The Impact of the Judiciary on Entrepreneurship: Evaluation of Pakistan's Access to Justice Programme

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Septembre/September 2007

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Abstract:
A key element of government is to uphold law and order. This paper will evaluate the impact of slow judiciaries on entrepreneurship. In 2002 a judicial reform was implemented in 6 of Pakistan's 117 districts to facilitate rapid case disposal. Drawing on a panel dataset of 875 district judges' performance between 2001 and 2003, a difference-in-differences analysis shows that judges disposed of 25 percent more cases thanks to the reform. Three rounds of the Labour Force Surveys will be then used to show that the reform improved security of property rights, encouraged people to seek loans, fostered entrepreneurship and was associated with increased transition from unemployment and paid employment to entrepreneurship.

I Introduction

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. Literature on the subject has yet to provide clear empirical evidence of judiciaries' impact on economic activity. A key question in this literature is causation, since institutions are arguably endogenous. This paper, in contrast, focuses on a dramatic change in Pakistan's judicial system in order to identify the latter's 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. Caseflow 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 percent more cases following the reform in affected districts.

This judicial reform may potentially affect entrepreneurship, which is key for economic growth [Schumpeter, 1934; Aghion and Howitt, 1997], and is thus a matter of first-order importance. First, efficient judiciaries that swiftly punish law violations may improve entrepreneurs' confidence in their property rights by minimizing disruptions to economic activity. Second, judiciaries that swiftly punish defaulters may improve banks' confidence in their ability to recover loans and increase the credit supply necessary to support entrepreneurship [Banerjee and Newman, 1993]. To test these two mechanisms, 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. As the reform was widely discussed and criticized in numerous newspaper articles mentioned below, it is likely that individuals knew about this reform and that short-term perceptions about the judiciary changed.

The main findings can be summarized as follows. First, the judicial reform eliminated "law and order situations preventing people from working"[1], a reason cited by 10 percent 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, building, machinery to establish enterprises tripled thanks to the reform. This translated into a one third 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, which could potentially affect the common time effects assumption according to which judges and individuals in affected areas, had they not been affected, would 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 one 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 interacted term between reform placement and the initial level of cases pending in 2001 is included in the regressions in order to account for potential mean reversion. Third, the common time effects assumption is equivalent to saying 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. Measuring judicial formalism in 109 countries, they found it to be greater in countries with civil rather than common law systems and associated with a lack of consistency, honesty and fairness in judicial decisions. Endogeneity concerns were addressed by using legal origin as an instrument for judicial formalism. This paper differs from that of Djankov et al [2003] in three ways. First, it uses a within-country analysis of Pakistan. By limiting myself to one country, I am able to account for a range of factors and influences that cannot be as convincingly accounted for in cross-country data. This allows me to identify the effects of judicial efficiency independently of laws, legal origins and other country-wide characteristics. Second, the paper focuses not only on judicial but economic outcomes. Third, it generates clear policy implications regarding the desirability of such reforms.

Visaria [2006] exploits variation in spread of debt tribunals and in likely impact across firms to show that a tribunal establishment reduced loan delinquency by 3 to 10 percent. Related to the outcomes studied in this paper, Johnson, Kaufmann and Shleifer [1997] relate the quality of legal institutions to the size of the unofficial economy proxied

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by the difference between electricity consumption (proxying for total economic activity) and official GDP. No attempt has been made to deal with the potential endogeneity of judicial inefficiency. Friedman et al [2000] perform a similar analysis using instrumental variables such as long-standing linguistic fractionalization, the origins of the legal system, the religious composition of the population, and geographic location to show that when faced with a weak legal system, businesses hide their activities "underground". 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 measures regarding the rule of law still apply. Frye and Zhuravskaya [2000] gather a dataset on courts' perceptions and private protection. They measure court performance by asking 230 small shopkeepers in three Russian cities whether, in the previous two years, they needed to use courts but chose not to. They relate this measure to contacts with private protection. They find that court efficacy is inversely related to the incidence of contacts with the private protection racket. They conclude that cities with weaker legal institutions are likely to be less attractive to small businesses. Similarly, using firm-level data, Johnson et al [2000] find weak evidence that the ability of the legal system to enforce contracts affects entrepreneurs' decisions on whether or not to hide their activity. These two papers make no attempt to deal with the potential endogeneity of judicial inefficiency. For example, one might wonder why perception of the judiciary varies within the same city or country. Shopkeepers with a better perception of the judiciary might be more politically connected. This would impact their operations in the official sector. Finally, Djankov et al [2006] gather a survey of 414 entrepreneurs and 561 non-entrepreneurs in seven Chinese cities. They investigate the sociological, individual and institutional determinants of entrepreneurship. They find that 15 percent of entrepreneurs blame inefficient courts as a key institutional obstacle in doing business,

