

Building Courts

Effects on Access to Justice and Economic Development

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Economic development & legal institutions are associated



A 20% increase in case speed is associated with a 10% higher GDP per capita
(Penn World tables)

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a major factor in Taliban's rise was their promise of speedy dispute resolution (Acemoglu, et al. 2020)

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Contract enforcement and economic development

- Suppose a firm contracts with a supplier to produce a customized good
 - Once the supplier has sunk the investment costs to produce the customized good, the buyer can renegotiate prices down
 - The supplier can sue in court, but typically recovers a fraction
 - NPV of recovery decreases with court delay
 - supplier effort $e \in [0, 1]$ yields output A with prob $\sqrt{e}$
 - with court delay, production function is: $(p\beta^T - I)A\sqrt{e} - e$

$$Y_i(t) = F\left(K_i(t), \left(p\beta^T - I\right) L_i(t)\right)$$

- Slow courts depress productivity (Boehm and Oberfield 2020)
 - “A manager who cannot rely on courts for timely and cheap enforcement may need to purchase low-quality substitutes from her cousin, vertically integrate the production process, or switch to a different technique altogether that avoids the bottleneck input. Regardless of the chosen alternative she will find herself producing at a higher cost.”
 - distortions alter production choices; build along supply chains
 - affects aggregate productivity relevant on the macro scale

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- Enforcement of contracts is critical for relationship-specific investments (RSI)
- RSI essential for complex supply chains, development of a modern economy
- One solution = Courts enforcing contracts
- Countries with RSI and complex manufacturing also have functioning legal systems
 - Is it causal?
 - If we build a court somewhere, RSI ↗? Modern economy?

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- \$120 Million World Bank reform building courts in Kenya
- Use plausibly exogenous delays in construction of some courts:
 - Adverse weather conditions
 - Unsuitable ground conditions on site
 - Building contractors delays
 - Slow release of funds
- Parallel trends

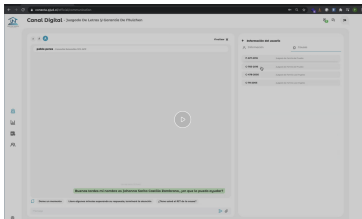
- We use administrative data on every case going through the courts every day in Kenya ($N = 9$ million)
- Restrict sample to courts completed and not yet completed
- Staggered introduction design

Preview of Results

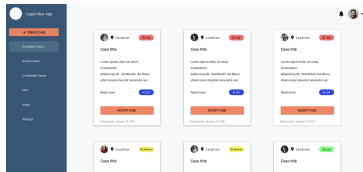
- More cases filed
 - Civil, commercial (contract), succession, property
- New courts are faster, better, safer
- Perception of courts improve
- More investment by firms in RSI-intensive sectors
- More private ownership

- Emerging modern literature on law and development:
 - Mehmood 2022, Rao 2022, Amirapu 2021, Boehm and Oberfeld 2020, Lichand and Soares 2014, Ponticelli 2016, Chemin 2020, Visaria 2009, Aberra and Chemin, 2021
- Our paper is the first to use construction delays of new courts
 - Important for econometric analysis
 - Important for policy recommendation: extending the reach of regular courts

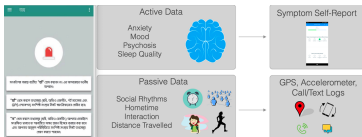
WhatsApp access to virtual courts



Uber-ization of case backlog



Apps for missing cases



Metaverse

Colombia court moves to metaverse to host hearing

By Isabel Woodford • February 24, 2022 3:08 PM GMT+1 • Updated 2 months ago



Court Building Program

Isiolo



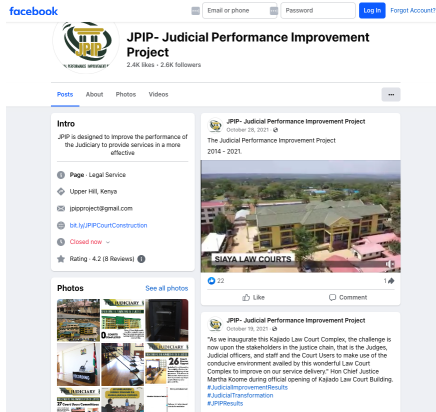
Kakamega



Chuka



Mechanisms for Information Transmission



National Council on Administration of Justice (NCAJ) stipulates that Court-User Committees must:

