The impact of the judiciary on entrepreneurship: Evaluation of Pakistan's "Access to Justice Programme"☆

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ABSTRACT

In 2002, the Pakistani government implemented a judicial reform that cost $350 million or 0.1% of Pakistan's 2002 GDP. This reform did not involve increased incentives for judges to improve efficiency but merely provided them with more training. Nonetheless, the reform had dramatic effects on judicial efficiency and consequently on entrepreneurship: judges disposed of a quarter more cases and entry rate of new firms increased by half due to the reform. Using data from the World Bank Group Entrepreneurship Database, our estimates suggest that this translates into an increase of Pakistan's GDP by 0.5%.

1. Introduction

Entrepreneurship is often thought to be important for economic growth (Schumpeter, 1934; Aghion and Howitt, 1997). But what makes people become entrepreneurs? The existing literature has focused primarily on entry regulation to explain the entry rate of new firms (Djankov et al., 2002; Alesina et al., 2005). In contrast, this paper focuses on an institution frequently cited by entrepreneurs as a major obstacle to the creation of a business but rarely studied: the judicial system. A fundamental role of governments is to ensure that property rights are secure and contracts enforced in order to foster investment and entrepreneurship. This is in part achieved by providing an efficient and timely court system. This paper presents new evidence on the impact of judiciaries on entrepreneurship using original judge-level data as well as detailed microeconomic data on entrepreneurship gathered following an innovative 2002 reform of Pakistan's judiciary. The basic finding of this paper is that this judicial reform, that cost only 0.1% of Pakistan's 2002 GDP, increased the entry rate in Pakistan by half, from 2.3% to 3.6%.[1] To provide an approximation of the importance of this impact, this suggests that the judicial reform increased Pakistan's GDP by 0.5% with a favorable cost–benefit ratio.[2]

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[1] The outcomes used are transition from unemployment to self-employed or entrepreneur, transitions from employment to self-employed or entrepreneur. Based on these estimates, it is possible to convert these into new firms created if the reform was scaled up to the level of Pakistan as budgeted under the $350 million figure.

[2] The database from the 2007 World Bank Group Entrepreneurship Database, which measures entrepreneurial activity collected directly from Registrar of Companies in 84 developing and industrial countries over the period 2003–2005, is the most comprehensive international survey on entrepreneurship. A simple panel data analysis with country fixed effects, robust standard errors clustered at the country level with 189 observations can measure the correlation between entry rates and log GDP per capita obtained from the World Penn Tables. This indicates that a 1 percentage point increase in entry rate is associated with an increase in GDP per capita of 0.43% according to author's calculations. Data found at www.ifc.org/ifcext/sme.nsf/Content/Entrepreneurship+Database.

Literature on the subject has yet to provide clear empirical evidence of judiciaries' impact on economic activity. A key question in this literature is causality, since institutions are arguably endogenous. This paper, in contrast, focuses on a dramatic change in Pakistan's judicial system in order to identify its impact on entrepreneurship. To reduce the enormous backlog of court cases, Pakistan enacted a judicial reform entitled the "Access to Justice Programme", which was conducted by the Asian Development Bank in 2002. Case-flow management techniques were taught to civil and criminal judges in 6 pilot districts out of 117, with the explicit objective of facilitating rapid case disposal. To assess whether the reform affected judges' performance, I assembled a panel dataset containing the performance of Pakistan's 875 judges between 2001 and 2003. A difference-in-differences analysis shows that judges disposed of 25% more cases following the reform in affected districts. Three rounds of Pakistan's Labour Force Surveys, collected in 2000, 2002 and 2004 and containing extremely detailed data on entrepreneurship, are used in a difference-in-differences analysis comparing individuals' economic behavior in districts where the reform was implemented with those where it was not, before and after the reform.

The main findings can be summarized as follows. First, the judicial reform eliminated "law and order situations preventing people from working",[3] a reason cited by 10% of the population when prevented from working. This may spur entrepreneurship by creating conditions conducive to business and improve entrepreneurs' confidence that their workforce will not be prevented from working due to law and order situations. Second, willingness to arrange for financial resources or to apply for loans on the part of the unemployed actively looking for work almost doubled in affected districts. Individuals were more confident in their ability to obtain credit when unemployed. Both mechanisms spurred entrepreneurship. The proportion of the unemployed applying for permits or seeking land, buildings or machinery to establish enterprises tripled as a result of the reform. This translated into a 30% increase in the transition from being unemployed to being an employer or own account worker. There was a similar increase in the number of transitions from being an employee to an employer or own account worker.

One of this paper's key concerns is non-random reform placement. Treated districts were not picked randomly. They may be systematically different from untreated districts. In particular, they may have a slower judiciary in the first place: comparing treated districts to untreated ones could potentially estimate a spurious negative impact of the reform. This paper attempts to solve this issue by performing a difference-in-differences analysis that differences out any pre-existing systematic trend between treated and untreated districts. By comparing treated districts before and after the reform to untreated ones before and after the reform, this paper estimates the impact of the reform independently of any time-invariant systematic difference between treated and untreated districts. A remaining concern is about the evolution of treated and untreated districts (the common time effects assumption): treated districts may be on an entirely different time path. For instance, judges and individuals in affected areas, had they not been affected, would maybe not have evolved in the same way as judges and individuals in non-affected areas. I address this concern in three ways. First, I explicitly test this assumption by examining the evolution of judges' performance and individuals' behavior in affected and non-affected areas 1 year before implementation of the reform. Second, the reform placement was an explicit function of the extent of the local judiciary's pre-reform slowness. Thus, the estimate could potentially confound the reform's effects with the mean reversion that would have taken place in its absence. An interaction term between reform placement and the initial level of cases pending in 2001 is included in the regression analyses in order to account for potential mean reversion. Third, the common time effects assumption is equivalent to stating that there are no omitted time-varying and district-specific effects correlated with the reform. I account for factors such as police strength in order to disentangle the reform's effects from any coincidental evolution in the police forces.

Empirical literature on the impact of judiciaries is limited. Djankov et al. (2003) have made an important contribution to the study of the courts by collecting data on judicial formalism from 109 countries. Acemoglu and Johnson (2005) related this data to economic outcomes using legal origin as an instrumental variable. They found that contracting institutions have no impact on economic performance once property rights institutions are controlled for. This paper differs from Acemoglu and Johnson (2005) in three ways. First, it uses a within-country analysis of Pakistan. By limiting myself to one country, I am able to control for a range of factors and influences that cannot be as convincingly controlled for in cross-country data. This allows me to identify the effect of judicial efficiency independently from that of laws, legal origins, and other country-wide characteristics. Second, it generates clear policy implications regarding the desirability of judicial reforms. Third, it looks at mechanisms, such as entrepreneurship, through which contracting institutions could affect growth. The literature relating the quality of legal institutions to entrepreneurship makes no attempt to deal with the potential endogeneity of judicial inefficiency (Johnson et al., 2000; Frye and Zhuravskaya, 2000; Djankov et al., 2006). Friedman et al. (2000) showed that when faced with a weak legal system, businesses hide their activities "underground" using instrumental variables such as long-standing linguistic fractionalization, the origins of the legal system, the religious composition of the population, and geographic location. Aside from the credibility of such instruments, the usual criticisms of cross-country studies regarding sample size (69 countries) and the accuracy of business perception measuring the rule of law still apply.

