

# Impact of a free legal search on rule of law: evidence from Indian Kanoon

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# Overview

**Can digital platforms offering free legal information improve the performance of courts and the justice system more broadly?**

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- Indian Kanoon: free, accessible, and searchable platform offering legal information
- We estimate the impact of Indian Kanoon on cases, courts and firms
- Event-study framework: exploit staggered rollout across India
- Data from Kanoon, eCourts DC, eCourts HC, Prowess, AIR

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**Main hypothesis:** The release of Kanoon brought a sudden, substantial and entirely exogenous reduction in the cost of searching for legal information in India

# Preview of Results

## **District Courts**

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- No effect on backlog and disposition time
- No effect on % of cases appealed, appeals less likely to be overturned

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## Large Formal Firms

- Firms involved in cases: income ↗ 51%, assets ↗ 64%, expenditures ↗ 55%
- All firms: Smaller but similar effects
- Effects driven by manufacturing and financial sectors

⇒ Free legal information reducing information frictions for firms

## Related Literature

**Functionality of the legal system and economic development** - Djankov et al. 2003; Ponticelli and Alencar 2016; Lichand and Soares 2014; Visaria 2009; Kondylis and Stein 2018; Chemin 2020

⇒ Large-scale examination of this relationship

**Information search cost and efficiency of decision-making** - Stigler 1961; Diamond 1971; Varian 1980; Goldfarb and Tucker 2019

⇒ Focus on the accessibility of legal information

**Information friction costs for firms** - Bloom, Eifert, et al. 2013; Bloom, Manova, et al. 2021; Guillouet et al. 2021

⇒ Impact of reduced information friction on large firms' balance sheets



# Background

- IndianKanoon, a free search engine for Indian law, was launched on 4 January 2008.
- Effort was led, implemented and managed by Sushant Sinha, a graduate student at U of Michigan
- No coordination with the government or any private firm
- Two goals:
  - Improved access to information: keyword searches
  - Ease of interpretation of laws: laws versus judgements, legal documents are broken down into clauses

# Timeline

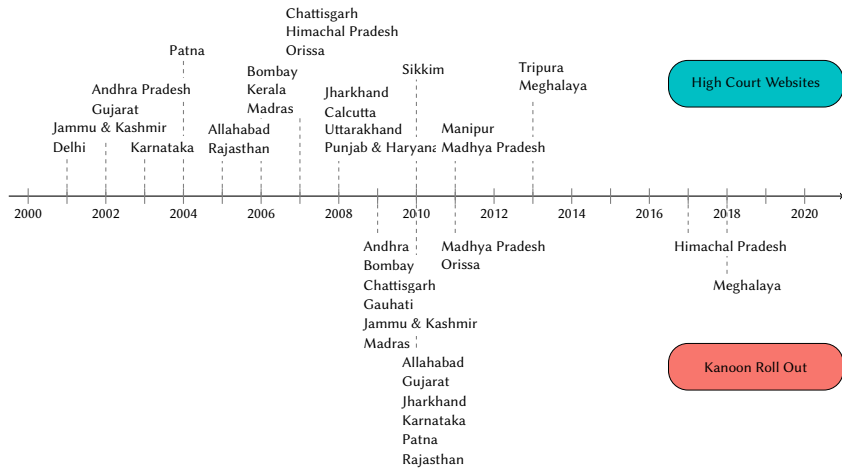


Figure: Roll Out Years for High Court Websites (top) and Kanoon (bottom)

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- High courts: 6,414,378 cases
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- Large formal firms, represent 70% of India's industrial output
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## **Prowess firms database**, 1979-2020

- Large formal firms, represent 70% of India's industrial output
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## **All-India Reporter**, 2005–2015

- Identify important cases

# Event Study Framework

Estimating at the court-year-month level:

$$Y_{cym} = \alpha + \beta \text{Kanoon}_{cym} + \gamma_c + \delta_y + \eta_m + \varepsilon_{cym} \quad (1)$$

$Y_{cym}$ : observed outcome of court  $c$  in year  $y$  and month  $m$

$\text{Kanoon}_{cym}$ : dummy = 1 if Kanoon rollout of court  $c$  happened before year-month  $ym$

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Standard errors are clustered at the high court-level.