- top three priorities include case backlog & negative perceptions of the justice system
- promote awareness of its activities through regular media briefs & organize CUC outreach

- Violent ethnic conflicts 2008: 1200 deaths, 600,000 displaced
- Opposition contested 2007 election results
- Party leaders refused to file a case in court: biased
- Instead take dispute to the streets
- Following this:
 - Main parties formed coalition government
 - New constitution 2010: independent judiciary, “one court in each county”
 - World Bank provided financial support

- “Courts were extremely dilapidated and condemned due to huge cracks on the walls and as such they were demolished and constructed as new” (p.11)
- “The new court buildings provide a conducive and dignified space for both staff and court users including members of the public and those incarcerated. The buildings have ICT infrastructure incorporated, spacious court rooms, secure registries, separate cells for men, women and juveniles, customer waiting areas and service bays, consultation rooms for advocates and clients, lactating rooms for staff and public, ramps for physically challenged persons. The Project has also purchased furniture for all the new courts.” (p.9)
- Source: “Draft Implementation Completion Report - JPIP”

- Sites selected for good reasons
- But construction delays:

- Nyamira, Vihiga and Chuka: heavy rains in 2017:
 - p.3, 2018: FINAL REPORT by Auditor-General (English)
- Wajir: adverse weather delayed delivery of materials in 2018:
 - 2017/18 JPIP Workplan

Unsuitable Ground

- Oyugis: “extremely sloped: complicated construction process”
- Nakuru:
 - Weak soil
 - Change the strip foundation to a raft foundation
 - “A stronger foundation consisting of a concrete slab that extends over the entire loaded area to reduce the stress of larger loads, to support the weight of the structure”
 - Delay in 2017, disagreements over the change in construction cost
- Garissa:
 - Weak soil
 - Contractors stopped work when 70% done
 - “They took issue with the significant amount of money, about 40 million Kenya shillings, that had been poured into the foundation when changing from strip to raft foundation, indicating that they could not continue work until they were compensated for this amount.”

Contractor delays

- Nyamira court:
 - Contractor lost family member
- Oyugis:
 - Contractor fell ill, absent for a year
- Chuka, Nyando, and Tamu courts:
 - Shared a contractor, overwhelmed by managerial and financial project load
- Kibera:
 - Suspicion of misuse of funds, termination after lengthy process
- Kakamega and Mukurweini:
 - Insufficient number of workers employed
- Maralal (but not Engineer, Kigumo, and Makindu):
 - Contractor lacked technical expertise
- Nanyuki:
 - Resettlement of tenants
- Kapenguria and Voi:
 - Small size of plots made it difficult to store materials

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Slow Release of Funds

- World Bank $\Rightarrow$ National Treasury $\Rightarrow$ Contractors
 - Engineer, Siaya, and Voi: 2017
 - Garissa, Oyugis, Isiolo, Siaya, Voi, Kakamega, Nanyuki, Kibera, Nakuru, Nyamira, Ol Kalou, Maralal, Vihiga, Wajir, Kapenguria, Makueni, Chuka: 2018
- Rule:
 - Contractors must advance funds, complete the work, send an invoice and be compensated
 - Only some contractors had financial capacity
 - Gracan Construction Ltd, Makindu: Yes
 - Mombasa, Maralal: No

- Some courts are completed
- Other experience delays
 - Adverse weather conditions
 - Unsuitable ground conditions
 - Building contractor operational delay
 - Release of funds by the National Treasury
- Compare courts completed to courts not completed

- Relationship-specific investment
 - Buyer asks Seller to produce customized input...
- Solution: file a case in court if:

$$p\beta^T \geq c \quad (1)$$

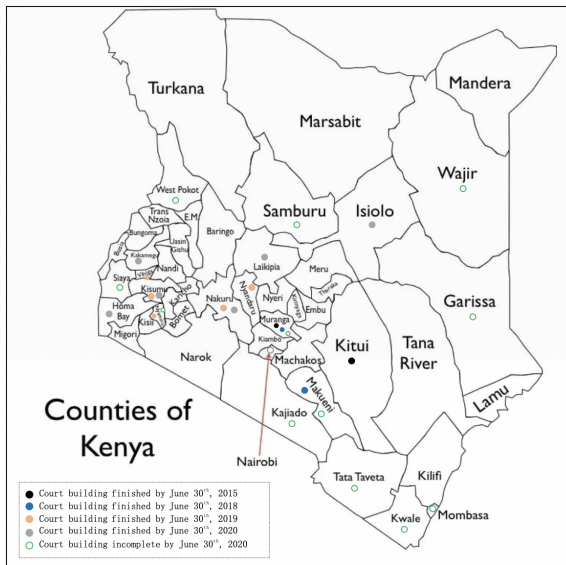
- New courts:
 - $c \searrow?$ $p \nearrow?$ $T \searrow?$
 - Incentives to file a case?
 - Investment?

