Structural Reforms and Assessment of their Economic Impact

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About Economic and Financial Affairs

- ECFIN is responsible for EU policies promoting economic growth and recovery, higher employment, stable public finances and financial stability

- ECFIN is organised in country desks and (thematic) horizontal units

- "Economic service" function inside the Commission

- Main stakeholders: EU Member States, ECB, EIB, IMF, OECD, G20

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About the unit "Economics of structural reforms and investment"

- 19 people, mostly economists (PhD level)

- Broad spectrum of topics organised around productivity: inclusive growth, business environment, public administration, taxation, investments

- "Clients"
  - Economic Policy Committee and Eurogroup
  - Country desks and other Commission Services
  - Other international organisations, National Productivity Boards

Structure of the training

- *What are structural reforms and why do they matter?*

- How to assess impact of reforms?

- Pilot based on the National Reform Programmes

- Final remarks

What are structural reforms?

- Supply-side reforms

- Tackle fundamental bottlenecks

- Can also have an impact on the demand side

- Impact on the economy, social situation, environment

Not a single definition

- Broad set of actions including reforms in labour and product markets as well as some fiscal reforms

- Competition-enhancing reforms (e.g. liberalising sheltered sectors)

- Improving market flexibility (e.g. labour market)

- Improving business environment

- Improving growth-friendliness of tax systems

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Assessing the impact is a difficult task

- Often actual effects take time to become visible
- Difficult to infer causality
- Indicators of reform efforts hard to construct
- How to go from policy to outcomes?

Assessing reforms in ECFIN:

Step 1. Measure the reform

Step 2. Identify the transmission channel

Step 3. Assess the economic impact

(Either econometrically or with DSGE)

Step 1. Measure the reform

- Method 1: "Closing the gap" towards best practice, or "what if?" (EC, IMF, OECD)
    - o Indicators on policy or performance

- Method 2: Measuring <u>actual</u> reform effort

Examples of indicators to measure reforms:
- o OECD Product Market Regulation (PMR)
- o OECD Employment Protection Legislation (EPL)
- o World Bank Doing Business
- o Replacement rate of unemployment benefits
- o Tax wedge and other indicators of the incentive effects of labour taxation

Step 2. Identify the transmission channel

The researcher needs to specify how the effects are transmitted, e.g.

- Business dynamics: entry, growth and exit of firms
- Price adjustments
- Resources reallocation
- Improved labour market matching

Step 3: Assess the economic impact

- Econometrics
  - At ECFIN: on intermediate variables
  - Other institutions: also GDP effects

- Quest
  - QUEST can accommodate shocks in product markets via mark-ups, entry costs, productivity, R&D subsidies
  - Labour market reforms can be captured for example through changes in replacement rates