In contrast to the above-mentioned literature, I use a clear identification strategy to isolate the impact of the judiciary on entrepreneurship. I also use detailed microeconomic information to test two mechanisms through which the judiciary could affect entrepreneurship.

The paper's structure is as follows. Section 2 presents Pakistan's judicial reform. Section 3 discusses the theoretical impact of the judiciary on entrepreneurship. Section 4 presents the data, method and results pertaining to the impact of the reform on judicial efficiency. Section 5 relates the spatial and temporal variation in judicial quality to entrepreneurship. Section 6 concludes.

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[3] This is the wording used in the database (Labour Force Survey). This means insecurity preventing people from working.

2. The 2002 judicial reform

More than 1.2 million cases were pending in Pakistan on the 1st of January 2002 in subordinate courts only. It was taking approximately 2 years to treat any case.[4] Legal experts say much remains to be done to reduce delays in the administration of justice.[5] The dreadful state of Pakistani courts spurred the government to implement the Access to Justice Programme (AJP), which sought to raise the quality of institutions administering justice, their public accountability and performance. The Asian Development Bank provided a $350 million assistance package to the AJP. The programme was launched in December 2001 and implemented by the Ministry of Law, Justice and Human Rights.

The reform's most important component was a Delay Reduction Project in the District Courts. Its objective was to develop and implement a management plan based on an analysis of completed cases and backlog, and the introduction of appropriate case processing standards, manual record management and case-flow management systems.

The crucial point for our analysis was the implementation of the reform in a limited number of pilot courts.[6] Ten subordinate court judges (seven civil and three criminal) in three large urban centres (Karachi, Lahore and Peshawar) were part of a pilot project testing the efficacy of case-flow management principles in addressing the long delays and large backlogs endemic to the country's trial courts.[7] The ten judges were not selected randomly. The selection process considered the judges' standing within the legal community, their willingness to participate in an experimental programme, their level of judicial experience and the leadership their superiors would provide for them during the project's duration. Nor were the three targeted areas selected randomly. Livingston Armytage notes that

"In order to maximize the effective delivery of project resources to focusing on the major problem of delay, it is proposed to focus on those courts where delay is most substantial and chronic, that is Peshawar, Lahore and Karachi".[8]

The number of cases pending at the beginning of 2001 would appear to be the criterion used in choosing affected areas. This non-random programme placement is to be kept in mind through the empirical analysis.

The Delay Reduction Project consisted in three steps. First, the ten judges visited Singapore's "state of the art" Subordinate Courts.[9] Second, they received training at Islamabad's Federal Judicial Academy in the form of five 3-days workshops organized every 3 months from June 1, 2001 to October 27, 2002 on case management techniques.[10] Third, a bench/bar liaison committee was established in each pilot project area to develop and monitor operations, and organize regular meetings and workshops for pilot court judges so that judges and lawyers could share their experiences.[11]

Features other than delay reduction were included in this reform. However, actors involved in this reform argue that the pilot project on delay reduction was the reform's most substantial outcome and that this component was the most visible aspect of the project to date.

It is interesting to note that this reform was widely discussed and criticized in Pakistan. It is therefore likely that individuals knew about this reform and that short-term perceptions about the judiciary changed. The most compelling criticism to this type of reform is that it was not accompanied with changes in judges' incentives, If judges are rational and understand their incentives well, then delays are not caused by systematic "incorrect" case management by judges. "Training" district judges should have no impact on delays if not accompanied with changes in incentives. It is therefore necessary to assess the reform's impact on judicial outcomes before examining economic outcomes. Hamid Khan attacks the project's basic requirement: "Pakistan simply cannot afford this big a loan. Rs. 20 billion is way too high a price to pay for improving the dispensation of justice — which is a state duty in the first place. Even after spending this heavy an amount, years from now we will see nothing will have changed as far as dispensation of justice is concerned".[12] It is therefore necessary to evaluate the reform's impact on judges' performance.

3. Theory

The judiciary may affect entrepreneurship through two mechanisms. First, efficient judiciaries that swiftly punish law violations may improve entrepreneurs' confidence in their property rights. The provision of law and order minimizes disruptions

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[4] "Monstrous backlog exist throughout the courts with chronic delays in disposal of cases of five, ten, even twenty-plus years. In one court we surveyed, the grand-children of the original litigants were continuing to dispute an interest in land some sixty years after institution of proceedings", according to Livingston Armytage, a legal expert from the Centre for Judicial Studies (Pakistan's Law and Justice Sector Reform Experience — Some Lessons, Livingston Armytage, Centre for Judicial Studies, 13TH Commonwealth Law Conference, Melbourne, 14 April 2003).

[5] Pakistan: Focus on judicial delays, UN Office for the Coordination of Humanitarian Affairs, Thursday 28 July 2005, IRINnews.org.

[6] The rationale behind pilot courts was to change the prevailing legal culture as outlined in the Technical Assistance Report 3015, a 7-month study of Legal and Judicial Reform in Pakistan (http://www.ajp.gov.pk/docs/Technical%20Reports/Integrated_DFR%20TA3015.pdf).

[7] The three "treated" criminal judges were spread in the three areas. There were three "treated" civil judges in Karachi, three "treated" civil judges in Lahore and one "treated" civil judge in Peshawar. Therefore no distinction can be made between civil and criminal outcomes across districts.

[8] http://nasje.unm.edu/archives/summer01/printable.htm#pakistan.

[9] Livingston Armytage notes that "contrary to initial expectations of obvious differences between Pakistan and Singapore, participants found this experience particularly useful in providing a tool-kit of practical techniques, from which they selected, experimented and applied lessons learned in their own courts with some quite notable successes".

[10] More details at: http://www2.warwick.ac.uk/fac/soc/law/elj/lgd/2003_2/armytage. http://wwwl.worldbank.org/publicsector/legal/PakistanADBProjectLessonsLearned.doc.

[11] According to the past experiences of legal experts, all successful delay reduction programmes begin with the creation of a Bench-Bar Coordinating Committee. A reform cannot be imposed upon the bar since the system ultimately requires voluntary compliance.

