Discussion of “Functionally Flexible?”

Legal Rigidity in Task Reassignment and Technology Adoption

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Roadmap

1 Summary

2 Contribution

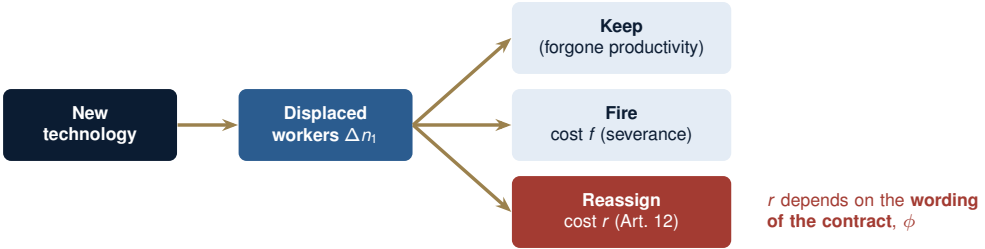
3 Comments

4 Extensions

5 Conclusion

My reading of the paper

Three margins when a new technology arrives



- *Ius variandi*: the employer can only reassign to **similar** duties, same place, no detriment.
- The law is the same for everyone $\Rightarrow$ what varies is **how contracts are written**.
- Question: does contract specificity raise r, shift firms towards firing, and **deter adoption**?

The law turns the wording of the contract into a constraint on technology adoption.

What the paper does

New data

11.6M
contracts registered with the Dirección del Trabajo, 2021–2025

∼98%
of contracts legible by the LLM

∼85%
of concrete contracts define functions rigidly

- An LLM reads each contract: legible? concrete or generic? number of functions? broadly defined ("adaptable")? location?
- Large heterogeneity by sector, occupation and education; **no clear trend**.

Three empirical exercises and a model

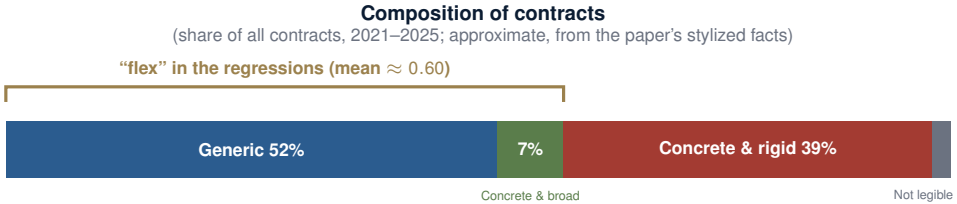
1. **Contract → relationship outcomes.** Flexible contracts: fewer annexes and task changes, same wage growth; in exposed occupations, fewer involuntary terminations and longer spells.
2. **Adoption → contract.** Firms that invest in technology later write more flexible contracts for exposed occupations.
3. **Flexibility → adoption.** Flexible share × exposure predicts more investment in automation.
4. **Model.** Extends Petit (2023): a cost f_c of turning a task-1 into a task-2 worker discourages investment in *directed* technology.

Contribution

1. **Measuring rigidity where it binds.** Rigidity is measured in each individual contract, worker by firm, rather than with country-level *de jure* EPL indices. This allows comparisons across workers within the same firm and under the same legal regime.
2. **A margin the literature has largely overlooked.** Work on employment protection focuses on firing costs. This paper studies the **internal reassignment of tasks**: arguably the key margin when technology changes *what* workers do rather than *whether* they are needed.
3. **Text as data for labor economics.** LLMs turn millions of legal documents into economic variables. The approach extends naturally to other clauses (location, working hours, non-compete) and to other countries.
4. **Policy relevance.** Speaks directly to the Chilean debate on multi-functionality and, more broadly, to how labor regulation shapes the diffusion of automation and AI.

A new lens on an old question: how labor regulation shapes technology adoption.

1. Measurement: what exactly is “flexible”?



- **Pooling generic and broad is problematic**: since 2021 rulings require “certainty”, so a generic contract may be the legally weakest, not the most flexible. Estimate separate effects for generic and for broad contracts.
- **Validate the LLM**: human-coded sample, precision/recall (Ludwig, Mullainathan & Rambachan 2025).
- **Use more of the text**: map duties to O*NET/ESCO tasks ⇒ routine content and AI exposure *per contract*.
- **Fixed-term contracts** substitute for flexibility: split by type.

2. Identification: the contract is a choice

- Firms that expect to reassign workers write broad contracts $\Rightarrow$ flex $\rightarrow$ outcomes mixes **selection** with the effect of rigidity.
- Proposal: the rulings documented by the authors (2021–2026) provide **variation over time** in how Art. 12 is applied, while the law itself did not change.



- **Event study** / **DiD** around each ruling: exposure = pre-ruling share of generic or multi-functional contracts; outcomes = contract wording, annexes, separations, investment.

3. What do the outcomes measure?

Annexes are (partly) mechanical

- A broad contract *does not need* an annex to change tasks.
- Fewer annexes $\neq$ less reallocation: possibly only less **formalization** of reallocation.

Event study around adoption

- Around **investment spikes** (Humlum 2019; Bessen et al.): internal reassignment vs. firing and new hiring, by prior contract flexibility.
- Also deals with anticipation in Strategy 2.