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ECFIN pilot based on NRPs

- Selected reform measures during 2013-2015 period
- Based on NRPs of Italy, Spain, Portugal and France
- Focus on structural component of reforms, i.e. exclude direct fiscal impacts
- We use rigorous methodology to make results comparable across countries
- We select only those measures that could be quantified in a sufficiently reliable and rigorous way
- Team work between country desks and horizontal units
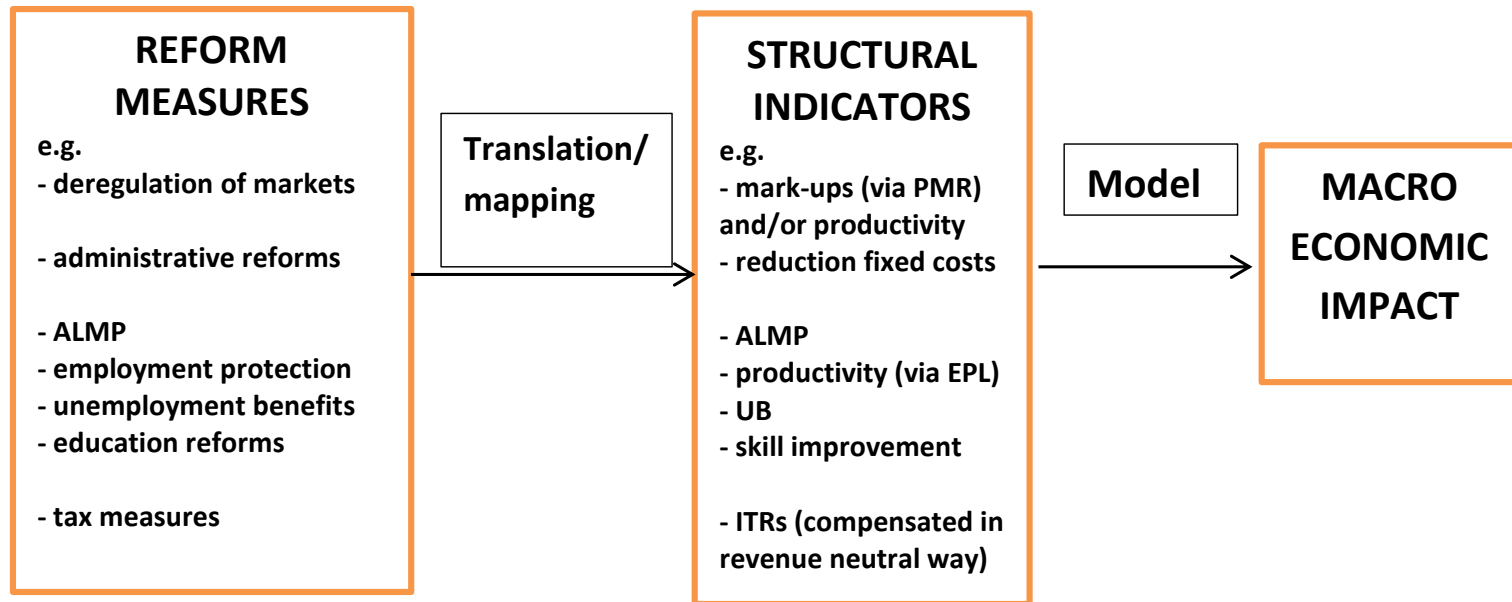
Translation of actual reform measures onto structural indicators either direct or indirect

Product market reforms

Labour market reforms

Tax reforms

Product market reforms

Directly mapped into QUEST

- Reduction of cost of starting a business: impact through entry costs
- Simplification of admin framework: impact through overhead labour

Indirect translation (requiring satellite analysis)

- Sectoral product market deregulation:

  change in PMR => mark-up shock (Thum-Thysen & Canton, 2015)

- Other efficiency-enhancing reforms: impact through productivity

Example of translation exercise (1)

- Spanish reform to simplify opening of small retail enterprises in 2012

- Retail PMR <u>after</u> the reform is 2.88 (i.e. the published number for 2013)

- "Backward engineering" of the PMR using the <u>questionnaire behind the PMR</u> yields a PMR <u>before</u> the reform of 3.61

- This change in PMR is estimated to <u>decrease mark-ups</u> in retail from 14.3% to 11%

Example of translation exercise (2)

- Transposition of Professional Qualifications Directive in Portugal
- Adoption of new horizontal framework law
- Proposals by prof. associations for amendments of statutes and internal rules to bring them in conformity with horizontal framework law
- Eliminate excessive restrictions and facilitate access