[12] "The system in short, Can the expensive Access to Justice Programme make the dispensation of justice more effective?" By Adnan Mahmood, Special report, The News International.

to economic activity. This prediction will be tested by evaluating the reform's impact on law and order situations preventing individuals from working last week. This may have important economic consequences. First, these situations directly prevent people from working. Second, this may affect the security of property rights of entrepreneurs who might be discouraged from starting a business but encouraged to enter the unofficial sector by hiring private protection against these disruptances. Johnson et al. (2000) show, in a theoretical model, that an increase in the level of law and order attracts more firms in the official economy, a process that can be further reinforced by the larger tax base. I will evaluate the reform's impact on the probability of a firm keeping written accounts, using this as a proxy for the official sector. Finally, following Field (2006), with inefficient judiciaries, households may choose to expend their own human resources in order to solidify their land claims. Efficient judiciaries may affect the opportunity cost of employment outside the home. Security of property rights might encourage entrepreneurship outside the home. I will test this hypothesis by looking at the probability of working within one's home rather than without.

Second, the judiciary might affect entrepreneurship through credit markets. Bianco et al. (2005) explain that the key function of courts in credit relationships is to force solvent borrowers to repay when they fail to do so spontaneously. By the same token, poor judicial enforcement increases opportunistic behavior in borrowers: anticipating that creditors will not be able to recover their loans easily and cheaply via courts, borrowers are more tempted to default. Creditors respond to this strategic behavior by reducing credit availability. Credit markets affect occupational choice (Banerjee et al., 1993). This logic generates a testable implication: the judicial reform may improve access to credit for entrepreneurs. The dataset does not contain information on whether individuals obtained loans. However, it contains information on whether unemployed individuals arranged for financial resources or applied for loans or credit during the last year to set up a business. The judicial reform should make individuals more confident in obtaining loans and thus spur their demand for loans.

The final implication is one about occupational choice. Following Banerjee et al. (1993), there should be more transitions from unemployment to self-employment and entrepreneurship, more transitions from employment to self-employment and entrepreneurship, and even more transitions from self-employment to entrepreneurship with a more efficient judiciary that fosters access to credit. Since the dataset contains information on occupational choice both at the time of the survey and a year before, it is possible to test these transition predictions.

4. Impact of the reform on judicial efficiency

Considering the criticisms raised by the reform, it is first necessary to evaluate its impact on judges' performance. Its description makes clear that only 10 civil and criminal judges in 6 districts were affected by it. It is impossible to identify the affected judges in the data being used. However, Prof. Carl Baar, who is in charge of project evaluation, notes that "the involvement of the four District Judges in the Karachi City Court Complex allowed the pilot project to move beyond its original focus on individual Judges to consider the possibility of backlog reduction in entire districts".[13] The possibility of spillover effects allows us to consider the districts in which the affected judges operate as affected units. This will measure a conservative estimate of the reform. I will use a difference-in-differences analysis to evaluate the reform's impact on the performance of district judges.[14] I will first describe the dataset, then explain the methodology and finally discuss the results.

4.1. Data

A panel dataset at the district judge level between 2UU1 and 2UU3 was constructed using the annual reports published by the Lahore and Peshawar High Courts and the High Courts of Balochistan and Sindh between 2001 and 2003. These provide a wealth of information on both High and Subordinate Courts. In particular they include a consolidated statement of cases (number of cases pending at the beginning of the period, filed and disposed of during the period, and pending at the end of the period) for each judge in each Subordinate Court.

2783 such statements were gathered at the judge level between 2001 and 2003. Names of judges were not available. However, judge-year observations could be matched together.[15] There are 752 judges with observations in 2001 and 2002, 358 judges with observations in 2002 and 2003 and 261 judges with observations in 2001, 2002 and 2003 (see Table 1 for descriptive statistics of the variables used and the source of data).

4.2. Method

A reform focused on delay reduction should be associated with an increase in the number of cases disposed of by judges thanks to better case-flow management techniques. This will thus be the main dependent variable. A difference-in-differences analysis is used,

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[13] p. 269, Final Report on Delay Reduction Pilot Courts Pakistan, Delay Reduction Report, Section 2: Technical Reports, Carl Baar, Political Science Professor from York University, Canada.

[14] Pakistan's judiciary includes a Supreme Court, 4 provincial High Courts, and other lesser courts exercising civil and criminal jurisdiction in 117 districts. In every provincial district, there is a Court of District Judge which is the main court of original jurisdiction in civil matters. Besides the latter, there are Courts of Civil Judges which try cases where the value of suits does not exceed a specified amount. In every district, there is also a Court of Sessions Judge (for offences punishable by death) and Courts of Magistrates (for offences not punishable by death) to try criminal cases.

[15] By exploiting a key redundancy in the data: that the number of cases pending at the end of a period for a judge must be equal to the number of cases pending at the beginning of the following period for the same judge. A judge-year observation is matched with another if the rank, town, district and province of operation were the same and if the number of cases pending at the end of a period was equal to the number of cases pending at the beginning of the next one. I took the liberty of matching judge-year observations together in cases where rank, town, district and province of operation were the same and where the number of cases pending at the end of a period was equal to the number of cases pending at the beginning of the following period plus or minus one.

Table 1
Descriptive statistics of the dataset

Number of districts treated	6			
Number of judges in treated courts in 2003	33			
Total number of districts	117			
Number of judge-year observations	2783			
Number of judges (with at least two observations)	875			
Number of judges for which observation in 2001 and 2002	752			
Number of judges for which observation in 2002 and 2003	358			
Number of judges for which observation in 2001, 2002 and 2003	261			
Explanatory variable	Obs	Mean	St. Error	Source of data
Number of cases pending at the beginning of the period	2783	486.22	670.89	Government of Pakistan, Law and Justice
Number of cases filed during the period	2783	793.36	1107.50	Commission of Pakistan, Annual Reports,
Number of cases disposed during the period	2783	719.62	928.80	Reports of the Courts, http://www.ljcp.gov.pk/
Number of cases pending at the end of the period	2783	553.95	896.53	
Number of police stations per district	117	17.62	13.45	Bureau of Police Research
Number of cinemas by district	117	8.62	12.89	Directorates of Taxation
Seating capacities of cinemas by district	117	5559.11	9450.56	Provincial Cantonment Boards
Law and order situation as to why did not work last week	708	0.1	0.29	Federal Bureau of Statistics Labor
Does the enterprise (individual ownership) keep written accounts?	36,765	0.13	0.34	Force Surveys 2000, 2002, 2004
Work at own dwelling (not on street, in a shop, business, or industry)	95,502	0.11	0.31	
In search of work, arrange for financial resources, apply for loan?	162,092	0.0004	0.02	
Steps to set up business	2161	0.05	0.22	
Availability for self-employment as opposed to employment	4555	0.13	0.34	
Transition to employer or own account worker from unemployed	3065	0.1	0.3	
Transition to employer from unemployed	3065	0.005	0.07	
Transition to own account worker from unemployed	3065	0.09	0.29	
Transition to own account worker from employee	578	0.25	0.43	
Transition to employer or own account worker from employee	578	0.26	0.44	
Transition to employer or own account worker from own acc. worker	9964	0.43	0.49	
Sex	372,829	0.52	0.5	
Age	372,829	21.98	18.11	
Education level (degree achieved)	372,829	2.96	2.43	
Residence status	372,829	1.01	0.11	
Migration history (living since birth in this district (=0) or has migrated?)	372,829	0.09	0.29	

