



Making SupTech Work: Evidence on the Key Drivers of Adoption

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What drives successful SupTech adoption?

- Financial supervision as an information-processing function
- Why are some supervisory authorities able to deploy SupTech solutions at scale, while others remain stuck at pilot stages?
- Dataset: 112 authorities across 97 countries
- 104 SupTech use cases, 13 supervisory domains
- Three maturity stages:
 - Proof of Concept
 - Working Prototype
 - Deployed Solution
- Methodological contribution: hurdle model

Major takeaways

- Larger authorities likely to initiate advanced projects
 - However, size alone does not explain deployment intensity
- The single strongest predictor is the existence of a dedicated SupTech unit
- Integrated strategies outperform isolated initiatives and also reduce challenges
 - a standalone digital strategy is insufficient.
 - a standalone data governance strategy is insufficient.
 - a standalone SupTech strategy is insufficient.

⇒ Governance + organization + infrastructure must align
- AI adoption requires scalable computing capacity, data architecture, and institutional control

Suggestions to strengthen the paper – Causality

- Strong correlations, but full causality remains difficult to establish
 - alternative explanation: more capable, better-funded, or more innovation-oriented authorities are simultaneously more likely to create SupTech units and adopt integrated strategies
- => Institutional quality may be driving both the independent and dependent variables.
 - cross-sectional data, survey-based, measured at a single point in time
 - whether integrated SupTech strategies *cause* deployment, or whether advanced authorities simply tend to adopt everything together
- Possible improvements:
 - introduce panel data across multiple survey waves
 - track temporal sequencing: strategy adoption → organizational restructuring → deployment outcomes
 - event-study or difference-in-differences where feasible
 - explore instrumental variables linked to exogenous digitalization shocks or regulatory reforms
 - include proxies for broader institutional quality, such as:
 - supervisory budgets, IT spending, public-sector digital maturity, governance indicators

Suggestions to strengthen the paper – Measuring effectiveness

- Authors measure breadth of adoption through the number of use cases and their maturity stage
- This implicitly assumes that: more SupTech tools = better supervisory capacity
- Some tools may be low-impact pilots, others may be deeply embedded and transformative:
 - deployment quality may vary enormously across jurisdictions.
 - a supervisor with 5 highly integrated AI tools vs. one with 25 fragmented applications.
- Moving from adoption metrics to outcome metrics
 - supervisory responsiveness, early risk detection, enforcement effectiveness, supervisory efficiency, financial stability outcomes.
 - measure reduction in reporting lags, improvement in anomaly detection, faster supervisory interventions, lower supervisory costs, improved bank risk metrics after SupTech deployment.
 - weighting use cases by operational importance, introducing qualitative scores
- Will enhance contribution to the literature than just asking “Who adopts SupTech?” towards “Does SupTech materially improve supervision?”

More suggestions

- Section 2: Evolution of financial supervision from an economic and policy perspective
 - Relevant literature should be on technology management
- Timing of survey: March 2025 or earlier, since data is from State of Suptech Survey 2024.
 - Only 5 deployed AI and 26 early stage AI
- Methodology: Discussion on the advantages of the hurdle model against Heckman selection regressions (1979)
- Treatment of central banks in aggregated areas: Financial stability vs. microprudential supervision?
- Design and Implementation challenges: A metric for the intensity of the challenge?
- Readability could be enhanced (i.e, Figure 3)

Final words...

- One of the first systematic global mappings of institutional SupTech adoption
- SupTech is not merely about isolated innovation and just digitizing supervision:
 - digital redesigning and transformation of supervisory institutions
- Technological capacity is increasingly becoming part of supervisory effectiveness
 - connects to the broader Basel Core Principles framework, especially through operational capability and institutional readiness