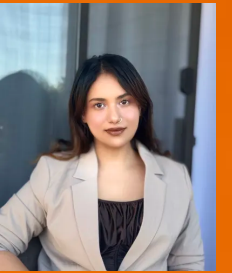




Patent Pivot: Examining the Impact of India’s Patents Amendment Act, 2005 Using SDID

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ABSTRACT

This study evaluates the causal impact of India’s Patents (Amendment) Act, 2005 using Synthetic Difference-in-Differences (SDID) approach. I construct a “Synthetic India” from countries with similar pre-reform IP regimes (Park Index). Findings reveal a significant post-reform increase (~3,266 additional applications annually), demonstrating that the reform spurred innovation while aligning India with global IP standards.

CONTEXT

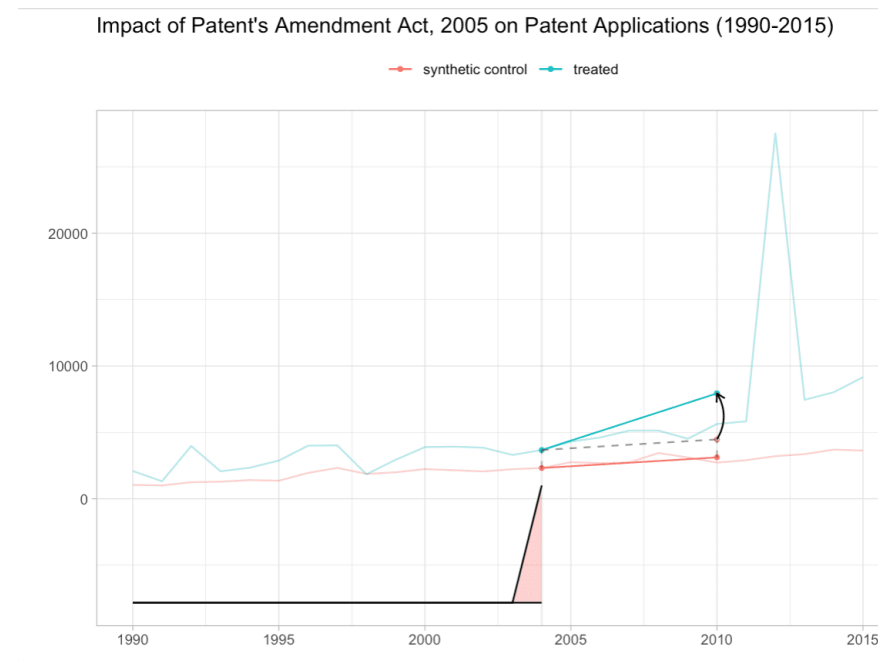
India emphasized on affordability, allowing only process patents (esp. in pharma) since 1970; this fostered generics but limited innovation. With WTO-TRIPS (1995), India faced pressure to strengthen IP protection and harmonize with global standards. The Patents (Amendment) Act, 2005 introduced product patents, harmonized patent terms, added transparency (publication/prosecution), and safeguards (e.g., Section 3(d) to prevent evergreening).

Data Source. WIPO IP Statistics, 1990–2015; Park Patent Rights Index for donor selection.

Research Method: SDID combines strengths of DID & Synthetic Control

Empirical Strategy: $Y_{it} = \mu + \alpha_i + \beta t + \tau W_{it} + \epsilon_{it}$, estimated with SDID unit/time weights; binary treatment assignment

RESULTS



- The 2005 Patents Amendment increased India’s annual patent applications by $\approx 3,266$ on average in the post-reform period.
- Synthetic Match Quality: 24 effective control economies (e.g., Venezuela, Iran, Morocco, Vietnam, Bangladesh) closely replicated India’s pre-2005 trend.
- Excluding countries with >5 missing years $\rightarrow$ results unchanged. Mexico was the only outlier control with moderate effect (likely confounding factors).
- Bootstrap distribution centered on point estimate with low variability.

ROBUSTNESS CHECK



CONCLUSION

Strengthen IP—keep the guardrails. (Mani 2021; Park 2008; Park & Lippoldt 2008)

Pair IP reform with R&D complements (Sattar & Mahmood 2011; Papageorgiadis & McDonald 2018)

Improve patent quality and exam capacity. (Mani 2021; Park 2008)

Sector focus where spillovers are high. (Mani 2021; Park & Lippoldt 2008)

Leverage regional heterogeneity. (Papageorgiadis & McDonald 2018; Sattar & Mahmood 2011)

Measure, monitor, and iterate. (Arkhangelsky et al. 2021; Abadie et al. 2010; Abadie et al. 2014)

ABSTRACT

COMMENT

REFERENCES

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