

# ECFIN Structural Reforms Workshop

## "Inequality and Structural Reforms: Methodological concerns"

### Session I discussion: Analysis of labour and product market reforms

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# Three comprehensive and well-written papers

- Jean-Olivier Hairault *et al*: **A general equilibrium (LM and PM reforms) perspective to inequality**
- Giovanni Dosi *et al*: **The effects of labour market reforms: an agent-based model approach**
- Orsetta Causa and Mikkel Hermansen *et al*: **Empirical analysis of the distributional impact of structural reforms**

# Three papers, three methodologies, three conclusions

- **Hairault:** two-sector general equilibrium model with skilled and unskilled workers
  - **Lower unemployment benefit:** *“the most effective policy in terms of employment gains for both unskilled and skilled workers”*
- **Dosi:** agent based model with endogenous growth (Schumpeter) and aggregate demand (Keynes)
  - **Lower unemployment benefit:** *“likely to yield both higher inequality and structural unemployment without fostering productivity or GDP growth”*
- **Causa:** empirical combined micro-macro approach based on a reduced-form estimation
  - **Lower unemployment benefit:** *“positive macro-level effects from higher labour utilisation are offset by negative micro-level disequalising effects affecting poor households, which explain why the total effect is not significant in that portion of the income distribution”*

# Jean-Olivier Hairault *et al*: A general equilibrium (LM and PM reforms) perspective to inequality

- Non-stationary, non-linear, multi-sectoral general equilibrium model with search and matching frictions and endogenous occupational choices
- Workers:
  - Skilled: homogeneous, perform abstract tasks (non-routine, cognitive)
  - Unskilled: differ in their abilities, perform either routine tasks (substitute for K) or non-routine service tasks
- Exogenous trends
  - Fall in price of capital
  - Evolution of labour market institutions
  - Growth in supply of skilled labour
  - Developments in US, France and Germany

# Jean-Olivier Hairault *et al*: A general equilibrium (LM and PM reforms) perspective to inequality

- **Key conclusions:**

- Task Biased Technological Change creates jobs
- Labour and product market flexibility fosters employment
- Flexibility also generates wage and income inequalities
- LMI or PMR reforms have little effect on employment
- Any policy that aims at protecting the declining tasks is inefficient in the medium and the long run
- Most efficient reforms are those that favour reallocation towards the expanding activities
- LMI or PMR reforms have little effect on inequality. Whatever the reform, inequalities increase, driven by the polarization of the jobs.