Allocative efficiency in prof. services
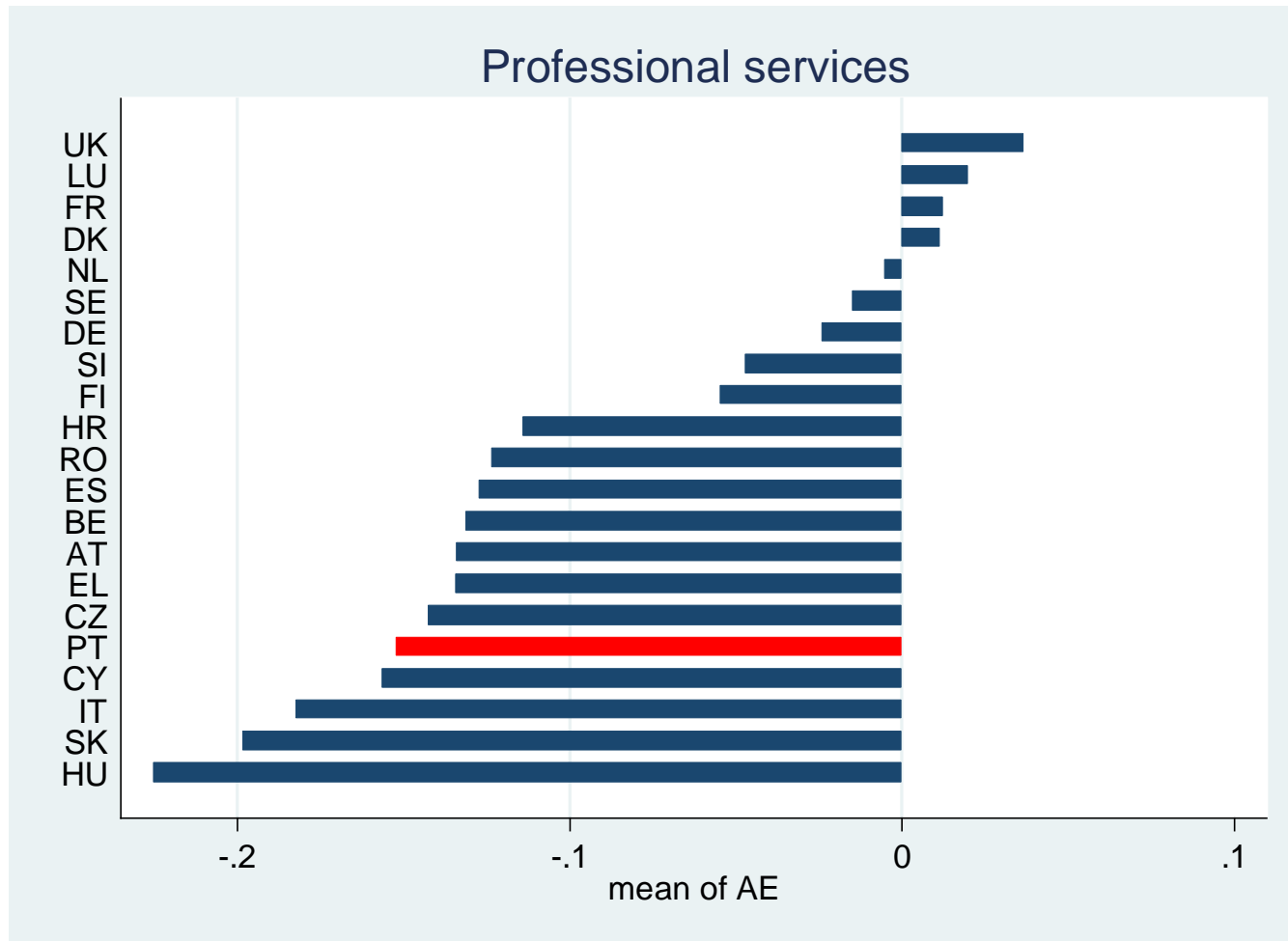
Productivity gains of the reform of professional services in Portugal

	Legal activities	Accounting activities	Architecture and engineering
PMR before reform	3.88	3.17	2.325
PMR after reform	3.25	3.08	2.47
ΔPMR	-0.63	-0.09	+0.145
Impact on business churn	+1.10%-point	+0.16%-point	-0.25%-point
Impact on AE	+0.036	+0.005	-0.008
Impact on labour productivity (%)	+2.70%	+0.38%	-0.61%