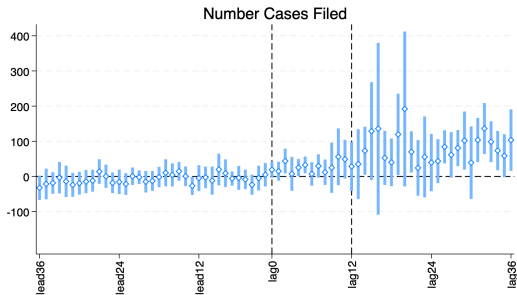
- If $\max_e (p\beta^T - c)A\sqrt{e} - e$, then $e^* = \left(\frac{(p\beta^T - c)A}{2}\right)^2$

Data

Data

- Administrative data Kenyan judiciary on every case going through the courts every day in Kenya
 - Daily Court return Template, DCRT
 - Total sample size of $N=9,052,199$ observations from October 2015 to March 2021





- Each dot is a regression coefficient of #cases filed in a month
- Dataset is restricted to the planned courts (built or delayed)
- Leads are not significant before the courts are built
- Differences emerge more strongly after one year

$$\begin{aligned}
 \text{NumberFiled}_{cd} = & \beta_0 + \beta_1 \text{CompletedCourt} - \text{LongRun}_{cd} \\
 & + \beta_2 \text{CompletedCourt} - \text{ShortRun}_{cd} \\
 & + \beta_3 \text{CompletedCourt} - \text{Before}_{cd} \\
 & + \alpha_c + \gamma_d + \varepsilon_{cd}
 \end{aligned}
 \tag{1}$$

CompletedCourt_LongRun = 1 one year after the court is completed

CompletedCourt_ShortRun = 1 in the first year after the court is completed

CompletedCourt_Before = 1 a year before the court is completed (pre-trends)

c: court

d: day (exact timing)

- Control group =
 - Before courts are completed
 - Courts not yet completed due to exogenous delays
- Control group $\neq$ Rest of the country

- Staggered Introduction Design:
 - Gardner (2021); Borusyak et al (2022)
- Dataset is large:
 - $N=9,052,199$
 - $N=33,602$ daily level AND sample: courts completed vs not yet
 - But ultimately comes from 29 courts
- ① Exact Fisher test (Young 2018)
 - Does not assume large sample as in t-test
- ② Wild Cluster Bootstrap

	(1) Number Filed
Completed Court - Long Run	3.15** (1.51)
Robustness Checks:	
2 Stage DID	2.20** (0.90)
DID imputation	2.36*** (0.69)
Fisher (p-val)	(0.04)**
Wild-Cluster Bootstrap (p-val)	(0.015)*
Completed - Short Run	1.38*** (0.48)
Completed - Before	0.61 (0.46)
Control Group mean	4.57
Observations	33602

- 60% more cases being filed per day

Results

- What type of case?

Results

- More cases filed
 - In line with the model
 - But clog the courts?

	(1)	(2)	(3)
	Time to Disposition	Number Judges	Time to Disposition
<i>CompletedCourt</i> ¹⁺	-119.2* (59.9)	0.48*** (0.13)	-140.5** (58.9)
<i>CompletedCourt</i> ⁰	-13.5 (52.1)	0.13 (0.15)	-19.4 (49.7)
<i>CompletedCourt</i> ⁻¹	-17.6 (50.3)	0.19 (0.15)	-22.6 (53.0)
Number Judges			38.3** (16.6)
Control Group mean	483.6	1.92	483.6
Observations	125245	33602	125245

- 25% reduction in case duration
- Modern courtrooms, registries, waiting areas, and accessibility features for disabled individuals as articulated in the project's description can create an environment that enhances judicial state capacity