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For **dynamic effects** and testing for **pre-trends**:

$$Y_{cym} = \alpha + \sum_{j=-4}^5 \beta_j \text{Kanoon}_{c,y+j,m} + \gamma_c + \delta_y + \eta_m + \varepsilon_{c,y,m} \quad (2)$$



# Econometric Concerns (and solutions)

## **Was Kanoon really exogenous?**

- The architect was overseas with no links to the Indian state
- The rollout was independent of the launch of high court websites
- The eCourts web hosting program was launched after the years of our study

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Are there **heterogenous treatment effects**? Kanoon affects each court differently?

- Estimators from Sun and Abraham (2020), De Chaisemartin and d'Haultfoeuille (2020), and Callaway and Sant'Anna (2021)

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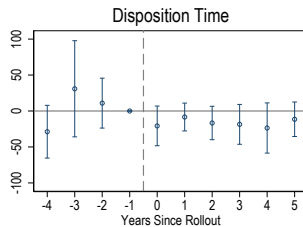
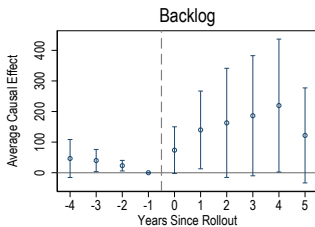
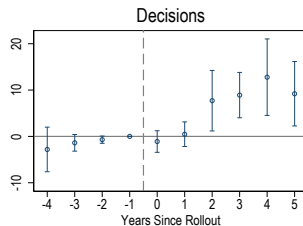
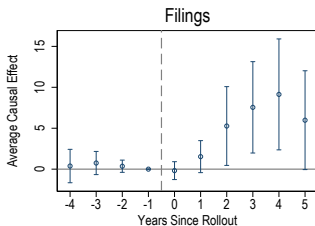
## Robustness

- Test for parallel trends in a dynamic model
- Placebo tests as in De Chaisemartin and d'Haultfoeuille (2020)

## District Courts: Increased Access to Justice

	Filings (1)	Decisions (2)	Backlog (3)	Disposition Time (4)
Post-Kanoon introduction	6.292*** (1.973)	8.506*** (2.592)	115.912 (78.257)	-7.996 (19.326)
Mean Dep. Var.	16.291	11.366	518.251	30.828
Observations	2,244	2,244	2,244	1,946
Year FE	✓	✓	✓	✓
Month FE	✓	✓	✓	✓
State FE	✓	✓	✓	✓

# District Courts: delayed increase in filings and decisions



# District Court Cases Appealed in High Courts

	(1) Appeals	(2) % Appealed
Post-Kanoon introduction	.051** (.021)	.0021 (.0023)
Year FE	✓	✓
Month FE	✓	✓
State FE	✓	✓
Mean Dep. Var.	.1	.00659
Observations	1,716	1,716

► Dynamic Effects

► Robustness

## Appeal Cases more often Withdrawn, less often Overruled

	<u>% of Appeals</u>	<u>% of Admitted</u>	<u>% of Disposed</u>	
	(1)	(2)	(3)	(4)
	Admitted	Disposed	Withdrawn	Overruled
Post-Kanoon introduction	-0.0044 (.032)	-0.00044 (.00038)	.022** (.0093)	-.13*** (.031)
Year FE	✓	✓	✓	✓
Month FE	✓	✓	✓	✓
State FE	✓	✓	✓	✓
Mean Dep. Var.	.81	.999	.0852	.247
Observations	1,288	1,276	1,276	1,276

▶ How appeals work

▶ Dynamic Effects

▶ Dynamic Effects Robustness

▶ Raw Effects

▶ Raw Effects Robustness

# High Courts: Less Filings and Decisions, higher Backlog

	Filings (1)	Decisions (2)	Backlog (3)	Disposition Time (4)
Post-Kanoun introduction	-1.444*** (0.470)	-1.063*** (0.300)	25.919*** (9.289)	-0.117 (1.015)
Mean Dep. Var.	3.394	2.621	82.706	0.915
Observations	1,812	1,842	1,848	1,842
Year FE	✓	✓	✓	✓
Month FE	✓	✓	✓	✓
State FE	✓	✓	✓	✓