# Jean-Olivier Hairault *et al*: A general equilibrium (LM and PM reforms) perspective to inequality

- **Some comments:**

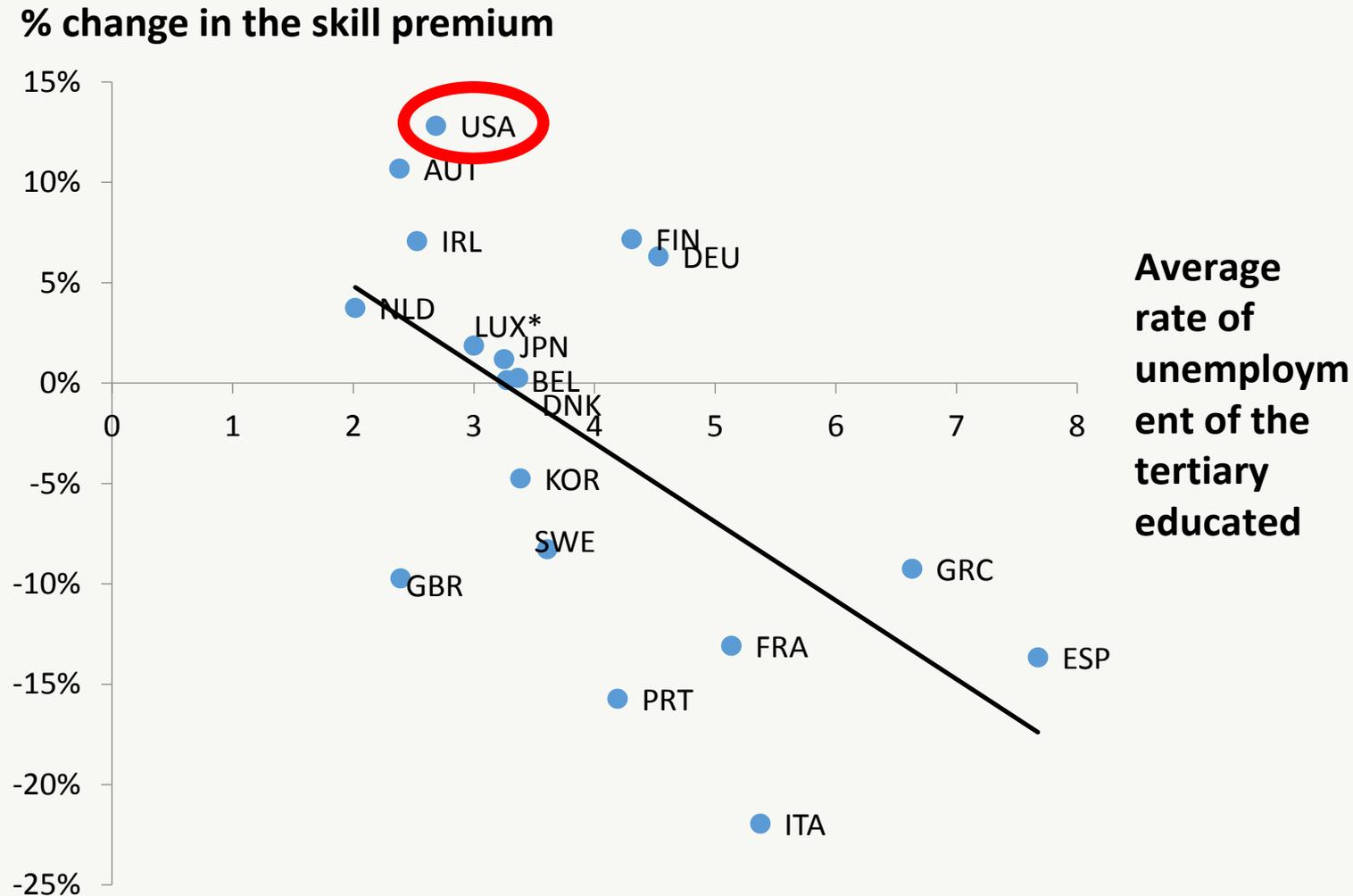
- General equilibrium framework: key advantages, but necessitates several assumptions
- More competition:
  - goods markets: more innovation → higher wages for the rich → rising inequality
  - services markets: no innovation, rising wages at the bottom of the distribution → lower inequality
- In many simulations the benchmark and policy scenarios hardly differ, but there is a huge difference for product market regulations: why?
- Income-inequality did not increase everywhere: e.g. it fell from 1995-2013 in Italy, Ireland, Greece
- US, Germany and France: large variety, yet adding e.g. Italy would be useful