A test of the mechanism: hold-up

- Art. 12 does not forbid reassignment: it requires the **worker's consent** (17% of contracts have annexes).
- The friction is a **bargaining cost**, not a ban. (Grout 1984; Malcomson 1997)

Testable predictions

- Task-change annexes in *rigid* contracts should come with **larger wage increases**.
- Compensating differential: do flexible contracts pay **more at hiring**? (worker FE, movers across contract types)

4. Mechanism: substitute or complement?

Where should legal rigidity matter?
(predicted role of rigid contracts in adoption)

Technology	Routine tasks	Non-routine tasks
Automation (displaces tasks)	**Binds most**: large Δn_1, reassign or fire	Little displacement: rigidity matters little
Generative AI (reshapes tasks within the job)	Displacement + task redefinition: **binds**	Complement; job content changes but worker stays: **ambiguous**

- The **negative AI interaction** may reflect this: if AI complements workers, no reassignment is needed.
- Test: flex $\times$ exposure $\times$ **routine content**.

- **Human capital**: cheaper reconversion, yet managers and professionals have the most rigid contracts.
- **Clerical support** (office clerks): rigid (8% adaptable), highly exposed (Gmyrek et al. 2023): a natural test group.

5. Model: a unifying adoption condition

Adopt the technology if and only if

$$\underbrace{\Delta\Pi - \kappa}_{\text{net gain}} \geq \underbrace{\Delta n_1}_{\substack{\text{displaced workers} \\ \text{(task type, technology)}}} \cdot \min\left\{ \underbrace{f}_{\text{fire}}, \underbrace{r(\phi, h, \delta)}_{\text{reassign}} \right\}$$

- Δn_1: substitute vs. complement; routine vs. non-routine; automation vs. AI.
- ϕ: contract flexibility (legal rigidity).
- h: worker's human capital.
- δ: distance between old and new tasks (Gathmann & Schönberg 2010), measurable with the contract text.

- Rigidity matters only when Δn_1 is large **and** reassignment would otherwise be cheaper than firing ($r < f$).
- New version: f_c is the cost of turning a task-1 into a task-2 worker, with **infinite firing costs**. Reassignment is in, but firing is out: the model cannot speak to the termination results.
- Model both margins jointly: the firm chooses $\min\{f, r\}$.

5. (cont.) Suggestions for the structural model

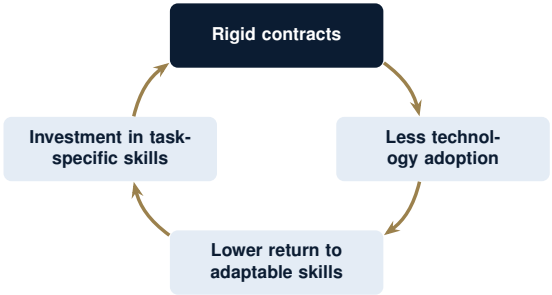
- **Endogenize the contract**: the new "mapping" slide already argues that firms planning to invest set $f_c \to 0$. Model it: firms choose ϕ at hiring, at the cost of a compensating differential or legal risk. This generates Strategy 2 and the selection in Comment 2.
- **Hold-up**: if workers own "their" task, they capture part of the rent from new technology $\Rightarrow$ less investment (Grout 1984).
- **CES detail**: with factor-augmenting technology,

$$\frac{\partial \ln(n_2/n_1)}{\partial d} = \frac{\rho}{1-\rho}$$

  so d shifts labor *towards* task 2 only if $\rho > 0$ ($\sigma > 1$). The mechanism hinges on σ.

- A **task-based model** (Acemoglu & Restrepo) is more natural: automation assigns tasks to capital (displacement); AI raises productivity in non-routine tasks or creates new ones (reinstatement).
- **Bring back the choice of technology** (dropped in the new version) and Petit's key result: rigidity makes innovation *less dispersed*. Testable: variance of post-investment growth, composition of investment (Bartelsman et al. 2016; Griffith & Macartney 2014).
- **Discipline with the data**: share of broad contracts; rate of task-change annexes (identifies r); separations by exposure; investment rate. Calibrate f to Chilean severance pay.

Extensions: long-run effects on human capital



A static analysis understates the cost of rigidity.

- **Workers**: if the contract fixes the task, incentives tilt to task-specific skills (Wasmer 2006; Krueger & Kumar 2004; Hanushek, Schwerdt, Woessmann & Zhang 2017).
- **Firms**: with flexible contracts the firm can redeploy the worker, so it has more incentives to train (Acemoglu & Pischke 1998, 1999). Data: SENCE training by contract type.
- **Heterogeneity**: firm size (fines scale with size), unionization (collective agreements can set multi-functionality), contract type.
- **Policy counterfactual**: not "remove Art. 12" but, e.g., agreed multi-functionality with compensation.

Conclusion

- Important question, genuinely new data and a creative use of LLMs, with direct relevance for the policy debate in Chile.

Three priorities

1. **Measurement**: separate generic from broad contracts and validate the LLM.
2. **Identification**: use the administrative rulings as shocks; today the variation comes from the firm's own choice.
3. **Mechanism and model**: model firing and reassignment jointly, with an endogenous contract and the task type (substitute vs. complement) explicit.

Looking forward to the next version of the paper!

Thank you!

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