► Dynamic Effects

► Robustness

► Filings by Case Type



# Firms: Increase in Income, Assets and Expenditures

	(1) Income	(2) Assets	(3) Expenditures	(4) Legal Charges
<b>Panel A: Partial Equilibrium</b>				
Post-Kanoon introduction	5.863*** (1.394)	13.965*** (2.652)	6.003*** (1.340)	0.005*** (0.001)
Mean Dep. Var.	11.48	21.85	11.01	0.01
Observations	15,081	15,081	15,081	14,399
<b>Panel B: General Equilibrium</b>				
Post-Kanoon introduction	2.834*** (0.710)	6.582*** (1.589)	2.940*** (0.689)	0.006*** (0.001)
Mean Dep. Var.	6.54	12.55	6.22	0.01
Observations	58,586	58,586	58,586	55,693
Year FE	✓	✓	✓	✓
Firm FE	✓	✓	✓	✓

# Summary

**Can digital platforms offering free legal information improve the performance of courts and the justice system more broadly?**

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- Event-study framework, exploiting staggered rollout
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### Key insights on the **impact of Indian Kanoon**:

- Increased filings and decisions in district courts
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- Decreased filings and decisions in high courts
- Large positive impacts on firm balance sheets

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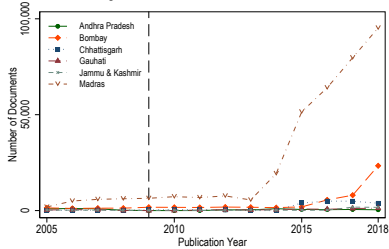
**Digital platforms can have a transformative role in fostering free legal search and subsequently bolstering economic development**

Comments & Suggestions?  
[peter.neis@tse-fr.eu](mailto:peter.neis@tse-fr.eu)

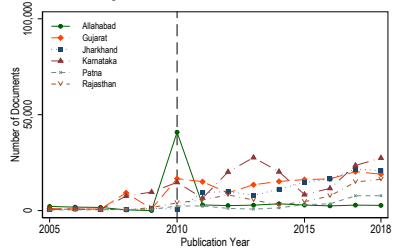
	N	Mean	SD	Min	Max
<i>eCourt High Courts Data (Case Level)</i>					
Resolved Cases	11,894,096	0.76	0.43	0	1
Resolved within 1 year	11,894,096	0.50	0.50	0	1
<i>eCourt High Courts Data (State-Month Level)</i>					
Number of Filings (Thsd.)	5,006	2.76	3.43	0.00	54.84
Decided cases (Thsd.)	4,853	2.14	3.76	0.00	182.75
Pending cases (Thsd.)	5,292	452.14	473.52	0.20	2,602.00
Backlog cases (Thsd.)	4,691	28.68	48.42	0.00	438.30
Mean age of Pending cases (Years)	4,979	0.04	0.01	-0.00	0.08
Mean age of Decided cases (Years)	4,853	1.37	1.28	-12.00	10.50
Disposition time (Years)	4,853	16.74	99.31	0.01	1,455.06
Clearance rate	4,853	0.01	0.10	0.00	5.83
<i>eCourt District Courts Data (State-Month Level)</i>					
Number of Filings (Thsd.)	6,500	11.92	21.27	0.00	217.72
Decided cases (Thsd.)	5,259	10.96	22.17	0.00	354.24
Pending cases (Thsd.)	6,612	396.59	714.21	0.00	5,286.06
Backlog cases (Thsd.)	6,612	301.64	568.18	0.00	4,123.98
Mean age of Pending cases (Years)	6,612	3.78	1.44	0.60	7.85
Mean age of Decided cases (Years)	5,259	2.13	1.48	0.00	21.70
Disposition time (Years)	5,259	22.73	99.03	0.00	2,541.55
Clearance rate	5,259	0.53	0.51	0.00	7.76

