

Productivity, Wage Costs and Competitiveness in Flanders

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Outline

- 1 Motivation
- 2 Methodology
- 3 Data
- 4 Results
- 5 Conclusion

Motivation

- **Productivity growth** = **key driver** of long-run prosperity, wages, and competitiveness,

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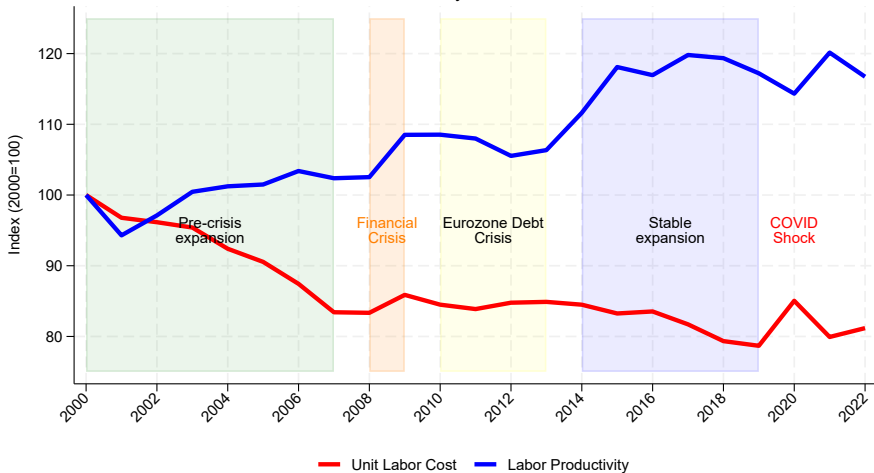
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- **This study:** firm-level analysis of **LP**, **ULC**, and **TFP** for **2000–2022** using **Sequenza data**.

Labor Productivity and Unit Labor Cost



Labor Productivity (LP)

Firm-Level LP: Measures output per unit of labor input.

$$LP_{it} = \frac{VA_{it}}{L_{it}^{FTE}} \quad (1)$$

VA_{it} = deflated value added, L_{it}^{FTE} = full-time equivalent employees

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Indexing: Normalized to year 2000.

$$LP_t^{index} = \frac{LP_t^{agg}}{LP_{2000}^{agg}} \times 100 \quad (4)$$

Unit Labor Cost (ULC)

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Indexing: Rebased to year 2000.

$$ULC_t^{index} = \frac{ULC_t^{agg}}{ULC_{2000}^{agg}} \times 100 \quad (8)$$

Total Factor Productivity (TFP)

Törnqvist Index: Based on Aw et al. (2000) and Bloom et al (2022).

$$\ln TFP_{ik} = \ln Y_{ik} - \ln \bar{Y}_k - \frac{1}{2} \sum_{j=1}^k (S_{ijk} + \bar{S}_{jk})(\ln X_{ijk} - \ln \bar{X}_{jk}) \quad (9)$$

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- TFP_{ik} : TFP of Firm i in sector k
- Y_{ik} : Value Added of firm i
- $\bar{Y}_k$: Average sector VA
- S_{ijk} : Input j share for firm i
- $\bar{S}_{jk}$: Average input share in sector k
- X_{ijk} : Input value for firm i
- $\bar{X}_{jk}$: Average input value

Data Overview

Primary Dataset:

Sequenza (Flanders, 2000–2022)

Firm-level balance sheet data on:

- Capital
- Value added
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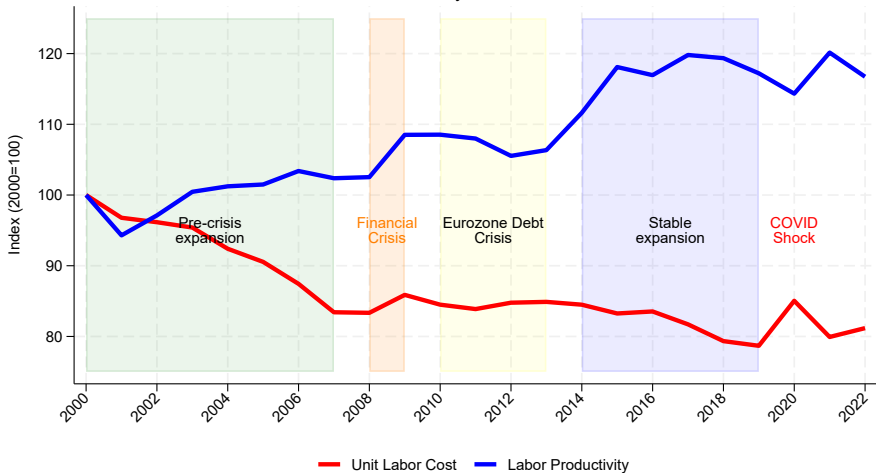
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Complementary Data:

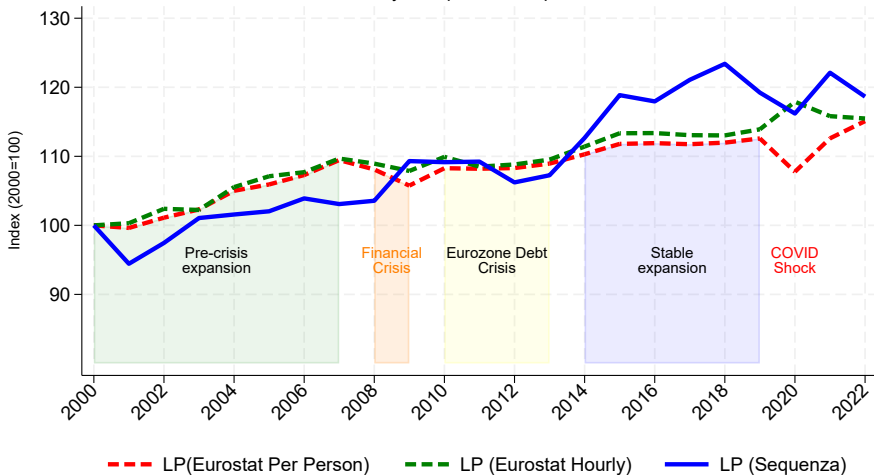
- **Eurostat:** GDP in PPP at province level
- **Eurostat:** Labor productivity (LP) for robustness checks
- GDP deflated using **World Bank GDP deflator**

Results

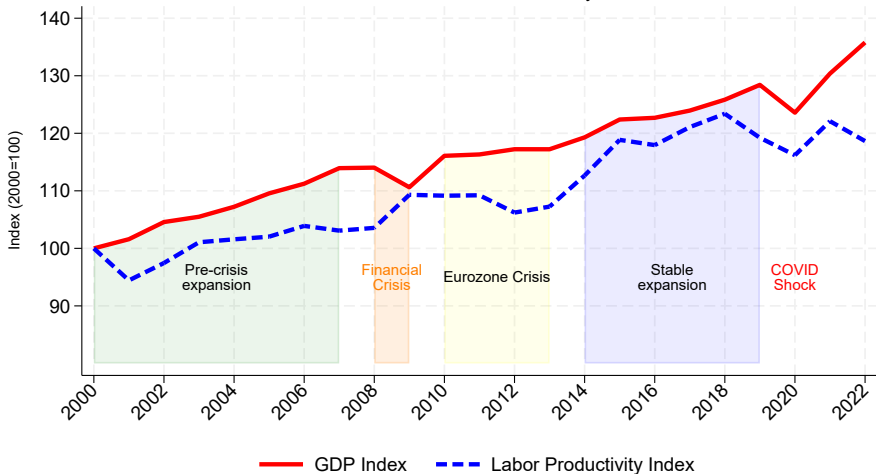
Labor Productivity and Unit Labor Cost



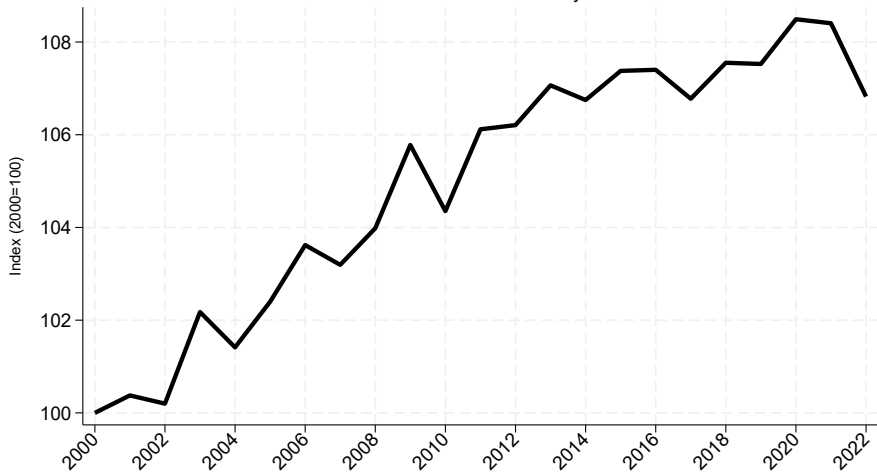
Labor Productivity Comparison Sequenza vs Eurostats