Labour market reforms

- Unemployment benefits: Translated via net replacement rate

- ALMPs: Spending

- Reforms affecting activity rate (e.g. related to disability benefits, maternity benefits, availability of childcare): Translated based on estimates by national authorities (if available)

- Education reforms: Translated based on projected effects on attainment

- Reforms of EPL: Translated into productivity shock based on an OECD estimation

Example of translation exercise (1)

- ES and PT had relatively generous UB systems
- Reductions in the replacement rate (RR) after the first 6 months reduced the net RR indicator (over 5 years for a "typical" worker with long contribution period)
  (e.g. from 59% in 2011 to 48% in 2013 in Portugal)

Example of translation exercise (2)

- In PT, a new program was introduced to keep pupils in the school system with a vocational program
- An estimation was made (based on attendance data in first full year of operation) on how many students will reach a higher grade of qualification as a result

Tax reforms

- Tax reforms are changes in statutory tax rates and/or taxable bases

- Translation into shocks via implicit tax rates (ITRs) on capital, labour and consumption

- Ex-ante revenue neutrality: Changes to consumption, labour and capital taxes - proportionally to pre-reform tax structure

Example of translation exercise

- PIT reform in ES in 2014:
  - reduced number of tax brackets, base broadening
  - led to a decrease in the ITR on labour by 0.83 pp in 2015 and 2016
  - which is compensated with an increase in the ITR on capital (0.3 pp), labour (0.4 pp) and consumption (0.17 pp) for a revenue neutral adjustment of all taxes

Adding up: overall GDP impact
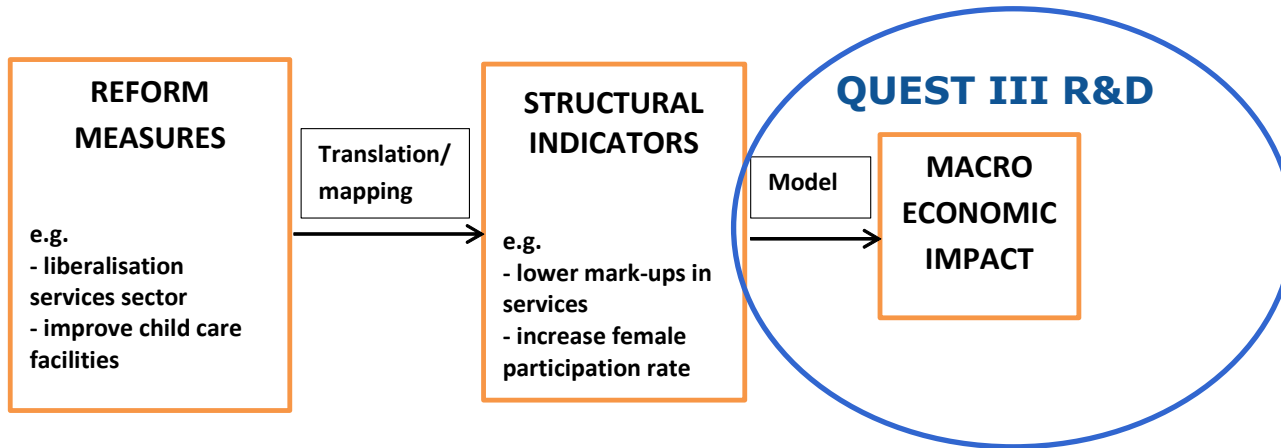
Advantages of model-based analysis

- Specific about transmission channels
- General equilibrium effects (feedback effects)
- Demand effects
- Dynamic effects
- Wider macroeconomic impact (employment, trade, government budget)

The model

Economy populated by:

Households
Low|Medium|High skilled

Final goods producing firms
Monopolistic competition

R&D institute

Intermediate goods producing firms
Monopolistic competition

Monetary authority
Central Bank

Fiscal authority
Government

Calibration of structural indicators in the QUEST model

- Mark-ups (Thum-Thyssen & Canton, 2015)
- Entry costs (World Bank)
- Implicit tax rates (TAXUD/EUROSTAT/EUROMOD)
- R&D tax credits (OECD)
- ALMP (EUROSTAT)
- Unemployment benefit generosity (OECD)