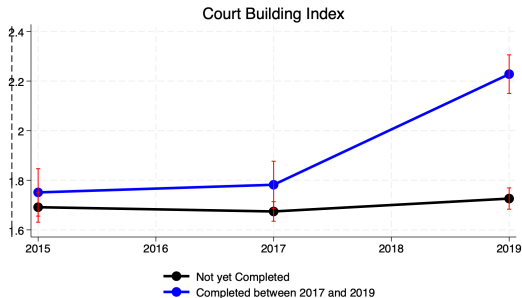
Effects On Quality of Decisions and Cases

	(1) Number Filed Civil Appeals	(2) Number Filed Criminal Appeals	(3) Number Cases Dismissed
<i>CompletedCourt</i> ¹⁺	-0.24 (0.18)	0.096 (0.17)	0.065 (0.46)
<i>CompletedCourt</i> ⁰	-0.14 (0.099)	0.062 (0.12)	0.12 (0.41)
<i>CompletedCourt</i> ⁻¹	-0.18 (0.12)	-0.16* (0.094)	-0.14 (0.34)
Control Group mean	0.31	0.44	1.03
Observations	33602	33602	33602

- no increase in appeals, either civil or criminal
- no increase in summary dismissals/struck out

Results

- Effects on court user satisfaction?
 - Court User Satisfaction Surveys in 2015, 2017, and 2019
 - Questions on court building
- Same analysis:
 - Sample restricted to courts completed AND not yet completed
 - $\text{CompletedCourt} = 1$ if completed (by 2017 or by 2019)



Treatment group = courts completed between 2017 and 2019

- 2015 to 2017 = pre-trends
- Control group = not yet completed

Effect on Access to Justice

	(1) Primary Education Parties
Completed Court	0.16** (0.07)
Observations	1,519
Year FE	YES
Court FE	YES
Mean Control Group (SD)	0.42 0.49

- 42 $\implies$ 58%, much more in line with Kenya's average
- Transforms the courts to being nationally representative

Summary

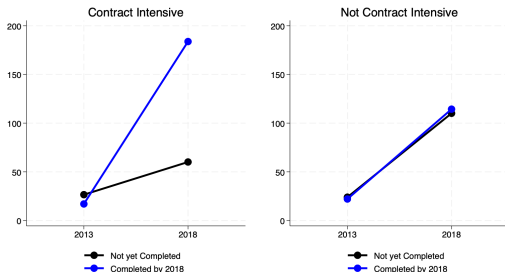
- Cost $c \searrow$
- Satisfaction $\simeq$ Court quality $p \nearrow$
- Time $T \searrow$
- $\implies p\beta^T \geq c \nearrow$
- More cases filed (commercial, succession)

- World Bank Enterprise Surveys: 2013 and 2018
- GPS, perception of courts, investment
- Firm is treated: CompletedCourt=
 - 1 if in a radius of 50km from a completed court by 2018
 - 0 if in radius of not yet completed court
- 50 km?
 - Can travel
 - Results the same with other ▶ radii
- Control group:
 - $\neq$ Rest of country
 - = firms in 50km of a court not yet completed by 2018

	(1)	(2)	(3)	(4)
	Perception Courts	Investment All firms	Investment Contract Intensive	Investment Not Contract Intensive
Completed court * 2018	0.23* (0.13)	67.16* (36.85)	158.50*** (60.55)	7.52 (50.68)
Completed court	0.14 (0.10)	-7.63 (8.93)	-9.42 (11.23)	-6.83 (11.77)
Observations	1,348	566	254	306
Year FE	YES	YES	YES	YES
Mean Dep Var (SD)	2.237 0.964	178.8 859.3	171.2 1094	189.3 604.2

- results consistent with court building being well known by firms
- 37% increase in investment
- a total added investment by the 1500 surveyed firms of USD 100 million, more than the costs of this program (USD 45.5 million)

Effects of Court Completed on Capital Stock per Worker



- Use Nunn (2007) QJE
- Proportion of inputs (not) sold on internationally organized exchanges
 - If sold, input is generic (poultry processing, flour production, petroleum refining, corn milling, and oilseed processing)
 - If not, input is specific (automobile, aircraft, computer, and electronic equipment manufacturing)
- Use input-output BEA table (US) (Rauch 1999)
- Above median proportion = Contract Intensive

- Recall that: $\max_e (p\beta^T - c)A\sqrt{e} - e$, then $e^* = \left(\frac{(p\beta^T - c)A}{2} \right)^2$
- Doubling of cases filed
 - $\simeq$ doubling of $p\beta^T - c$
- We find: doubling of investment ($\leq *4$)
- Effect over 5 years, from 2013 to 2018
 - Corresponds to 18 percent annual growth rate in investment

- More succession cases filed in court
 - To officially transfer the land, one has to file a proper succession case in court
 - Big issue: most people do not do that $\implies$ land never officially transferred $\implies$ no title $\implies$ insecurity of property rights $\implies$ less investment
- We use:
 - 2015/16 Kenya Integrated Household Budget Survey (KIHBS)
 - 2019 Kenya Continuous Household Survey (KCHSP)
- One question in common: own dwelling?