# Number of Documents on Indian Kannon per Publication Year and HC

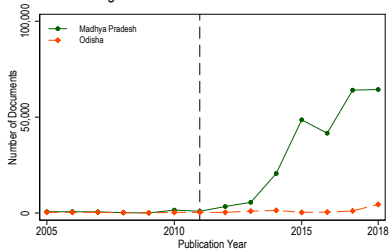
High Courts with Kannon-rollout in 2009



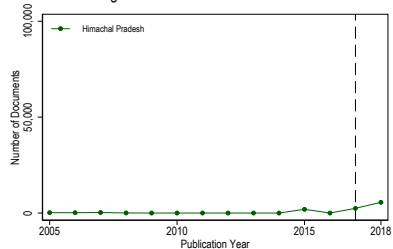
High Courts with Kannon-rollout in 2010



High Courts with Kannon-rollout in 2011

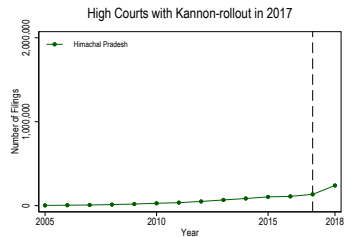
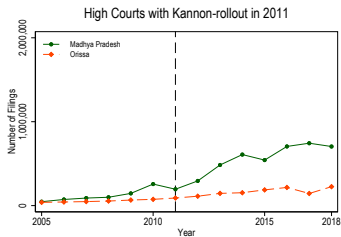
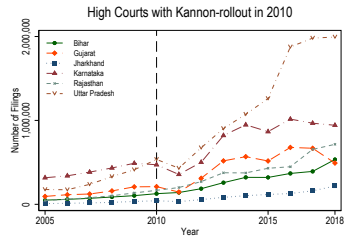
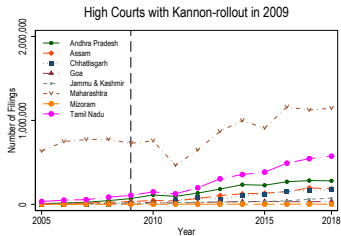


High Courts with Kannon-rollout in 2017

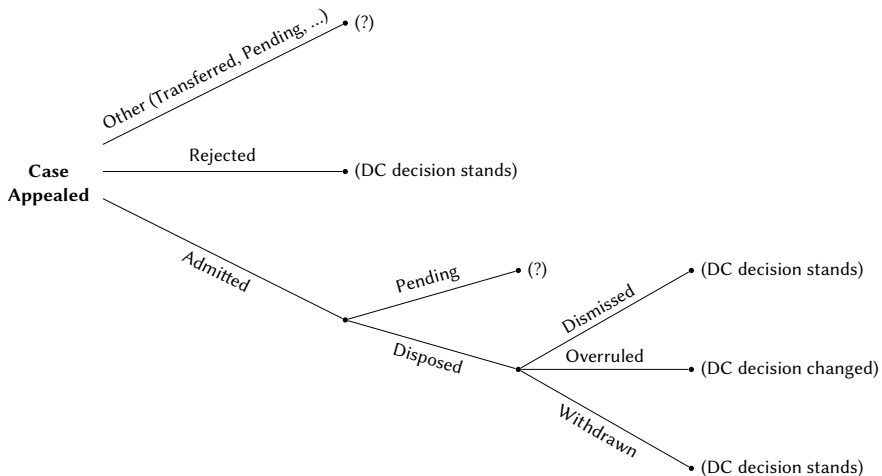




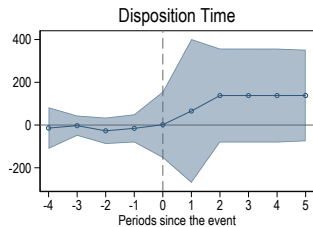
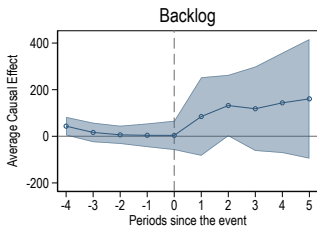
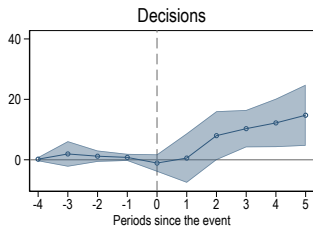
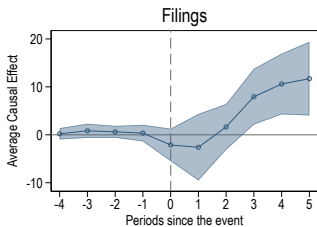
# Number of Filings in District Courts by Year and State



