#### Learning by Working in High-Skill Sectors

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EFI Workshop on Services and Structural Transformation

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## Summary

- Micro-level evidence on learning by working within and across industries using Brazil's matched employer-employee data
- Findings: The value of experience accumulated in high-skill industries
  - Earning premium in skill-intensive industries that are not due to worker, location and firm attributes
  - Experience in high-skill manufacturing industries raises wages only if workers stay in the same industries
  - But returns from experience in high-skill service industries persist even if workers move to less skill-intensive industries

#### Comments: General

- Learning by Working: Important research question that looks at an under-explored channel of learning at the worker level
- Rich microdata that documents individual career profiles across employers and industries and over time
- Thoughtful empirical analysis with rigorous efforts to account for the effects of worker and firm attributes and establish the value of experience

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- Is the value of experience equivalent to learning by working?
  - Learning by workers vs. Learning by employers
    - \* Are workers getting better or just getting more pay due to, for example, reduced information asymmetry and better matching with employers and positions?
    - \* Especially if only continuing workers are included in the analysis

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- The analysis so far has focused on mobility within and across industries
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- The incremental value of experience may vary significantly with tasks depending on the skills required and the slope of the learning
  - Adda and Dustman (2022): "Routine-manual skills are a key driver of early wage growth while cognitive-abstract skills become important later on"

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- The incremental value of experience may vary significantly with tasks depending on the skills required and the slope of the learning
  - \* Adda and Dustman (2022): "Routine-manual skills are a key driver of early wage growth while cognitive-abstract skills become important later on"
- The value of experience also varies across the matrix of occupations as workers switch tasks, depending on the transferability of knowhow
  - This may help explain some of the results on the persistence of (or the lack thereof) the experience premium

### Comments: Specification

- Instead of singling out top-10 industries and interacting them with experience, perhaps directly construct a "knowledge" proximity measure between industries/occupations and see whether the value of experience persists between proximate/related positions
- Could there be selection bias as workers enter and exit labor force?
- Microregion-industry-year FE to control for local productivity and demand shocks

#### **Comments: Policy Implications**

- How to inform policies on industrial development?
  - The paper motivated the question with industrial development and the implications of robotization
  - A stronger link between the findings and the motivation would be helpful
    - If trying to inform on the future of industrial growth amid automation, understanding task-specific wage growth path becomes even more relevant
  - What are the implications of the findings? Setting industrial and labor market policies to facilitate the growth and experience accumulation of workers

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