Discussion of *Wages and the Sorting of Workers to Firms when Skills are Bundled*

Joacim Tåg

NICE Conference, Stockholm August 25, 2026

IFN & Hanken School of Economics

An ambitious theory paper with a simple and powerful asymmetry

- Workers bring a **bundle** of cognitive and non-cognitive skills to one employer
- Firms can combine many workers' bundles to assemble the aggregate skill mix they need
- This, in a competitive labor market, can generate:
  - sorting by comparative advantage in skills across firms;
  - firm-specific prices for the same underlying skills;
  - convex wage schedules and a generalist markdown;
  - endogenous firm size.

A key contribution is to put **the firm as a skill aggregator** at the center of a model of wages and sorting.

Core mechanism: why balanced skills can be priced differently

A worker cannot unbundle

- One worker brings (C, N) to one firm
- A balanced worker cannot sell C to one firm and N to another

A firm can re-bundle

- A firm can combine a C-specialist and an N-specialist
- It can therefore replicate a balanced aggregate input with a team of specialists

Teams of specialists can compete with generalists in firms' input markets, generalists cannot compete in the reverse direction.

- A "bundling discount" generated by competitive arbitrage

Why the contribution matters

- The model is **ambitious** in giving firms substance. Firms have heterogeneous TFP (from trade) and heterogeneous production functions (from IO).
  - Makes firm production technology relevant for both **who works where** and **how skills are priced**
  - Firm-specific skill prices arise under perfect labor-market competition
- Gives a sharp link between three objects often studied separately:
  - worker-to-firm sorting;
  - wage curvature / returns to skills;
  - firm productivity and size.
- Generates a clear explanation for cross-sectional **generalist markdowns and convex skill schedules** allowing us to better understand wage variation across workers.

Comment 1: Does the legal firm correspond to the production unit?

- The model's economic firm is the unit within which skill inputs are freely aggregated. Is that unit empirically the legal employer?
- **At what organizational level does aggregation occur?**
  - corporate group?
  - establishment?
  - occupation?
  - business line?
  - project team?
  - or the legal firm?
- This determines the scope for specialist teams to substitute for a balanced worker and hence the strength of the markdown.

Comment 1: Does the legal firm correspond to the production unit?

- If bundling occurs within smaller organizational units, firm aggregation may:
  - label a diversified firm "generalist" even when each local unit is specialized;
  - average away the relevant local skill-price variation;
  - confound firm technology with the composition of units inside the firm.

- You could:
  1. Compare sorting, within-unit heterogeneity, and markdowns across corporate group, firm, establishment, and occupation-within-establishment definitions (Appendix B is a start)
  2. Under firm-wide aggregation, specialists elsewhere in the firm should affect local skill pricing. Under establishment-level aggregation, only specialists in the focal establishment should matter.

Comment 2: Can you find a quasi-exogenous shift in specialist supply?

- One of the model's comparative statics:
  More specialist supply $\Rightarrow$ more bunching + smaller markdown
- Table 2 tests this by splitting markets into "bunching" and "no bunching". But it conditions on realized bunching, an endogenous equilibrium outcome.
- **Plant closures as a predicted shock to local specialist supply:**
  - exposure from displaced workers' pre-closure skill profiles, by occupation $\times$ commuting zone; exclude the closing plant and industry from outcomes.
- Then trace the predictions in other local firms:
  1. within-firm mixing of C- and N-specialists rises
  2. bunching in balanced (generalist) firms rises
  3. the local wage schedule becomes more linear (the generalist markdown falls)

Comment 3: Can you impose a hierarchy of contributions?

- The paper has one core mechanism: **Workers cannot unbundle skills, while firms can aggregate workers' skill bundles**.
  1. Convex wages and a generalist markdown
  2. Firm-specific skill prices
  3. Pure sorting versus bunching
  4. A unique endogenous firm size
- But the paper has many more results that are often presented as **coequal contributions**
- The reader sees the paper's breadth, but may not know which result should be remembered

Comment 3: Can you impose a hierarchy of contributions?

- The paper has one core mechanism: **Workers cannot unbundle skills, while firms can aggregate workers' skill bundles**.
  1. Convex wages and a generalist markdown
  2. Firm-specific skill prices
  3. Pure sorting versus bunching
  4. A unique endogenous firm size

- I would let this hierarchy govern the paper:
  - Move the three-type example and Figure 5 earlier to establish the economics first
  - Organize the empirical evidence directly around these core predictions
  - Present non-homotheticity, the AKM analogy, and workers-versus-jobs as extensions and connections

One mechanism, four core results, then extensions.

Takeaway

A key contribution is to put **the firm as a skill aggregator** at the center of a model of wages and sorting.

- **Comments:**
  1. Does the legal firm correspond to the production unit?
  2. Can you find a quasi-exogenous shift in specialist supply?
  3. Can you impose a hierarchy of contributions?

- A seriously ambitious framework, well matched to the Swedish administrative data!