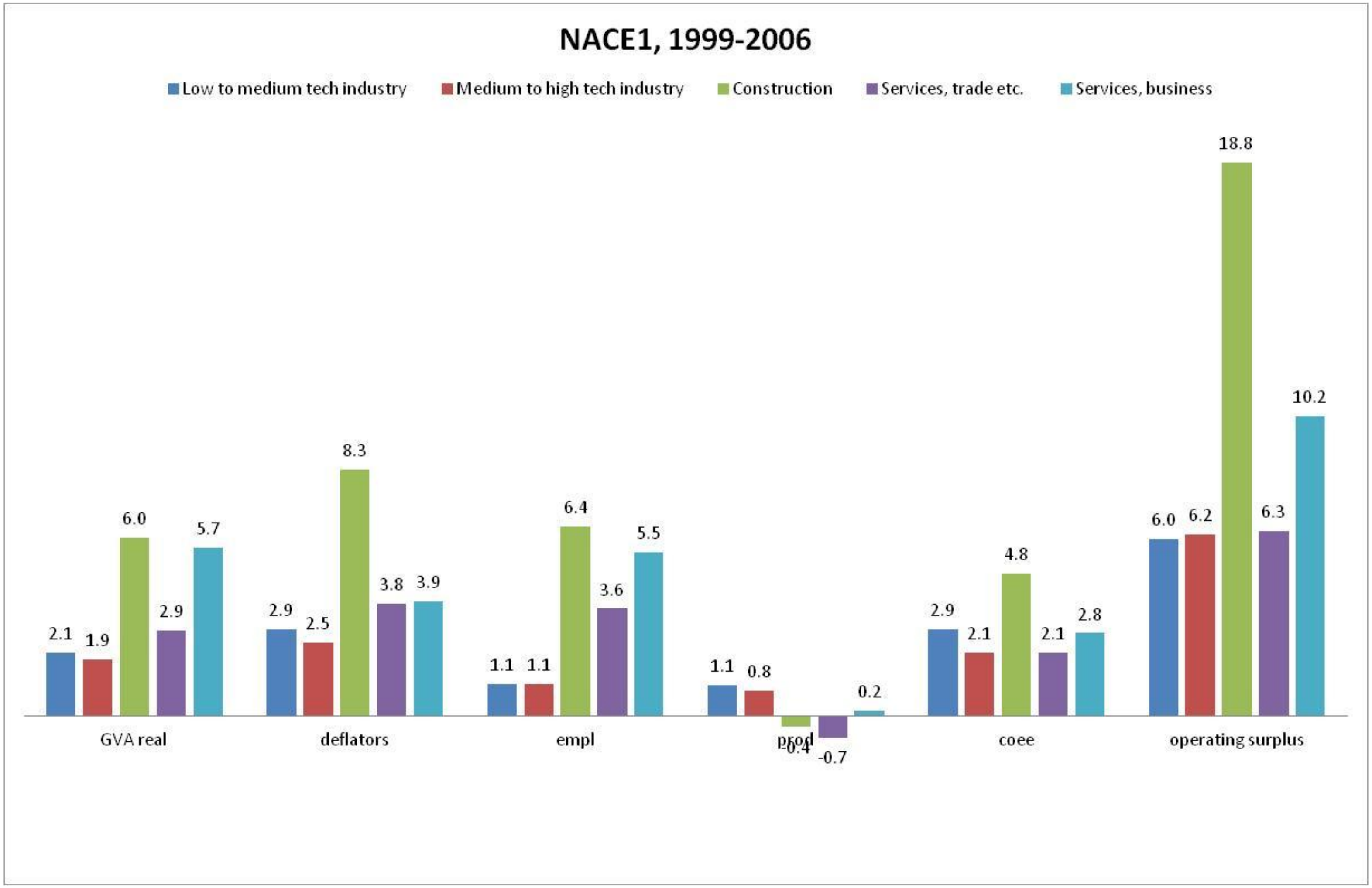


Outlook

- Can this framework be applied also to other countries?
  - The demand shock experienced by some countries in the early years of the euro area is in some respects specific.
- Nevertheless, countries to be studied in the same framework could be
  - Baltic states (adjustment in CA after 2007, without deflation or substantial depreciation of the RER, on a growth path since 2010)
  - Finland (1990s; adjustment with nominal exchange rate depreciation)
  - Germany (CA surpluses in the 2000s)
- Definition of suitable testable equations within this framework.

Background material

Spain, 1999-2006, NACE1 data



Adjustment process Spain based on data from NACE2, 10 sectors