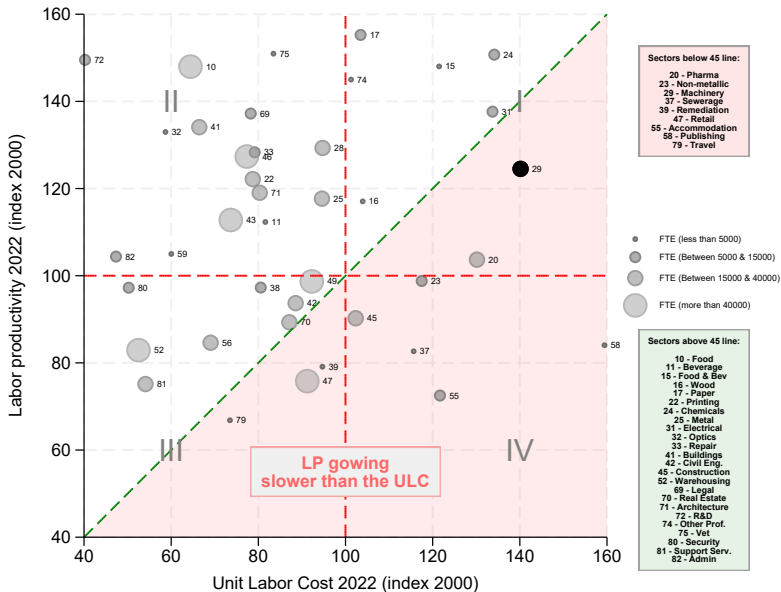


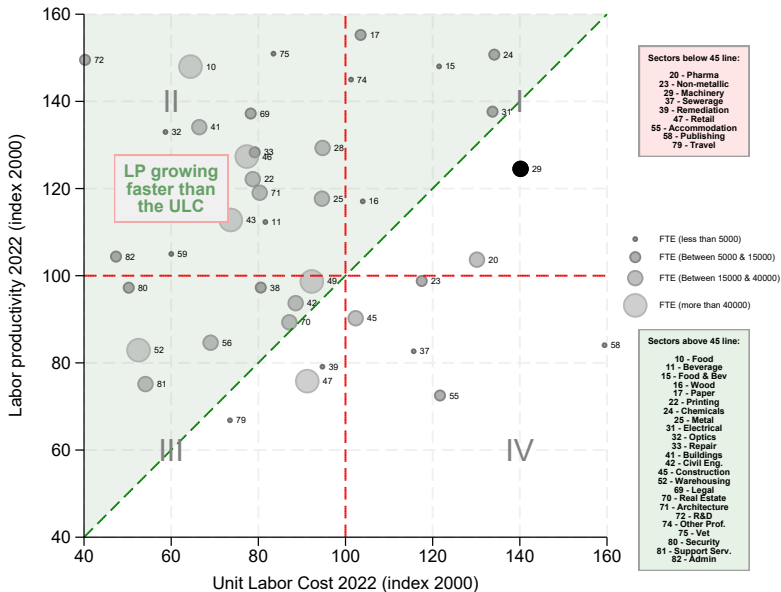
Economic Phases: Labor Productivity and GDP