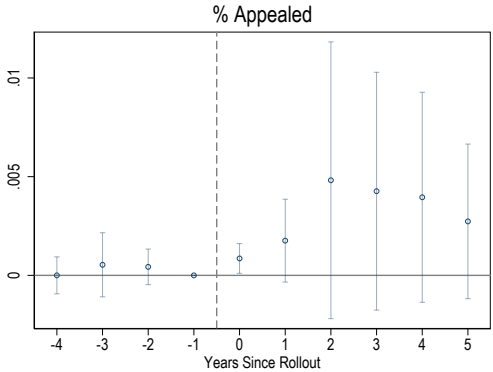
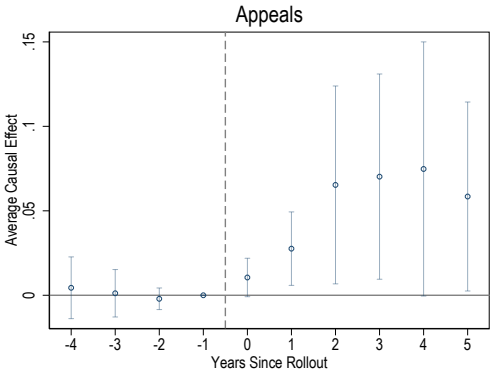
# Decision Tree of District Court Appeals in High Courts



# District Courts: de Chaisemartin and D'Houltfoeuille (2020)

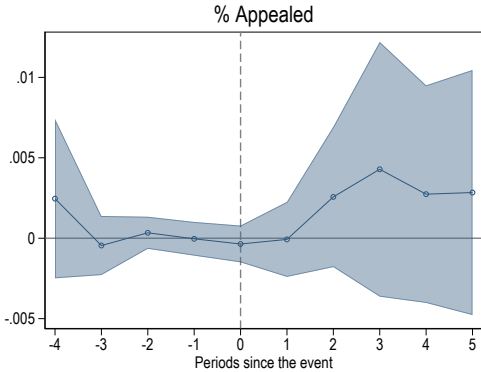
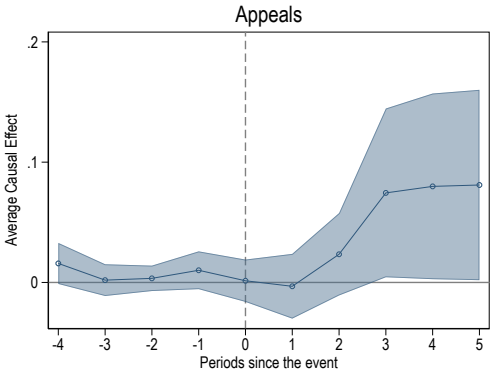


# Appeals: Dynamic Effects



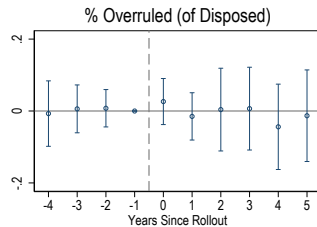
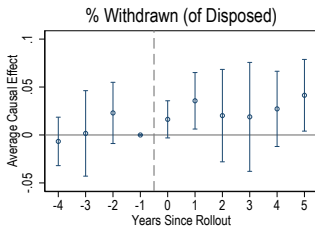
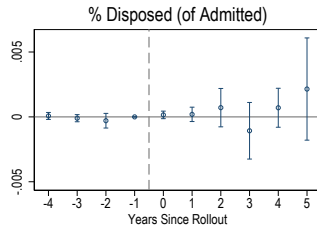
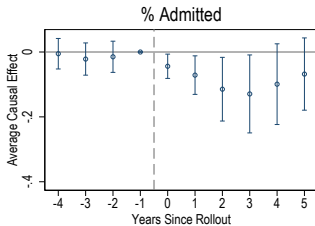
▶ Back