# Jean-Olivier Hairault *et al*: A general equilibrium (LM and PM reforms) perspective to inequality

- **Some comments, cont'd:**

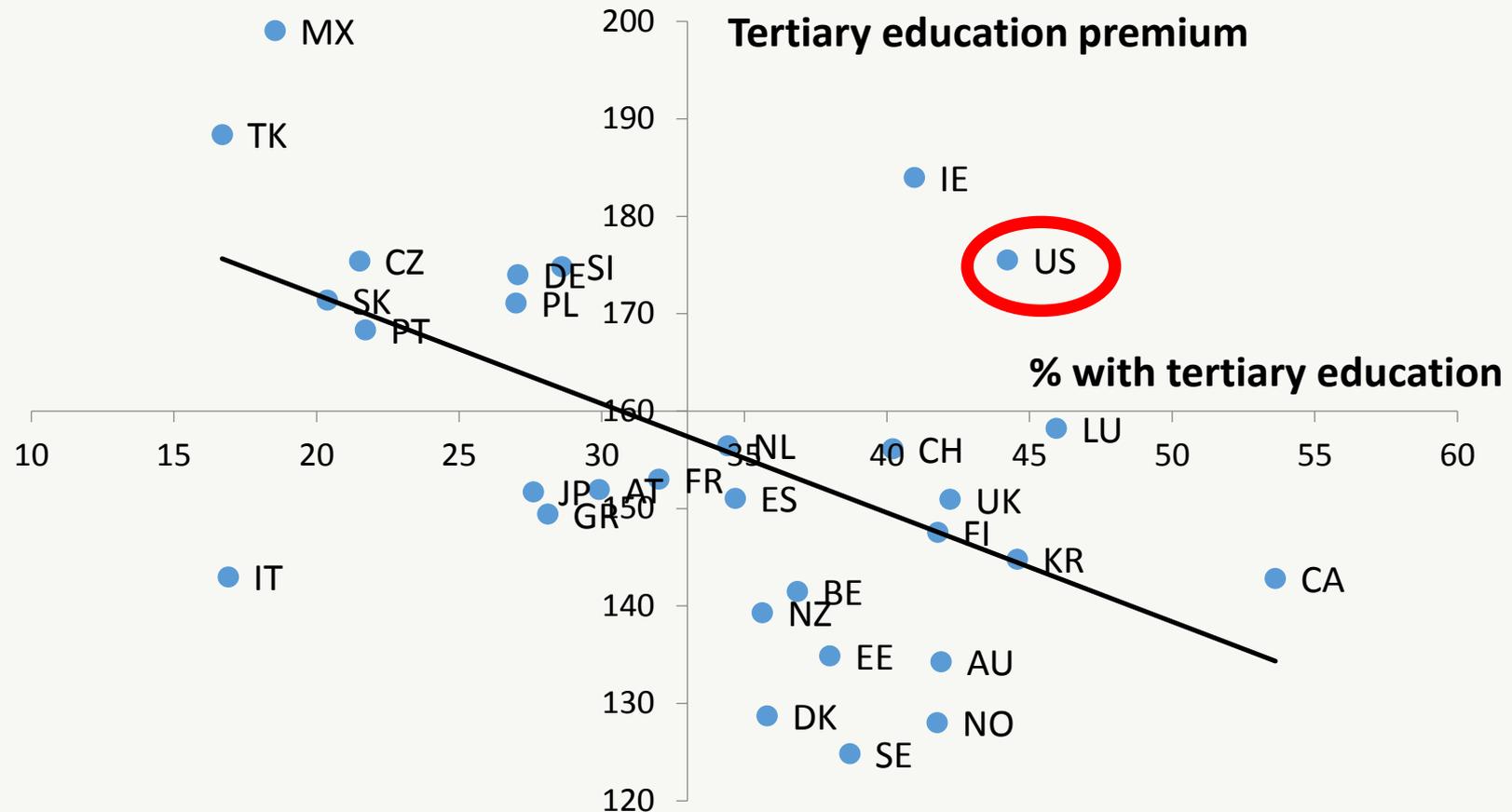
- The US was an outlier to the cross-country relationship (see charts on the next two slides):
  - between the unemployment rate of tertiary-educated workers and their pay rises, and
  - between the share of tertiary-educated workers and their wages relative to lower-educated peers
- Factors not included in the model (e.g. rent seeking, education policies) might have played a role in inequalities

# The average rate of unemployment of those with tertiary education and the change in the skill premium, 1998-2009



Source: Darvas and Wolff (2016), based on Eurostat, OECD and World Input-Output database.

# Share of tertiary-educated workers and their relative earnings, 2013



Source: Darvas and Wolff (2016), based on OECD, Education at a glance 2015. Note: Workers with medium education= 100. Data for Netherlands: 2010; France and Italy: 2011; Australia, Canada, Finland, Japan, Poland, Spain: 2012.