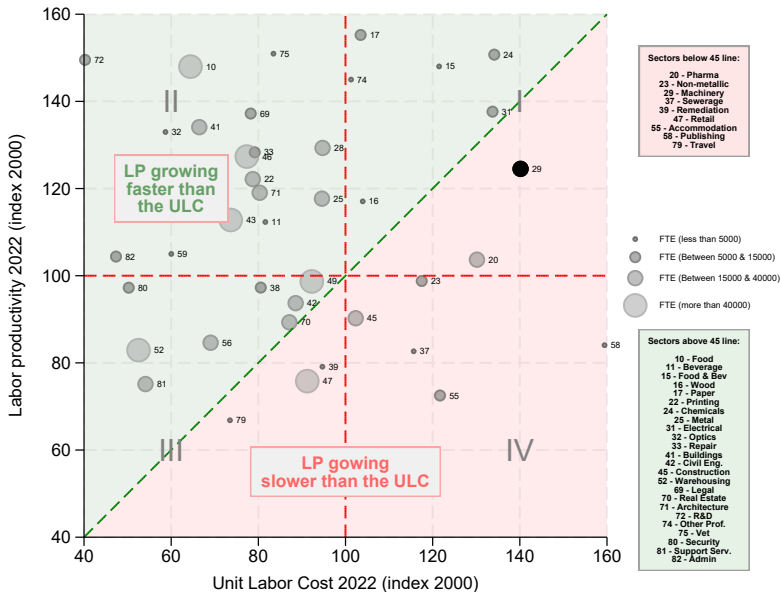


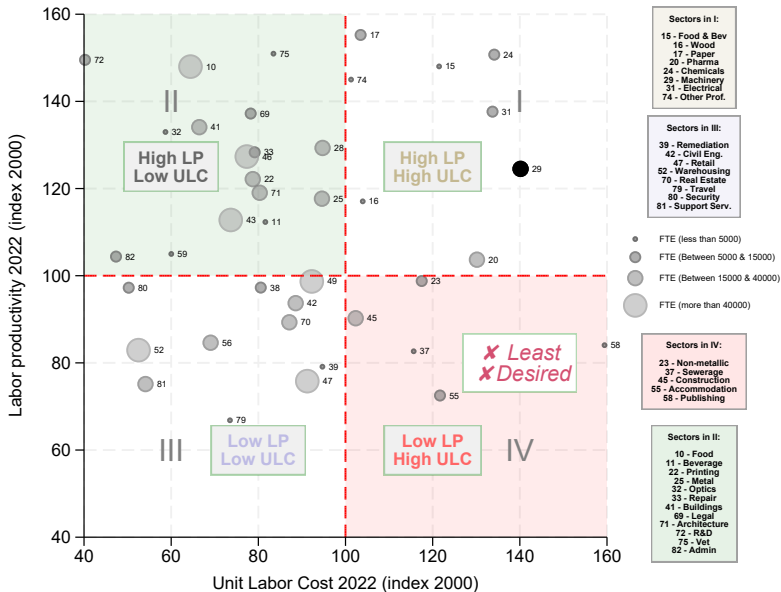
Total Factor Productivity

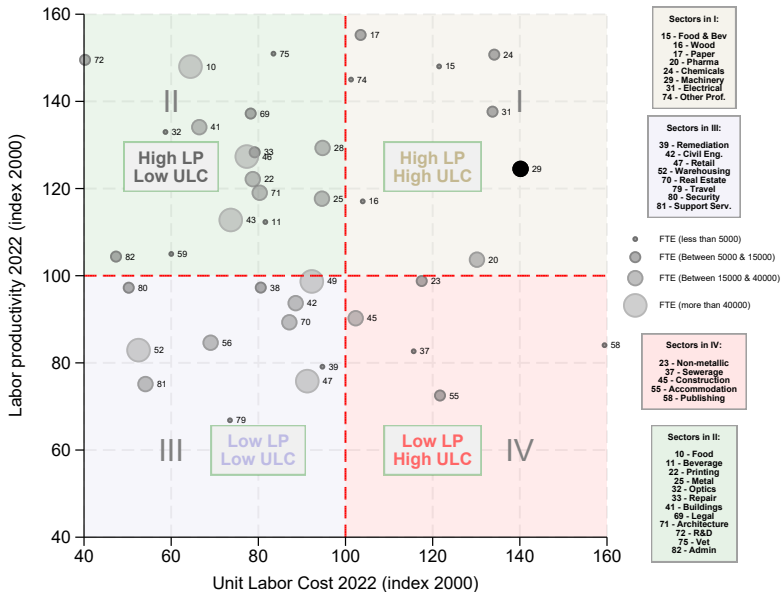












Conclusion

- **Labor productivity** increased by **18%** between 2000 and 2022.
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- In most sectors, **productivity gains outpaced ULC declines**, indicating stronger competitiveness.
- **Total Factor Productivity (TFP)** rose by about **8%** over the same period.
- **Future analysis explores:**
 - Markup dynamics across firms and industries,
 - Market concentration patterns,
 - Decomposition of productivity growth.

Thank You!

References

- Aw, B. Y., Chung, S., and Roberts, M. J. (2000). Productivity and turnover in the export market: micro-level evidence from the Republic of Korea and Taiwan (China). *The World Bank Economic Review*, 14(1), 65-90.
- Bloom, N., Iacovone, L., Pereira-Lopez, M., & Van Reenen, J. (2022). Management and misallocation in Mexico (No. w29717). National Bureau of Economic Research.