Workforce composition, productivity and pay: the role of firms in wage inequality developments

Comments from lead speakers
Presentation by the Italian Treasury Department

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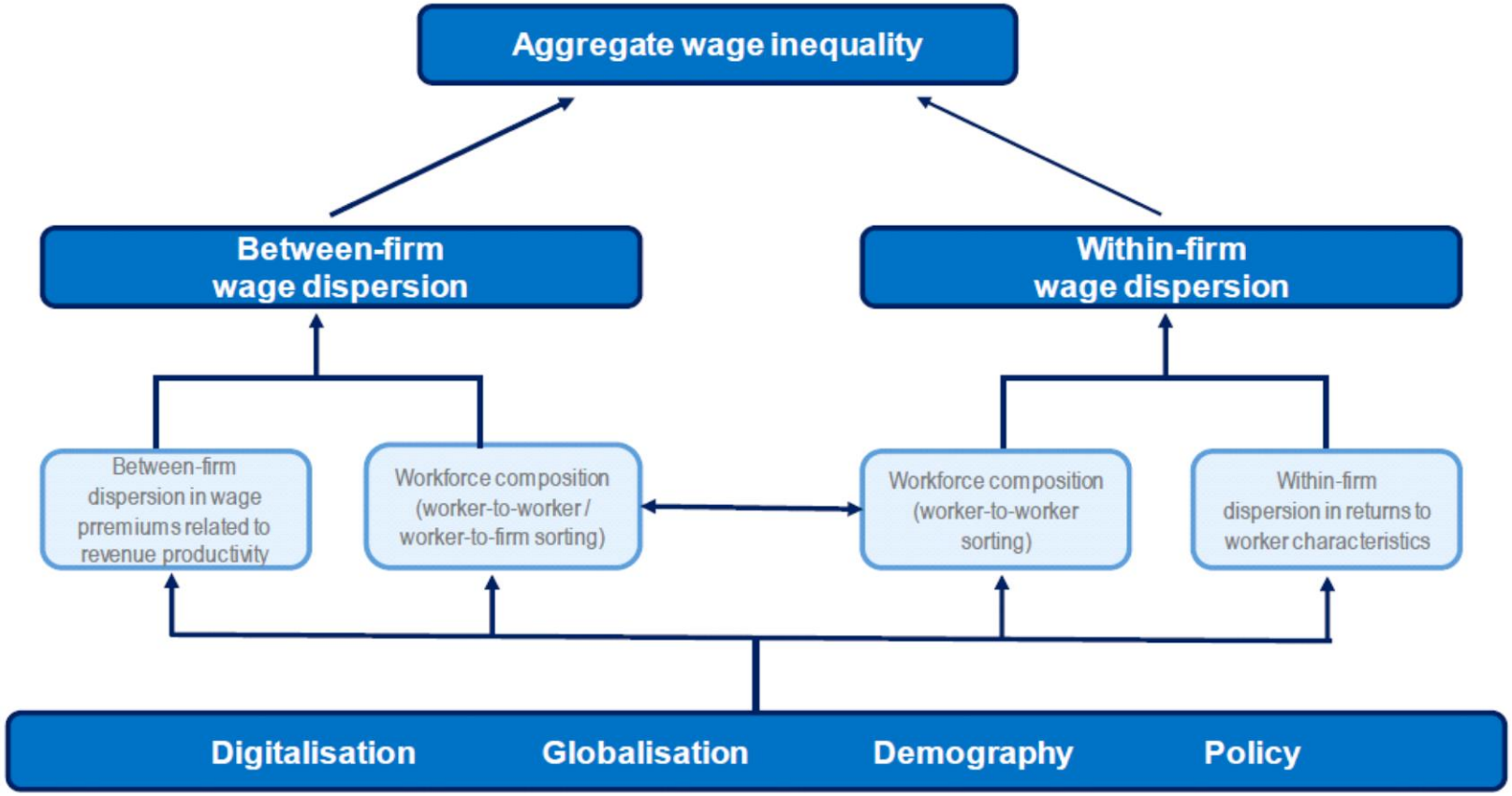
OECD WP1
Paris, 11 October 2019