as illustrated in Fig. 1. This figure presents the mean number of cases disposed of per judge in affected districts as opposed to the mean number of cases disposed of per judge in non-affected districts between 2001 and 2003. The 2002 reform was only implemented in pilot districts. The performance of judges diverges greatly after 2002. This visual intuition is confirmed by the simple difference-in-differences analysis in Table 2. Column (1) shows the mean number of cases disposed of per judge in 2001 for affected and non-affected areas. Judges in the former disposed of slightly more cases than in non-affected areas prior to the
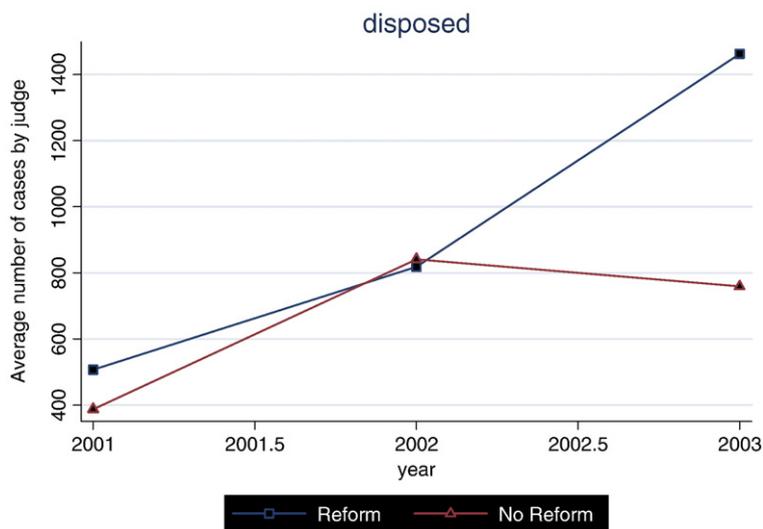
Fig. 1. Mean number of cases disposed in treated districts (square) as opposed to the mean number of cases disposed in non-treated districts (triangle) between 2001 and 2003.

Table 2
Difference-in-differences analysis: impact of the judicial reform on the number of cases disposed by judges

		(1)	(2)	(3)
		2001	2003	Difference
Number of cases disposed by judges in reform areas	Reform = 1	506.15 (52.74)	1462.61 (272.87)	956.45 (170.88)
Number of cases disposed by judges outside of reform areas	Reform = 0	389.85 (20.88)	758.72 (59.88)	368.87 (53.71)
	Difference	116.30(51.08)	703.89 (218.37)	587.59 (173.61)

Standard Errors in parentheses. Reform is a dummy variable indicating where the reform is actually taking place. It is equal to 1 in the following districts. Karachi East, Karachi South, Karachi West and Karachi Central. Lahore and Peshawar (for Civil and Criminal Courts).

reform, but this difference is of little significance. Column (2) shows the mean number of cases disposed of per judge in 2003 for affected and non-affected areas. Judges in the former disposed of more cases than in the latter following the reform. This difference is misleading in the sense that judges in affected areas are perhaps systematically different from those in non-affected areas. Column (3) shows the difference between judges in the same areas between 2001 and 2003. Again this difference is misleading since judges might have solved more cases even without the reform. Only the difference-in-differences estimate in Column (3) Row (3) is accurate. Judges in affected areas in 2003 disposed of an average of 587 cases due to the reform. This effect is huge considering that Pakistani judges disposed of an average of 720 cases/year between 2001 and 2003.

The advantage of a difference-in-differences approach is that it deals with any pre-existing systematic difference between affected and non-affected areas. The programme was implemented in the three biggest cities of Pakistan. One could argue that judges in these three biggest cities are of higher quality because such jobs are in high demand. A difference-in-differences approach including judge fixed effects accounts for systematic difference in judges' quality. However, a key assumption in a difference-in-differences approach is that of common time effects: it is assumed that judges in affected areas, had they not been affected, would have evolved in the same way as judges in non-affected areas. We address this concern in three ways. First, I explicitly test this assumption by looking at the evolution of judges' performance in affected and non-affected areas before implementation of the reform. In Fig. 1 we see that there was no difference in the evolution of judges' performance before 2002. I further account for pre-reform judge performance in all regressions. Second, the placement of the reform was an explicit function of the extent of the judiciary's slowness prior to the reform. The estimate could thus potentially confound the reform's effects with the mean reversion having taken place in its absence. I will include in the regressions an interacted term between the reform placement and initial level of cases pending in 2001 so as to account for potential mean reversion. Third, the common time effects assumption is equivalent to affirming that there are no omitted time-varying and district-specific effects correlated with the reform. I account for factors such as police strength in order to disentangle the reforms' effects from coincidental evolution in the police forces.

We will now perform regressions of the form:

$$disposed_{it} = \alpha_i + \beta_t + \gamma_1 reform_i * 2003 + \gamma_2 reform_i * 2002 + \xi x_{it} + u_{it} \tag{1}$$

where i corresponds to judge i, t to year t between 2001 and 2003. α_i is a judge fixed effect, β_t a time fixed effect, reform is a dummy variable taking the value 1 for judges in the following districts: Peshawar, Lahore, Karachi South, Karachi West, Karachi East and Karachi Central. To perform a difference-in-differences analysis, this term must be interacted with the year in which the reform was supposed to bear fruits (2003). I also include an interacted term between the reform and the year 2002 to explicitly account for the common time effects assumption. Level terms are already included in the year fixed effects and in the judge fixed effects (a Reform variable equal to 1 in the affected districts is a linear combination of district dummies, which are themselves a linear combination of judge fixed effects). x_{it} are control variables, u_{it} are disturbance terms. The standard errors are clustered at the level of districts to account for concerns over serial correlation (Bertrand et al., 2004). The judge fixed effect captures the invariant ability of judges to solve cases. It also controls for district-specific factors such as culture and geography since a district dummy would be a linear combination of judge dummies. The year effects capture common shocks such as central amendments to the Code of Civil Procedure which occurred during the reform as well as other centrally implemented policies. The coefficient of interest is γ_1. The coefficient γ_2 should not be significantly different from 0 if the common time effects assumption is to hold.