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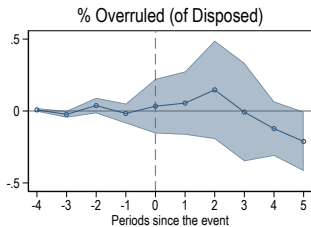
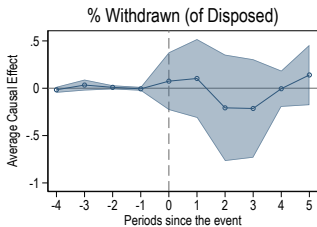
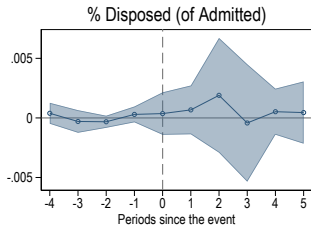
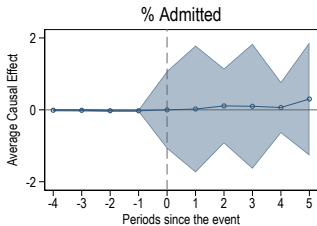


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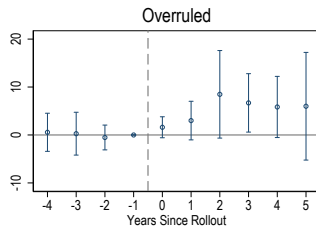
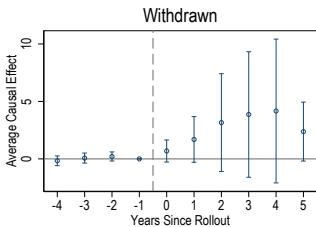
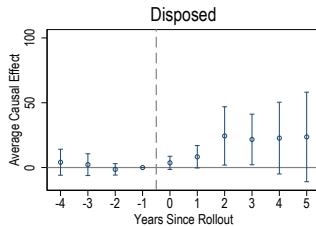
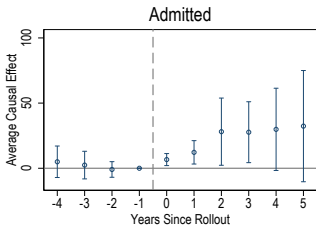
# Appeals: Dynamic Effects



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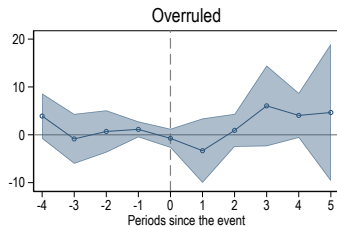
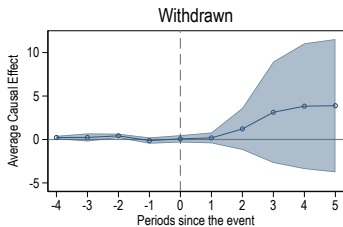
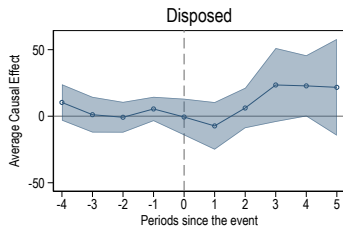
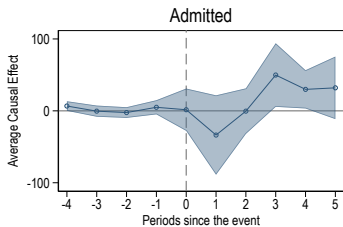


# Appeal Count: Dynamic Effects

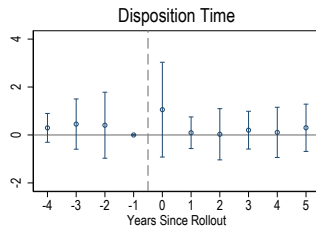
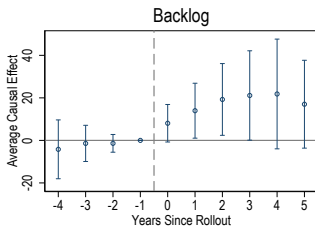
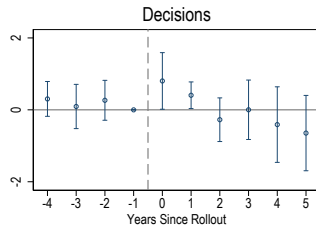
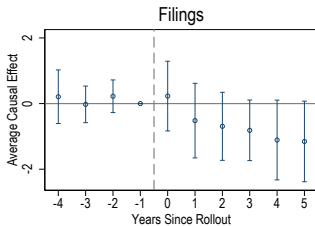