Research question, framework of analysis and key policy message

- Trend of rising inequality, low aggregate productivity growth and increasing gaps in firm productivity
- What are the mechanisms through which firms can affect aggregate wage inequality?
- Main results: wages (and wage dispersion) are driven not only by diverging marginal productivity but also by firms' productivity-related rents
- Policy message: worker-centred policies to be complemented with firm-centred policies

Figure 1. Conceptual framework



Source: OECD.

Aggregate wage inequality can be divided into:

(1) within-firm wage dispersion: workforce-composition and returns to workers

(2) between-firm wage dispersion: wage premia differ by prod.; workers sorting

Stylized facts

- Changes in between-firm wage inequality (worker composition AND firm wage premia) explain about 50% of changes in overall wage inequality
- Changes in firm-wage premia (possibly related to productivity but UNRELATED to workforce composition) explain 65% of between-firm changes in inequality
- The remaining 35% of between-firm changes in inequality explained by worker-sorting

Policy implications

- **Productivity developments have an impact on wage inequality**: directly (via firm wage premia) and indirectly (via incentives for worker sorting)

- **Firm dynamics matter**: inequality in workers' earning characteristics (skills, age) only partially explain wage inequality

- **Implication**: worker-centred AND firm-centred policies
  - *Complement traditional programs focusing on skills gap/wage-setting with policies addressing differences in productivity-related rents*

- **Help firms either catch-up**…
  - *e.g. support for technology adoption/innovation, reducing barriers to market entry, competition policy enforcement, taxation policies, and access to finance for intangible assets*

- …or help them **exit the market**…

Productivity and inequality

- **Main policy challenge**: How best to simultaneously increase productivity while reducing inequality?
- Adoption of skill-biased technologies (SBT)
- Policies that promote productivity-technologies in lagging behind firms
- Skill upgrading for all workers

Some issues: database still unfit for cross country analysis

- Cross-country differences in wage dispersion can be relevant; at the same time, country level differences in the share of between-firm inequality in overall wage inequality are fairly limited, how to interpret this joint evidence?

- How to square the second piece of evidence with the presence of vastly different labour-market institutions and bargaining systems?

- What is the role, more in general, of institutions (barriers, regulation...)?

- Is it all (mostly) about firm-related innovation variables? E.g. technology adoption, exposure to international competition...

- Relevant problem. Unfortunately, limited coverage of the database (14 Countries) and information far from homogenous (e.g. missing data concerning hourly-based wage data or productivity at firm level).

Some issues: need to invest more in econometric analysis

- In equation (1) $\ln w_{ij} = x_i\beta + \gamma_j + \varepsilon_{ij}$
  variable γ_j is not correctly estimated if there are missing worker characteristics
  This is the case, so the wage premium variance component is over-estimated

- Are the β coefficients time-invariant? Issue related to changing skill premiums

- Concerning equation $\hat{\gamma}_j = \alpha + \beta \log(\text{productivity}_j) + \varepsilon_j$
  It only explains 10% of the dependent variable… why?
  Dependent variable is not correctly measured, but what else?
  It is important to find a better fit

  Possibly draw from literature focusing on labor share at firm level
  Additional regressors. Firm size, capital intensity, market power
  It would shed light on an extremely important issue at the macro level

Follow-up and future research

- Empirically test all hypotheses and control for several variables related to firms such as dimension, exposure to competition, sector, unionization rate..
- Examine **clusters of «homogeneous countries»** with focus on specific case-studies
- Possibly broaden the scope of the analysis to cover both the issue of overall «**workers' well-being»** affecting productivity and the distribution of productivity gains among all workers to promote **inclusiveness**