as compared to 38 percent of non-entrepreneurs. But this could equally be due to the fact that cities with economic policies favouring entrepreneurship also have better courts or that individuals with a better perception of the courts have a natural inclination toward entrepreneurship.

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 provides a background on Pakistan's judicial system and 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.

II   Background

In order to understand the source of variation in judicial speed used in the empirical section, it is useful to examine the state of Pakistan's judiciary, as well as certain institutional details regarding the country's judicial reform of 2002.

II.1   Pakistan's Judiciary

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. Some anecdotes are even more striking.

Haider, a law student, was 23 when he was first arrested. The charges against him were serious, ranging from dacoity (armed robbery) and possession of explosives and

ammunition, to murder. He claims that all charges were fabricated at the behest of a disgruntled police officer. Haider is now a 41 and has only recently been set free[2].

"Many of the under-trial prisoners had been in prison for periods longer than the term they would have served, had they been convicted," affirms Syed Liaquat Banori, head of the prisoners' rights body the Society for the Protection of Human Rights and Prisoners' Aid. Over 17,000 cases remained pending before the country's Apex (Supreme) Court on January 1 2003, according to the annual report of the Law and Justice Commission of Pakistan (LJCP) released in October 2004. This report also claims that more than a million cases were pending in all high and subordinate courts by the same date. According to legal experts, dispensation of justice in Pakistan has remained flawed, delayed and in some cases non-existent. The Law Minister claims the situation is even worse regarding civil cases: "It takes years to conclude a case and sometimes, the remedy gets diluted". Legal experts say much remains to be done to reduce delays in the administration of justice[3]. "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 was 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[4]. He further adds that "the problem of delay in civil cases is severe, particularly in commercial cases which tend on average to take 4.5 years to complete. In the Sindh High Court, however, this period extends to almost ten years, and property litigation to almost 7 years. Isolated cases considerably in excess of these delays are not altogether apocryphal"[5].

Criminal Court judges, in a report discussing the design and operation of delay reduction efforts at the Federal Judicial Academy on June 1-3, 2001, highlighted several reasons for these delays. Cases are not managed properly. The Courts' ministerial staff

is not properly trained and most of the Presiding Officer's time is wasted attending to petty matters. Courts are insufficiently equipped. Criminal case reports are submitted after inordinate delays despite the fact that, according to Section 173 of the Criminal Procedure Code, it is obligatory for investigating officers to present reports in Court and have jurisdiction within 3 days after the required 14 following registration of the case. Under-trial prisoners are not presented in court on the date of hearings[6]. Prosecution fails to produce witnesses in time. There is an alarmingly high volume of cases pending before Magistrates and Learned Sessions Judges do not transfer cases in equal number to Judicial Magistrates. A large number of courts are vacant and without any presiding officer.

Civil Court judges produced a similar report in which they argue that cases are not properly managed (admission of plaints not requiring trial, service of summons not properly controlled by bailiffs, excessive time spent filing written statements, issues framed by courts posterior to fifteen days of filing written statements, unnecessary adjournments encouraged by cost impositions, evidence not allowed by affidavits, judges failing to ensure that executing decrees not be unduly delayed). The number of Courts in comparison to the number of cases is inadequate, resulting in delayed case disposal. The working capacity of the existing courts is low due to inadequate remunerations, inefficient staff and insufficient equipment.

II.2 The Judicial Reform of 2002

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. The rationale behind pilot courts was to change the prevailing legal culture as outlined in the Technical Assistance Report 3015, a seven-month study of Legal and Judicial Reform in Pakistan[7]. 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 caseflow management principles in addressing the long delays and large backlogs endemic to the country's trial courts[8]. 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".[9]

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

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be kept in mind when examining the empirical analysis.