Effects of Court Completion on Property Rights

	(1) Own Dwelling?
Completed Court	0.035** (0.015)
Control Group mean	0.71
Observations	29082
County FE	YES
Year FE	YES

- CompletedCourt:
 - = 1 in 2019 AND in county with completed court by 2019
 - = 0 in county with court not yet completed

Conclusion

- After new courts are built:
 - More cases in court: civil, commercial, succession, property
 - Firms engaged in RSI sectors invest more
- Not obvious:
 - Legal experts: “We know how to do a lot of things, but deep down we don’t really know what we are doing” (Carothers)
 - Other ways to address ex-post renegotiation risk (vertical integration, repetition, reputation, relational contracts)
- Douglas North (Nobel prize 1993):
 - The absence of low-cost means of enforcing contracts is “the most important source of both historical stagnation and contemporary underdevelopment in the Third World”

Thank you

- Chief Justice: Mr. Justice David Maraga
- Kenyan judiciary: Chief Registrar, Ms. Anne Amadi, the Chair of Administration of Justice and Performance Management Committee, Hon Justice Agnes Murgor, assistant directors Mr. Fredrick Ombwori, Mr. Dominic Nyambane, Dr. Moses Maranga, Mr. Joseph Osewe, and Gilbert Kirui
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- Financial Support: Social Sciences and Humanities Research Council Canada, International Growth Center, World Bank's Research Support Budget

Other type of cases

	(1) Personal Injury	(2) Family	(3) Other Civil
Court - LR	0.35** (0.14)	-0.025 (0.049)	-0.28 (0.19)
Court - SR	0.20* (0.11)	-0.052 (0.033)	-0.21 (0.13)
Court - Bef	0.14** (0.057)	-0.023 (0.025)	-0.22* (0.12)
Control	0.14	0.095	0.36
Obs.	33602	33602	33602

[illegible]

► Back

Parallel Trends Court Satisfaction

- Pre-trends test for courts completed in 2019
 - Recall year of completion can be 2017 or 2019
- Two missing variables in 2015

	(1) Court rooms safe	(2) Court building easy to find	(3) Easy to locate court rooms	(4) Registry space is adequate
Completed Court - Before	-0.08 (0.20)	-0.12 (0.17)	-0.17 (0.17)	0.09 (0.24)
Completed Court	0.29* (0.15)	0.18 (0.18)	0.24 (0.17)	0.57** (0.23)
Observations	3,912	4,008	3,980	3,514
Year FE	YES	YES	YES	YES
Court FE	YES	YES	YES	YES
Mean Dep Var (SD)	1.90 0.85	2.01 0.84	1.93 0.83	1.43 0.93

	(5) Waiting area	(6) Facilities for disabled	(7) Court Building Index
Completed Court - Before	-0.01 (0.20)	0.30 (0.29)	-0.02 (0.15)
Completed Court	0.79*** (0.22)	0.62*** (0.15)	0.42*** (0.14)
Observations	3,903	3,582	4,138
Year FE	YES	YES	YES
Court FE	YES	YES	YES
Mean Dep Var (SD)	1.53 1.07	1.19 0.98	1.71 0.58

▶ Back

Other radii

	(1) 50	(2) 40	(3) 45	(5) 55	(6) 60
Completed court * 2018	158.50*** (60.55)	176.24** (78.10)	192.75** (75.65)	134.09*** (46.28)	61.89* (33.44)
Completed court	-9.42 (11.23)	-3.82 (13.58)	-5.31 (13.33)	-7.75 (11.41)	2.87 (20.00)
Observations	254	253	253	254	254
Year FE	YES	YES	YES	YES	YES
Mean Dep Var (SD)	171.2 1094	171.2 1094	171.2 1094	171.2 1094	171.2 1094

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