4.3. Results

Table 3 shows the basic results regarding the impact of the judicial reform on judges. The dependent variable is the number of cases disposed per judge. A positive coefficient would be evidence of a positive impact of the reform. It would mean that judges dispose of more cases per year. Column (1) shows a simple pooled regression that does not take into account the panel structure of the observations. There are 2782 observations. To perform a correct difference-in-differences analysis, we included a Reform variable equal to 1 in the affected districts (Karachi East, South, West and Central, Lahore and Peshawar for Civil and Criminal Courts). We also included year fixed effects for 2001, 2002 and 2003. Finally, we included an interaction variable between the reform and the year 2003. This is the difference-in-differences coefficient. Judges in affected areas disposed of 675 more cases as a direct result of the reform. A concern arising from Column (1) is the possibility of mean reversion operating in affected areas. I therefore include in Column (2) an interacted term between the number of cases pending per judge at the beginning of 2001 and the placement of the reform. This variable positively affects the number of cases disposed of per judge. This is evidence of mean

Table 3
Impact of the reform on cases disposed per judge dependent variable: number of cases disposed per judge

Explanatory variables	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent variable: number of cases disposed per judge					
Reform*2003	675.3296	444.2570	410.5463	439.4594	165.9326	182.2839
	(3.89)***	(3.20)***	(3.45)***	(3.63)***	(2.37)**	(2.49)**
Reform	34.9619	−238.8974	−204.8331	−184.1619		
	(0.23)	(2.37)**	(2.23)**	(1.79)*		
(Number of cases pending at the beginning of 2001 per judge)*(placement of the reform)		0.7396	0.7392	0.7029		
		(8.78)***	(8.72)***	(6.37)***		
Reform*2002			−69.0500	−76.5783	−17.9801	−50.1059
			(0.65)	(0.71)	(0.15)	(0.45)
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Judge fixed effects	No	No	No	No	Yes	Yes
Rank fixed effects	No	No	No	Yes	No	No
District controls	No	No	No	No	No	Yes
Observations	2782	1785	1785	1785	2782	2531
R^2	0.05	0.05	0.05	0.07	0.84	0.85

The table reports judge-level OLS estimates of Eq. (1). Robust t statistics in parentheses, standard errors clustered at the level of district. *Significant at 10%; **significant at 5%; ***significant at 1%. The dependent variable is always the number of cases disposed per judge. The variable "reform" is a dummy equal to 1 where the reform is actually taking place. It is equal to 1 in the following districts: Karachi East, Karachi South, Karachi West and Karachi Central, Lahore and Peshawar (for Civil and Criminal Courts). The interacted term "Reform*2003" is equal to 1 for the mentioned districts to 1 in 2003. The interacted term "Reform*2002" is equal to 1 for the mentioned districts to 1 in 2002. There are 6 possible ranks for judges: District and Sessions Judge, Additional District and Sessions Judge, Senior Civil Judge, Civil Judge, Judicial Magistrate and an omitted category (City Judge, Accountability Judge, Qazi). District controls are number of police posts by district, number of cinemas by district, seating capacities of cinemas by district.

reversion. However, the impact of the reform remains significant. Judges in affected areas disposed of 444 more cases because of the reform. To deal with common time effects, I account for the performance of judges in affected and non-affected areas prior to the reform in Column (3). I include an interacted term between the treatment of a judge and the year 2002. This coefficient is not significantly different from 0. Moreover, the reform's impact varies little. Judges in affected areas did not evolve differently from judges in non-affected areas prior to the reform. Column (4) adds rank dummies.[16] Accounting for rank effects, judges disposed of 439 more cases because of the reform. A more convincing way to account for judges' quality is to include judge fixed effects. We exploit the longitudinal aspect of the dataset in Column (5) by including judge dummies.[17] The impact of the reform drops considerably. Accounting for judges' ability, a "trained" judge will dispose of 166 more cases. This indicates that judges are of better quality in affected areas, which correspond to Pakistan's three biggest cities. This seems logical as such jobs are likely to be in high demand. Judges would have disposed of more cases even without the reform in affected areas. However, the impact of the reform remains statistically and economically significant since Pakistani judges disposed of on average 720 cases/year between 2001 and 2003. This result is robust to the inclusion of certain district time-varying control variables. We include in Column (6) the number of police posts by district to account for the police's importance in enforcing law and order, the number of cinemas by district and their seating capacities by district in order to account for the overall development of a particular district.[18]

It is also useful to look at different judges' outcomes in order to fully understand the reform's impact. Fig. 2 shows the average number of cases filed per judge before and after the reform in affected and non-affected districts. The reform appears to have a positive impact on the number of cases filed. However, using the number of cases filed per judge as a dependent variable, no effect of the reform on extra cases filed was found.[19] This indicates that this reform was essentially a supply-side shock. Using the ratio of the number of cases filed to the number of cases disposed as a dependent variable,[20] it was found that 1.1 less years are needed to treat a case because of the reform.[21]

Pakistan's judicial reform appears to have affected judges' performance. Judges dispose of 25% more cases because of it.[22] It takes 1 year less to treat a case in affected areas. This is a huge improvement considering it was taking approximately 2 years to treat any case on the 1st of January 2002 in subordinate courts. However, this does not answer satisfactorily the criticism regarding incentives. Since the reform was not accompanied by changes in incentives, "training" judges should not improve their

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[16] There are 6 possible ranks for judges in Pakistan's judiciary: District and Sessions Judge, Additional District and Sessions Judge, Senior Civil Judge, Civil Judge, Judicial Magistrate and an omitted category (City Judge, Accountability Judge, Qazi).

[17] Note that the interacted term (Number of cases pending at the beginning of 2001 per judge)*(placement of the reform) cannot be included anymore as it is a linear function of judge dummies.

[18] Remember that the standard errors are always clustered at the district level.

[19] Results are available on request.

[20] This indicates the average time it takes to treat a case if we consider the cases pending at the beginning of the period to be so old and complicated that judges do not even bother examining them ("last in, first out" type).

[21] Results are available on request. Using the ratio of the total number of cases to be treated (pending at the beginning of the period in addition to those already filed) to the number of cases disposed as a dependent variable (average time it takes to treat a case if we believe the case-flow management technique to be of the "first in, first out" type) indicates that, thanks to the reform, it takes 1.4 less years to treat a case.

