

# Research Proposal

## Data Rent and Surplus Value in the European Digital Economy: Empirical Evidence from EU KLEMS IntanProd Data

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**Objective and EU Policy Relevance.** This project empirically tests whether data accumulation in European industries generates genuine productivity gains or enables rent extraction by dominant platforms, directly addressing EU-IOAC priorities of *digital transition* and *EU industrial policy*. Our ongoing project (Mohades & Savona)<sup>1</sup> demonstrates that data operates through two channels: productivity enhancement versus monopolistic rent extraction. European regulations like GDPR paradoxically increased market concentration by 17% while reducing activity by 12% (Johnson, Shriver and Goldberg, 2023), suggesting privacy protection without data-sharing strengthens incumbents. This research tests these predictions using EU KLEMS IntanProd country-sector panel data (1995-2020).

**Potential Research Questions.** (1) Does data accumulation reduce labour shares, consistent with intensified exploitation? (2) Do data-rich sectors exhibit persistent markups disconnected from productivity, indicating rent extraction? (3) Did GDPR increase concentration in data-intensive sectors while reducing economic activity?

**Empirical Strategy.** Using data on 28 EU countries, multi-industries, 25 years, we estimate first the **(1) Exploitation channel:** as

$$\text{LaborShare}_{st} = \alpha_0 + \alpha_1 \log(\text{DataStock})_{st} + \alpha_2 X_{st} + \delta_s + \delta_t + \epsilon_{st}$$

Theory predicts  $\alpha_1 < 0$  if data intensifies surplus extraction. We then estimate **(2) Rent extraction** as

$$\text{Profit Rate}_{st} = \beta_0 + \beta_1 \log(\text{Data})_{st} + \beta_2 \text{HHI}_{st} + \beta_3 (\text{Data} \times \text{HHI})_{st} + \mu_{st}$$

Positive  $\beta_3$  indicates data's effect on markups increases with concentration, consistent with rent versus productivity. I also propose that we estimate a **(3) GDPR experiment:** Difference-in-differences comparing EU high- versus low-data-intensity sectors before/after May 2018, testing whether regulation increased concentration while reducing activity.

We address endogeneity through: (1) instrumental variables using historical telecommunications infrastructure and regulatory shocks, (2) Arellano-Bond dynamic panel GMM, (3) controlling for R&D capital, technology trends, and trade exposure.

**Collaboration and Timeline.** Dr. Filippo Bontadini brings expertise in EU KLEMS data structure and European industrial organization. The 8-week fellowship proceeds: *Weeks 1-2:* Data merging and baseline estimation. *Weeks 3-4:* Core specifications and robustness checks. *Weeks 5-6:* Heterogeneity analysis and policy simulations. *Weeks 7-8:* Working paper draft and seminar presentation (scheduled Week 7 for LEAP faculty and EC stakeholders).

**Expected Outputs.** (1) Jean Monnet seminar synthesizing theory and empirics with direct EU policy implications. (2) EU-IOAC working paper "Data Rent in European Industries: Evidence from EU KLEMS" for

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<sup>1</sup>Draft available upon request

submission to peer-reviewed journals. (3) Policy brief for European Commission on Data Act implementation.

**Policy Implications.** If data generates rents rather than competitive returns, then: (1) EU data strategies emphasizing privacy without sharing mandates may strengthen non-European platforms, (2) European industrial policy should prioritize data commons over data localization, (3) competition policy should mandate interoperability rather than just behavioral constraints. Findings inform Data Act and Data Governance Act implementation, demonstrating whether these instruments address rent extraction at its source. The research provides empirical grounding for European digital sovereignty debates, showing whether current governance frameworks promote competitive digital ecosystems or entrench dominant platforms. Results will be disseminated through LEAP’s established EC networks in DG CONNECT and DG COMP, directly informing ongoing policy consultations on data governance and platform regulation.

## References

**Johnson, Garrett A., Scott K. Shriver, and Samuel G. Goldberg.** 2023. “Privacy and Market Concentration: Intended and Unintended Consequences of the GDPR.” Management Science, 69(10): 5695–5721.