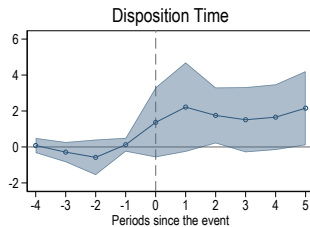
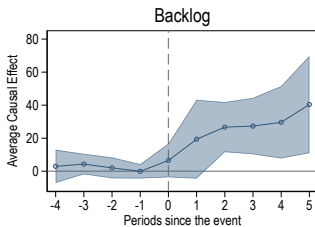
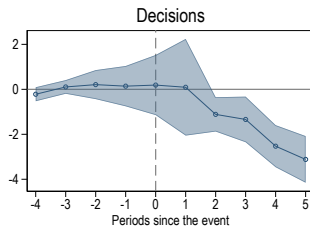
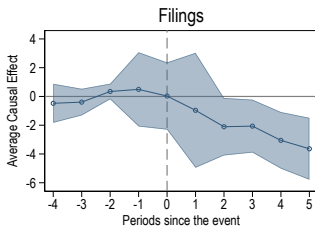
# Appeal Count: de Chaisemartin and D'Houltfoeuille (2020)



# High Courts: Dynamic Effects



# High Courts: de Chaisemartin and D'Houltfoeuille (2020)



## High Courts: Reduction in filings driven by civil cases

	Number of Filings of Case Type (in thsd)				
	(1) Criminal	(2) Civil	(3) Writ	(4) Appeal	(5) Other
Post-Kanoon introduction	0.067 (0.183)	-0.873*** (0.153)	-0.135 (0.109)	0.004 (0.004)	-0.481* (0.263)
Court FE	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
Month FE	✓	✓	✓	✓	✓
Mean Dep. Var.	0.81	1.04	0.53	0.08	1.07
Observations	1,812	1,812	1,812	1,812	1,812

## Event Study Framework for Firms

$$Y_{fcy} = \alpha + \beta \text{Kanoon}_{fcy} + \delta_y + \eta_f + \varepsilon_{fcy} \quad (3)$$

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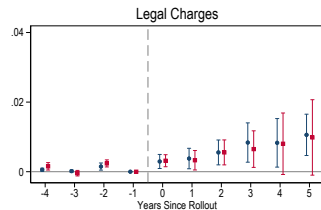
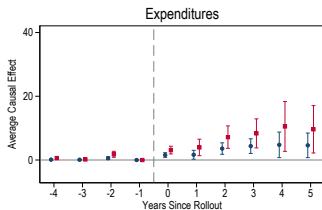
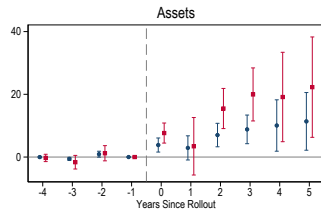
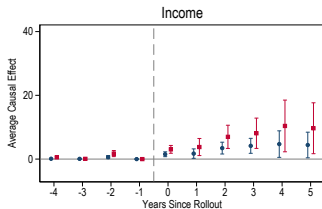
$\text{Kanoon}_{fcy}$ : dummy variable = 1 if financial year  $y$  began after court  $c$ 's Kanoon rollout