[22] According to the preferred specification, a "trained" judge will dispose of 166 more cases. Pakistani judges disposed of on average 720 cases/year between 2001 and 2003.
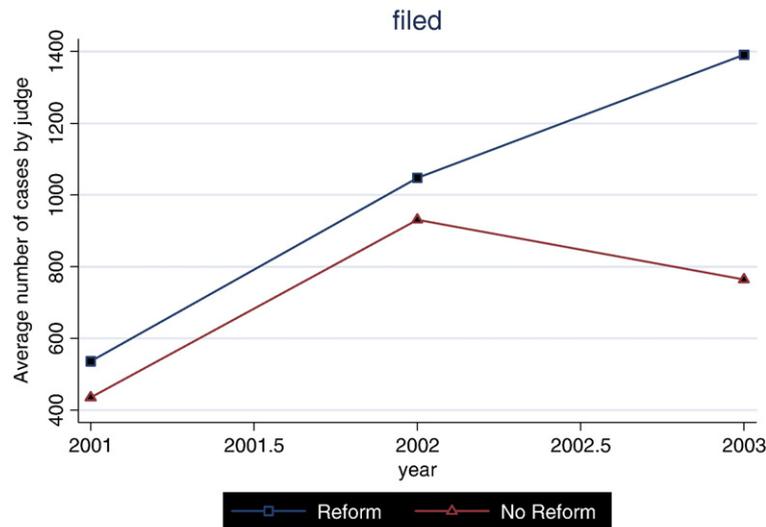
Fig. 2. Mean number of cases filed in treated districts (square) as opposed to the mean number of cases filed in non-treated districts (triangle) between 2001 and 2003.

performance, if we assume that judges fully understand their incentives in the first place. Critics may argue that the increased performance visible in the data is simply due to a Hawthorne effect. Judges knew they were to be evaluated and increased their effort as a result. However, this paper's objective is not to argue that this particular judicial reform, consisting of teaching judges case-flow management techniques, is effective. Its objective is rather to evaluate the impact of the judiciary on entrepreneurship. Variation in judges' performance provided by the reform is used only as a means to isolate the impact of faster judiciaries on the security of property rights, demand for credit and transition towards entrepreneurship.

5. Impact of the reform on entrepreneurship

This paper uses the spatial and temporal variation in a judicial reform afforded by the "Access to Justice Programme" to estimate the impact of the reform on entrepreneurship. As the reform was widely discussed and criticized in numerous newspaper articles mentioned above, it is likely that individuals knew about this reform and that short-term perceptions about the judiciary changed. This paper uses three consecutive rounds of the Labour Force Surveys collected in 2000, 2002 and 2004. It is interesting to note that the sample is not representative at the district level. This is because a different sampling strategy was adopted in rural and urban areas. In rural areas, the dataset is representative at the district level. In urban areas, that is the country's 14 "self-representing" cities,[23] randomization was applied at the level of entire cities, which encompass several districts. The judicial reform was implemented in the following districts: Peshawar, Lahore, Karachi South, West, East and Central. It was thus implemented in three self-representing cites: Peshawar, Lahore and Karachi.[24] The dataset is thus representative at the level of districts in rural areas and self-representing cities in urban areas. Using the weights provided in the dataset allows us to have a representative dataset of the country as a whole.

The dataset contains a wealth of information on working conditions and firm characteristics. In particular, it is possible to evaluate the impact of the reform on the security of property rights (particularly the occurrence of law and order situations preventing people from working, written accounts keeping, proxying for presence in the official sector and work location as underlined in the theoretical section) and on credit demand.[25] These two mechanisms explain why judicial reform has affected entrepreneurship. I will thus examine the reform's impact on the transition from unemployment and salaried work to being self-employed and an employer.

5.1. Method

A difference-in-differences approach has been adopted to alleviate concerns of non-random programme placement, since it accounts for pre-existing systematic differences between affected and non-affected areas. The identification assumption is that

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[23] This is the wording used in the database (Labour Force Survey). This means the 14 biggest cities of Pakistan. These cities constitute a separate stratum, hence the word "self-representing". These are: Lahore, Gujranwala, Faisalabad, Rawalpindi, Multan, Sialkot, Sargodha, Bahawalpur in Punjab; Karachi, Hyderabad, Sukkur in Sindh; Peshawar in North West Frontier Province; Quetta in Balochistan and Islamabad (capital city).

[24] This is because the only 4 districts in Karachi are: Karachi South, Karachi West, Karachi East, Karachi Central.

[25] An interested test would be to look at the different civil or criminal outcomes according to the "treated" judges' area of expertise. However, the three "treated" criminal judges were spread in the three areas. There were three "treated" civil judges in Karachi, three "treated" civil judges in Lahore and one "treated" civil judge in Peshawar. Therefore no distinction can be made between civil and criminal outcomes across "treated" districts.

there are no common time effects. I address this concern in three ways. First, I test this hypothesis by looking at the evolution of outcomes before the reform, that is, between 2000 and 2002. A difference in the evolution of outcomes before the reform would cast doubt on the analysis since we could no longer argue that, had they not been affected, agents in affected areas would have evolved in the same way as agents in non-affected areas. Second, I compare my results with the analysis restricting the sample to Pakistan's 14 self-representing cities in order to have a better comparison group. Third, I account for factors such as police strength so as to disentangle the reform's effects from coincidental evolution in police forces, number of cinemas by district, and these cinemas' seating capacities, so as to account for the overall development of a district. Additionally, I include individual factors such as sex, age, education level (degree achieved), residence status and migration history (that is, those living since birth in the same district as opposed to those having migrated).

We will perform regressions of the form:

$$outcome_{idt} = \alpha_d + \beta_t + \gamma_1 reform_d*2003 + \gamma_2 reform_d*2002 + \lambda x_{idt} + \xi z_{dt} + u_{idt} \tag{2}$$

where i corresponds to agent i,d to district d, t to year t between 2001 and 2003. α_d is a district fixed effect, β_t a time fixed effect. $reform_d$ is a dummy variable taking the value 1 for the following self-representing cities: Peshawar, Lahore and Karachi. To perform a difference-in-differences analysis, this term must be interacted with the year in which the reform is supposed to bear fruit (2003). I also include an interacted term between the reform and the year 2002 to explicitly account for the common time effects assumption. Level terms are already included in the year and district fixed effects (a Reform variable equal to 1 in the affected districts is a linear combination of district dummies). x_{idt} are individual control variables, z_{dt} are district control variables, u_{it} are disturbance terms. Standard errors are clustered at the district level to account for concerns of serial correlation (Bertrand et al., 2004). District fixed effect account for district-specific factors such as culture and geography. Year effects capture common shocks such as central amendments to the Code of Civil Procedure having occurred during the reform as well as other centrally implemented policies. The coefficient of interest is γ_1 The coefficient γ_2 should not be significantly different from 0 if the common time effects assumption is to hold.