# Giovanni Dosi *et al*: The effects of labour market reforms: an agent-based model approach

- Agent based model with
  - endogenous growth process driven by innovation and their adoption and diffusion (the Schumpeterian engine), and
  - aggregate demand process driven by investments and workers' consumption (the Keynesian engine)
- Rather complex model setup
- Two main types of labour regimes:
  - **Fordist:** rigid wage sensitivity, only unemployed searched, fire only if losses, unemp. benefit, minimum wage indexation
  - **Competitive:** flexible wages, employed also searched, fire also with production decline, no unemp. benefit, partial indexation of minimum wage
- Tries to refute the “OECD-IMF orthodoxy”, which suggests: labour market institutions → rigidities → job creation less attractive for employers and joblessness more attractive for workers.

# Giovanni Dosi *et al*: The effects of labour market reforms: an agent-based model approach

- **Key conclusions:**

- Hysteresis (such as long unemployment spells and low output growth) is not due to market imperfections or rigidities, but to the functioning of decentralised economies characterised by coordination externalities and dynamic increasing returns
- In a downturn, hysteresis fostered by lower investment and innovation, skills deterioration, declining entry dynamics
- Labour market flexibility measures cause inequality and unemployment
- No equity-efficiency trade-off
- Flexible labour market → less innovation
- Inequality and unemployment → weak demand

# Giovanni Dosi *et al*: The effects of labour market reforms: an agent-based model approach

- **Some comments:**

- Stylised theoretical model vs. empirics
- Stylised theoretical model vs. another theoretical model (e.g. Dosi vs. Hairault)
- Several countries with flexible labour markets innovate a lot (e.g. US, Canada)
- Crisis-related arguments for hysteresis (e.g. low investment and skill deterioration) are convincing, yet empirical evidence suggests that countries with more rigid labour markets suffered from more protracted recession and unemployment than countries with more flexible markets
- Timing of labour market flexibility reforms?
- Offsetting policies (e.g. increased social security and ALMP)?

# Orsetta Causa and Mikkel Hermansen *et al*: Empirical analysis of the distributional impact of structural reforms

- Combine macro-level estimates of the impact of structural reforms on macroeconomic growth with micro-level estimates of the impact of structural reforms on household incomes across the income distribution
- Decompose growth to labour utilisation and labour productivity
- Reduced-form estimation, system GMM
- Income distribution is considered via the general mean approach, a non-linear weighted average of incomes along the whole income distribution, based on Atkinson (1970) framework
- Large number of scenarios studied (different reforms, different aversion to inequality)

# Orsetta Causa and Mikkel Hermansen *et al*: Empirical analysis of the distributional impact of structural reforms

- **Key conclusions:**

- Pro-growth policies can be inclusive
- Easing barriers to firm entry and competition in product markets produces strong macroeconomic gains without raising trade-offs between efficiency and equity objectives
- Public spending on education boosts growth and at the same time reduces income inequality
- Social protection and labour market reforms are the sources of most of the trade-offs between growth and equity objectives
- Crucial: well-targeted active labour market policies (ALMPs) with a view to enhancing employability among the low-skilled, the long-term unemployed and discouraged jobseekers

# Orsetta Causa and Mikkel Hermansen *et al*: Empirical analysis of the distributional impact of structural reforms

- **Some comments:**

- Macro-effects taken from other studies, while micro-effects are estimated in the paper. Are all estimates comparable?
- The macro-level effect of all policy interventions considered vary very little across the income distribution: why?
- Why general mean approach and not separate analysis of e.g. deciles or quintiles?
- Simple reduced form model is estimated: there are possible omitted variables relevant for income distribution
- Identification of short/medium/long-run effects from reduced form model when policies interact

# Some general remarks and questions

- **Level of income inequality in the EU:** crucial, yet among the lowest in the world. Importance of absolute poverty/disadvantaged people.
- **Reforms and the economic cycle:** does it matter if introduced in recession or expansion?
- **Pareto improvement:** what if the poor is not worse off but the middle income/rich are better off?
- **Policy synergies:** what if e.g. increased labour market flexibility is combined with increased social security?
- **Sequencing structural reforms:** recent crisis prompted rapid measures. Is there political capital for better sequencing now?

# Chart from Causa et al: Pro-growth policy reforms and household disposable income across the distribution