The Delay Reduction Project consisted in three steps. First, the ten judges visited Singapore's "state of the art" Subordinate Courts[10]. Second, they received training at Islamabad's Federal Judicial Academy in the form of five three-days workshops organized every three months from June 1 2001 to October 27 2002 on case management techniques. Appendix 1 describes in more detail these techniques. 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[12]. 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.

II.3 Criticisms

The most compelling criticism to this type of reform is that it was not accompanied by change in incentives. If we assume that judges are rational and thus understand their incentives well, then delays are not caused by systematic "incorrect" case management by judges. Were such a reform not accompanied by any change of incentives, then "training" district judges would have no impact whatsoever. It is therefore necessary to assess the reform's impact on judicial outcomes before examining economic outcomes.

Other criticisms focus on unaddressed priorities. Adnan Mahmood, in his article "Can the expensive Access to Justice Programme make the dispensation of justice more effective?", reports that Hamid Khan, of the Supreme Court Bar Association, does

not think that such a huge investment can succeed in assuring fair and prompt trials. He believes that justice dispensation cannot be made timely unless the "entire system is changed to ensure an independent judiciary in the country. Only an independent judiciary can be an effective judiciary – things will not change for the better no matter how many foreign trainers we hire or how many procedural changes we try to bring in".

Retired Justice Malik Muhammad Qayyum of the Lahore High Court states that drastic change in codes and laws is required to improve the efficiency of courts: "The Civil and Criminal Procedure Codes, for example, need changes to a large extent. How can we expect laws formulated in 1908 to be effective for courts today? We follow English laws. The courts in the UK have changed their laws almost entirely but we continue to follow the same set of codes and procedures".

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"[13].

Critics argue that the reform should have included changes in incentives, steps towards an independent judiciary and a revision of laws and procedures. It is therefore interesting to evaluate its impact on judges' performance[14].

III   Theory

If we assume for now that the reform affected judges' performance, it will also be interesting to describe the potential impact of judicial efficiency on economic activity. The judicial reform's first intuitive consequence would be increased provision of law and

order to agents. The judiciary is an important deterrent to fraud or crime that might be more economically attractive in the short run. The probability of harsh punishment in monetary or non-monetary terms heavily dissuades opportunistic agents from committing such infractions. Slower judiciaries lower the discounted value of punishment, thereby weakening incentives to act in accordance to laws. I will test this prediction by evaluating the reform's impact on law and order situations preventing individuals from working last week.. If the reform is effective and speeds up the courts, the discounted value of punishment is higher and law and order situations should occur less frequently. This would 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 and encouraged, at least as a natural response, to enter the unofficial sector by hiring private protection.

Johnson, Kaufmann and Shleifer [1997] investigate this latter claim in a simple model linking tax revenues, the quantity of law and order provided and the size of the unofficial economy. According to this model, the government chooses a level of law and order provision. This affects firms' anticipated profits since law and order increases the productivity of firms in the official sector. Firms may decide to stay in the official sector and pay taxes but also benefit from government-provided public goods such as courts and police. Or they may opt for the unofficial sector and choose to pay fees to private protection agencies providing protection from thieves and contract enforcement instead of official taxes. A firm's decision to operate in the official or unofficial sector has implications for government finances. Firms operating in the official sector increase budget revenue and thus make government better able to provide law and order. The model produces two stable equilibria. In one, the size of the unofficial economy is small and the level of law and order high. In another, the size of the unofficial economy is big,

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making it impossible for governments to maintain efficient legal systems. In an unstable equilibrium both types of firms coexist. As a result of an exogenous increase in the level of law and order provided, more firms might be attracted to the official economy by displacing the location of the unstable equilibrium.

This logic generates a testable implication. The reform, if effective, would increase the speed of the judiciary, providing more protection and better contract enforcement. I will evaluate its impact on the probability of a firm keeping written accounts, using this as a proxy for its belonging to the official sector.