5.2. Results

Table 4 examines the relationship between the reform and the two mechanisms highlighted in the theoretical section that spur entrepreneurship. In Column (1), the dependent variable is a dummy variable equal to 1 in cases where the individual was prevented from working the previous week due to a law and order situation.[26] As expected from the theory, the reform, by increasing judicial speed and thus the discounted value of punishment in cases of law and order disturbances, is associated with less such events. However, the coefficient is not significant. In Column (2), I restrict the sample to the 14 self-representing cities. The reform is associated with a 10 percentage point reduction in the likelihood of law and order disturbances preventing agents from working. This effect is economically significant given that we know that the occurrence of such events (conditional on being prevented from working) is 10%. In other words, the reform eradicates such events. However, the sample size is small (708 agents) due to the fact that I restricted it to agents having been prevented from working in the last week. Column (3) includes individual controls such as sex, age, education level (degree achieved), residence status and migration history (those living since birth in the same district as opposed to those having migrated). The coefficient remains similar, strengthening the belief that the identification strategy captures the reform's impact and not that of omitted variables correlated with it. Column (4) includes district controls such as the number of police stations by district, the number of cinemas by district and seating capacities of cinemas by district. Again, the coefficient remains similar. Testing these specifications, which show the reform's constant impact, allows us to conclude that the identification strategy is robust. Additionally, in all the regressions the coefficient of the reform interacted with the year 2002 is always insignificant, providing direct evidence that the common time effects concern is not a major issue.

A falsification exercise would require looking at the impact of the judicial reform on other reasons preventing people from working unlikely to be affected by the reform. In column (5), the dependent variable is a dummy variable equal to 1 if the individual was prevented from working last week because of a personal reason (religious or social activities or attending political gathering…). The judicial reform has no impact on the occurrence of these activities, as expected.[27]

In Column (6) of Table 4, the dependent variable is a dummy variable equal to 1 where individual owners keep written accounts and in which we keep the complete specification with year and district fixed effects and individual and district controls. The reform increases the likelihood of operating in the official sector by 10 percentage points. Again this is a significant effect considering that only 13% of the individual owners keep written accounts. In Column (7), the dependent variable is a dummy variable equal to 1 in cases where individuals work at home (that is in his or her own, a family, friend or employer's dwelling) as opposed to elsewhere (on the street, road, in the country side, shop, business, office, or in industry). The judicial reform is associated with a 0.7 percentage point decrease in the likelihood of working in someone's dwelling, considering that 11% of the population works in such locations. As expected from the theory, the judicial reform, by facilitating rapid case disposal, increases security of property rights, which could potentially translate into the reallocation of labour supply into more productive activities. In Column (8), the dependent variable is a dummy variable equal to 1 in cases where individuals arranged for financial resources or applied for loans

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[26] Other reasons preventing agents from working are illness, injury, strike, bad weather and mechanical breakdown.
[27] Other reasons preventing people from working are: illness or injury; strike or lockout; holiday, ramzan, vacation or leave of absence; off-season inactivity; due to bad weather, due to mechanical breakdown, due to shortage of raw material; educational and training leave; maternity or parental leave; reductions in economic activity. I found no effect of the judicial reform on these outcomes. Regressions are available on request.

Table 4
Impact of the reform on investment confidence and demand for credit

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Law and order situation as to why did not work last week				Personal reason	Written accounts	Own dwelling	Arrange for financial resources, apply for loan, credit
Reform*2004	−0.0703	−0.09543	−0.0756	−0.1071	−0.0248	0.1027	−0.0072	0.0003
	(1.12)	(5.88)***	(2.20)**	(2.17)**	(0.07)	(3.98)***	(2.80)***	(1.80)*
Reform*2002	−0.0362	0.0358	−0.0334	−0.0576	−0.0944	0.0095	0.0035	0.0009
	(0.52)	(0.12)	(0.33)	(0.48)	(0.35)	(0.45)	(0.83)	(4.72)***
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
District fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual controls	No	No	Yes	Yes	Yes	Yes	Yes	Yes
District controls	No	No	No	Yes	Yes	Yes	Yes	Yes
Observations	362	67	362	362	438	10,169	93,356	58,046
Pseudo R^2	0.15	0.14	0.20	0.20	0.21	0.08	0,05	0.02

The table reports individual level probit estimates of Eq. (2). Robust z statistics in parentheses, clustered at the level of provinces. *Significant at 10%; **significant at 5%; ***significant at 1%. The explanatory variable reform*2004 is the interaction between the placement of the reform in certain districts and the year dummy corresponding to 2004. Reform*2002 is interacted with the year dummy corresponding to 2002. The dependent variable in columns 1, 2, 3, 4 is a dummy variable equal to 1 if the individual was prevented from working last week because of a law and order situation. In column 2, only the 14 self-representing cities in Pakistan are considered. These are: Lahore, Gujranwala, Faisalabad, Rawalpindi, Multan, Sialkot, Sargodha, Bahawalpur in Punjab; Karachi, Hyderabad, Sukkur in Sindh; Peshawar in North West Frontier Province; Quetta in Balochistan and Islamabad (capital city). The dependent variable in column 5 is a dummy variable equal to 1 if the individual was prevented from working last week because of a personal reason (religious or social activities or attending political gathering…). The dependent variable in column 6 is a dummy variable equal to 1 if the individual owner keeps written accounts. The dependent variable in column 7 is a dummy variable equal to 1 if the individual carries work at somebody's dwelling (his, her own, family or friend's, employer's) as opposed to elsewhere (on the street, road, on country side, in a shop, business, office, or industry). The dependent variable in column 8 is a dummy variable equal to 1 if the individual arranged for financial resources, applied for loan, credit during the last year, in search of work. Individual controls are sex, age, education level (degree achieved), residence status, and migration history (living since birth in this district or has migrated?). District controls include number of police stations by district, number of cinemas by district, seating capacities of cinemas by district.

or credit during the last year of searching for work. The reform is associated with a 0.03 percentage point increase in the probability of taking steps towards arranging for financial resources. Agents are more confident in their ability to obtain credit when unemployed. If credit is obtained, a point regarding which I have no information, agents would be able start businesses. However, the significance of the coefficient interacted with year 2002 casts doubt on the analysis. The table shows that the two channels through which the judiciary might affect entrepreneurship are valid.