$\delta_y$ : financial year fixed effects

$\eta_f$ : firm fixed effects

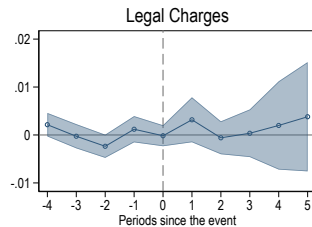
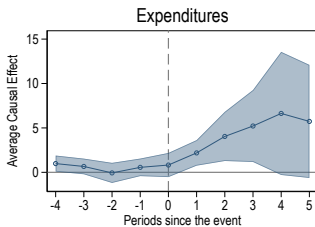
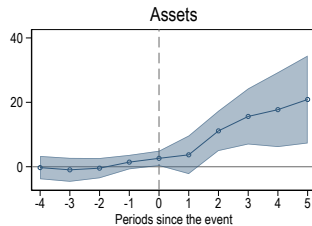
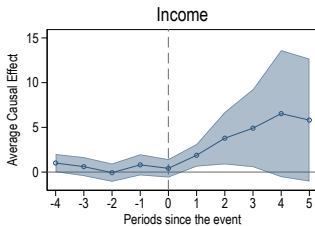
▶ Back

# Firms:

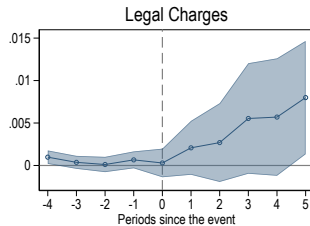
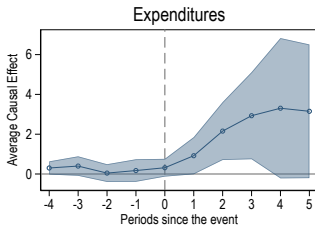
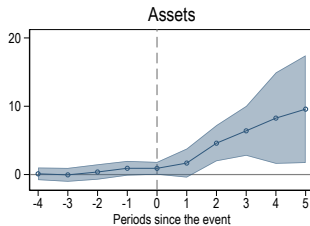
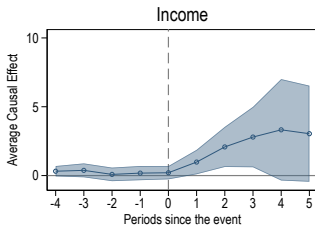


● General Equilibrium    ■ Partial Equilibrium

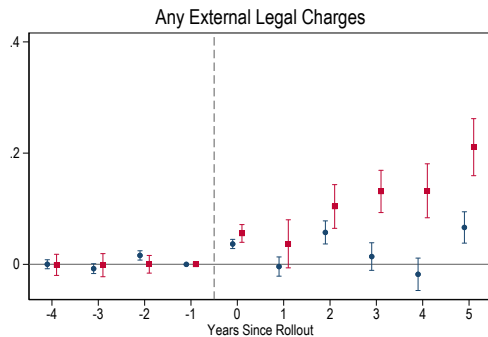
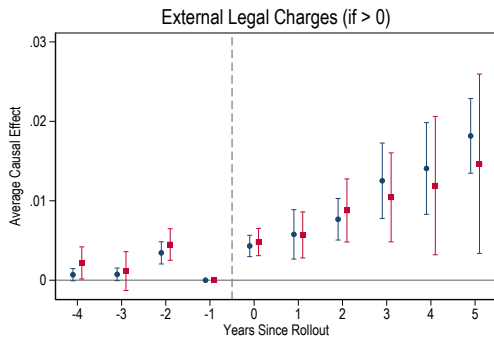
# Litigating Firms: Robustness



# All Firms: Robustness



# Firms: Legal Charges go up



• General Equilibrium    ■ Partial Equilibrium

▶ Back

# Firms: Impact by Sector

	(1)	(2)	(3)
	Income	Assets	Expenditures
<b>Panel A: Manufacturing Sector</b>			
Post-Kanoon introduction	6.067*** (1.820)	5.547*** (1.552)	6.005*** (1.788)
Mean Dep. Var.	10.28	8.77	9.92
Observations	24,090	24,090	24,090
<b>Panel B: Financial Sector</b>			
Post-Kanoon introduction	2.119*** (0.192)	19.608*** (2.387)	1.854*** (0.163)
Mean Dep. Var.	2.88	25.98	2.52
Observations	12,199	12,199	12,199
<b>Panel C: Other Sectors</b>			
Post-Kanoon introduction	0.121 (0.230)	0.377 (0.564)	0.586** (0.236)
Mean Dep. Var.	4.39	7.48	4.17
Observations	22,297	22,297	22,297
Year FE	✓	✓	✓
Firm FE	✓	✓	✓