Example of translation: Spain

Reform	Translation	Model Shocks
2012 Tax reform	ITR_C: +1.18pp ITR_L: + 0.17pp ITR_K:+ 0.71pp Revenue neutrality (compensated)	ITR_C: +0.65pp ITR_L: - 1.22pp ITR_K:- 0.30pp
2013 Market Unity Law: 2012 Retail reform	Reduction in barriers for start-ups PMR: -0.73 => Markup 14.3-> 11.0	Entry costs -35% Final goods Markup -0.5
2012 Unemployment benefit 2012 Employment protection	UB after 6 months 60% -> 50% EPL -0.14	NRR -3pp Productivity +0.14
2013 Pension reform	Labour force participation 60-64 age: +3.2 (2020); +6.9 (2060)	Labour force 60-64: +14%
2014 Tax reform	ITR_L: - 0.83pp ITR_K:- 1.26pp Revenue neutrality (compensated)	ITR_C: +0.33pp ITR_L: - 0.03pp ITR_K:- 0.65pp

Example: Results for Spain

Years	2013	2014	2015	2016	2017	2018	2019	2020	2030
GDP	0.17	0.37	0.59	0.72	0.86	1.01	1.16	**1.31**	2.80
Employment	0.31	0.58	0.78	0.89	0.98	1.07	1.18	**1.29**	2.54
Trade balance (% of GDP)	0.23	0.26	0.22	0.23	0.23	0.23	0.24	**0.25**	0.31
Gov. balance (% of GDP)	0.72	0.97	1.20	1.33	1.48	1.64	1.81	**1.98**	4.14

GDP: positive effects (+1.3% by 2020)

Employment: positive effect (+1.3% by 2020)

Trade balance: small positive effect

Budget balance: positive effect (pension reform)

Summary of results (1)

- GDP by 2020: FR +0.4; IT +1.3 ; ES +1.3 ; PT +2.1
- That could add between 0.1-0.3 pp to growth rates
- Even larger GDP gains in longer run

➢ Positive impact on government finances (higher tax revenues)

➢ This could be underestimation of impact of structural reforms (we were not able to quantify many measures) or overestimation (too optimistic assumptions on implementation?)

➢ Estimates from national authorities are sometimes even higher

➢ Translation of reform measures surrounded by large uncertainties

Summary of results (2)

This impact assessment:

GDP by 2020: FR +0.4; IT +1.3; ES +1.3; PT +2.1

Compare to benchmarking exercise (GDP gains if each country closes half the gap with best performers):

GDP by 2020: FR +4.2; IT +3.9 ; ES +3.2 ; PT +2.4

Reforms implemented/planned so far make some progress, but more can be done.

Quantification is a challenging task

Not all measures are easily quantifiable: some measures have not been assessed (~40%)

- deemed insignificant,
- not clear how the macroeconomic impact of the reforms, if any, could be quantified.

'Translation' of reform measures into quantifiable changes in structural indicators is surrounded by large uncertainties:

- (in)direct quantification of the measures,
- assumed implementation speed
- robustness of empirical estimates on which the assessment had to rely.

Results are not strongly model-dependent, but may be sensitive to certain model assumptions: e.g. fiscal and monetary policy assumptions, compensatory payments, etc.

=> Estimates are surrounded by large uncertainties and should be interpreted with caution.

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Final remarks

- Use of micro data is rapidly increasing (Orbis, CompNet, …)

- Policy experimentation

Thanks for your attention

The Economic Impact
of Selected Structural
Reform Measures in
Italy, France, Spain
and Portugal

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EUROPEAN ECONOMY

http://ec.europa.eu/economy_finance/publications/eeip/pdf/ip023_en.pdf

The QUEST III R&D model

References: Roeger et al. 2008, Varga et al. 2014