Table 5 examines the relationship between the reform and entrepreneurship. In Column (1), the dependent variable is a dummy variable equal to 1 if the individual answered yes to the following question: "Last year, in looking for work, did you apply for a permit or license to set up your own enterprise, such as a shop, business, farm or service establishment (fixed or mobile)? Or did you look for land, building, machinery or equipment for setting up your own enterprise, such as a shop, business, farm or service establishment (fixed or mobile)?". The variable takes the value of 0 where individuals took steps to find a salaried job, such as applying to prospective employers, checking worksites, farms, factories or marketplaces, answering advertisements or registering with Government or private employment agencies. The reform is associated with a 12 percentage point increase in the likelihood of the unemployed taking such steps, considering that only 5% of the unemployed took them.[28] In Column (2), the dependent variable is a dummy variable equal to 1 if the individual answered yes to the question "Would you be available for self-employment if given the necessary resources and facilities as opposed to full-time paid employment with government, private business or industry, or other types of employment such as commissions, contracts or daily wages, etc.?". The reform is associated with a 12 percentage point increase in the likelihood of individuals being available for self-employment as opposed to salaried employment. However, the significant result obtained with the interaction of the reform and the year 2002 casts doubt on the analysis. In Column (3), the dependent variable is a dummy variable equal to 1 if the individual, having been unemployed during the previous year, is now an employer or his own (non-agricultural) account worker, as opposed to a regular paid employee with fixed wages, a casual paid employee, a paid worker by piece rate or work performed, or a paid non-family apprentice. This is a direct test of the judicial reform's impact on transitions out of unemployment and into entrepreneurship. The judicial reform increases the likelihood of transitioning from unemployment to being an employer or one's own account worker by 3 percentage points. This is a sizeable effect considering that 10% of the unemployed became their own employers or own account workers the following year. Column (4) studies the transition from being unemployed to being an employer. The effect is small, due perhaps to the rarity of such transitions. Column (5) studies the transition from being unemployed to becoming one's own account worker and finds similar results.

Similar results are found about transitions from employee to own account worker or entrepreneur. As predicted by the Banerjee et al. (1993) model, there are also more transitions from being self-employed to being an employer when the judiciary is more efficient.[29] Using these transition rates, it is possible to calculate the impact of the reform on entry rates of new firms. If the reform

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[28] I did not find any effect of the reform on other steps taken during the last year in search of work.
[29] Results are available on request.

Table 5
Impact of the reform on efforts and transition out of unemployment

	(1)	(2)	(3)	(4)	(5)
	Steps to set up business	Availability for self-employment as opposed to employment	Transition to employer or own account worker	Transition to employer	Transition to own account worker
Reform*2004	0.1242	0.1199	0.0330	0.0000000001	0.0483
	(4.65)***	(8.94)***	(2.64)***	(2.49)**	(2.04)**
Reform*2002	0.1636	0.2752	0.0619	0.0188	0.1064
	(1.89)*	(5.96)***	(1.14)	(0.37)	(5.31)***
Year fixed effects	Yes	Yes	Yes	Yes	Yes
District fixed effects	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes
District controls	Yes	Yes	Yes	Yes	Yes
Observations	1419	3947	563	552	549
Pseudo R^2	0.19	0.19	0.06	0.30	0.07

The table reports individual level probit estimates of Eq. (2) with different outcomes. Marginal effects at the mean are presented. Robust z statistics in parentheses, clustered at the level of provinces. *Significant at 10%; **significant at 5%; ***significant at 1%. The explanatory variable reform*2004 is the interaction between the placement of the reform in certain districts and the year dummy corresponding to 2004. Reform*2002 is interacted with the year dummy corresponding to 2002. The dependent variable in column 1 is a dummy variable equal to 1 if the individual answered yes to the following question: "Last year, in search of work did you apply for permit or license to set up own enterprise such as a shop, business, farm, or service establishment (fixed or mobile)? Or did you look for land, building, machinery or equipment for setting up own enterprise such as shop, business, farm, service establishment (fixed or mobile)?". In column 2, the dependent variable is a dummy variable equal to 1 if the individual answered yes to "Would you be available for elf self-employment given the necessary resources and facilities as opposed to full-time paid employment with government, full-time paid employment with private business, industry, or other types of employment such as on commission, contract employment, daily wages, etc.?". In columns 3, 4, 5, the dependent variable is a dummy variable equal to 1 if the individual is now an employer or own account worker (non-agricultural); an employer; an own account worker (non-agricultural) respectively; as opposed to regular paid employee with fixed wage, casual paid employee, paid worker by piece rate or work performed, paid non-family apprentice; conditional on being unemployed 1 year ago. Results are presented for the 14 self-representing cities in Pakistan. Individual controls are sex, age, education level (degree achieved), residence status, and migration history (living since birth in this district or has migrated?). District controls include number of police stations by district, number of cinemas by district, seating capacities of cinemas by district.

was scaled up to Pakistan (as planned under the $350 million budget), it would increase the entry rate in Pakistan by half, from 2.3% to 3.6%.

6. Conclusion

This paper has used a reform as a source of variation in judicial speed in order to evaluate judiciaries' impact on entrepreneurship. Judicial slowness may reduce incentives to start businesses by deteriorating the security of property rights. It may also limit possibilities of obtaining loans. Finding ways to speed up judiciaries is thus fundamental to economic growth. In 2002 Pakistan implemented a programme of delay reduction called the Access to Justice Reform. Case-flow management techniques were taught to judges in 6 out of 117 pilot districts with the explicit objective of facilitating rapid case disposal. By using a panel dataset of the performance of Pakistan's 875 judges between 2001 and 2003 within a difference-in-differences analysis, this paper has shown that judges disposed of 25% more cases after the reform in affected districts.

This spatial and temporal variation in the judiciary's speed was then used to evaluate its impact on entrepreneurship in a difference-in-differences analysis. The three rounds of the Pakistan Labour Force Surveys, collected in 2000, 2002 and 2004 and containing extremely detailed data on entrepreneurship, were used to look at two mechanisms through which judiciaries affect entrepreneurship. The judicial reform eliminated law and order situations preventing people from working, a reason cited by 10% of the population when prevented from working. This may spur entrepreneurship by creating conditions favorable to business and by improving entrepreneurs' confidence that their workforce will not be prevented from working due to law and order situations. Additionally, the willingness of the job-seeking unemployed to arrange for financial resources or to apply for loans almost doubled in affected as opposed to non-affected districts, before and after the reform. Individuals were more confident in their ability to obtain credit when unemployed. These two mechanisms spurred entrepreneurship. The proportion of previously unemployed people applying for permits or looking for the land, building, machinery or equipment necessary to start their own businesses tripled due to the reform. This translated into a one third increase in transitions from unemployment to being one's own employer or account worker. There was a similar increase in the number of transitions from employee to employer or independent account worker.

If the reform was scaled up to Pakistan (as planned under the $350 million budget), it would increase the entry rate in Pakistan by half, from 2.3% to 3.6%. To exemplify the importance of this effect, data from the World Bank Group Entrepreneurship Database indicate that this translates into an increase of Pakistan's GDP by 0.5%. This suggests an important role for the judiciary in shaping economic activity and, considering the cost–benefit of this reform, for judicial reforms in fostering entrepreneurship.

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