Field [2006] examines one aspect of welfare gains to property titling, namely the effect of improvements in tenure security on labour supply and labour allocation decisions within households. This reasoning can be extended to the judiciary. A key function of the latter is to reduce the likelihood of forced eviction by landlords, government or other residents. Even if tenants have formal claims to land, slow judiciaries make the discounted value of punishment due to landlords' forced eviction small. With inefficient judiciaries, households may choose to expend their own human resources in order to solidify their land claims. Efficient judiciaries could free up hours of work previously devoted to maintaining security through informal means. They could also affect the opportunity cost of employment outside the home. Security of property rights might encourage entrepreneurship outside the home.

This logic implies that judicial reform should affect the probability of working within one's home rather than without. I will test this hypothesis using information on the exact location of individuals' workplaces.

An entirely different channel through which the judiciary might affect entrepreneurship is credit markets. We may also believe that judicial systems impact firms' debt contracts. Pagano et al [2005] explain that the key function of courts in credit relation-

ships 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 and Newman, 1993].

In Banerjee and Newman's model, there are four occupational options: subsistence (investment in safe assets), working (earning a certain wage from entrepreneurs), self-employment (investment in risky projects) and entrepreneurship (investment in a number of projects similar to self-employment projects and monitoring of workers). Wealth is distributed unequally. Agents can borrow by using their initial wealth as collateral. Agents can repay on time or renege and incur fines. This forces banks to restrict credit supply and lend only to those with sufficient collateral. Banerjee and Newman thus conclude that only the wealthy can be self-employed and only the wealthiest can be entrepreneurs. We can extend this analysis by incorporating judicial efficiency. In the model, a fine is a constant. I argue that a speedier judiciary can make the discounted value of this fine higher. This will discourage borrowers from defaulting and lower the wealth threshold for being self-employed or an entrepreneur.

This model generates two testable implications. First, individuals might have better access to financial institutions spurring entrepreneurship. In the dataset, I do not know whether individuals obtained loans. However, I do know which unemployed individuals arranged for financial resources or applied for loans or credit during the last year. The judicial reform, if efficient, should make individuals more confident in obtaining loans and thus spur their demand. Second, in affected areas there should be more transitions towards becoming self-employed and an employer following the reform.

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I have seen in this section that judiciaries spur entrepreneurship through two mechanisms. First, they increase security of property rights and investment confidence. Second, they facilitate access to credit markets. Following Banerjee and Newman, we should see 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. Since I know in the dataset the occupational choices both at the time of the survey and a year before. I am able to test these transition predictions.

IV   Impact of the Reform on Judicial Efficiency

Considering the criticisms raised by the reform, it is necessary first 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, 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"[15]. The possibility of spillover effects allows us to consider the districts in which the affected judges operate as affected units. This will represent 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. 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. I will first describe the dataset, then explain the methodology and finally discuss the results.

IV.1 Data

A panel data set at the district judge level between 2001 and 2003 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 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. According to this matching strategy, there are 752 judges with observations in 2001 and 2002, 358 judges with observations in 2002 and 2003 and 261 judges with observations

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in 2001, 2002 and 2003 (see Table 1 for descriptive statistics of the variables used and the source of data).

IV.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 caseflow management techniques. This will thus be the main dependent variable. A difference-in-differences analysis is used, as illustrated in Figure 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 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 587.59 cases due to the reform. This effect is huge considering that Pakistani judges disposed of an average of 720 cases

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per 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 Figure 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:

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

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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. $reform_i$ 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, 2002]. 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.

IV.3   results

Table 3 shows the basic results regarding the impact of the judicial reform on judges. Column (1) provides a simple confirmation that there is non-random programme placement. The dataset is restricted to the 752 judges with an observation in 2001. The dependent variable is a dummy variable equal to 1 if the judge operates in one of the

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6 affected districts. The explanatory variable is the number of cases pending at the beginning of 2001 per judge. There is a positive correlation between the number of cases pending and the placement of the reform. The reform has in fact targeted areas with higher arrears. Column (2) 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 (3) 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 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 (4). 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 (5) adds rank dummies. 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). Accounting for rank effects, judges disposed

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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 (6) by including judge dummies[16]. The impact of the reform drops consid-
erably. 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 sig-
nificant since Pakistani judges disposed of on average 720 cases per year between 2001
and 2003. This result is robust to the inclusion of certain district time-varying control
variables. We include in Column (7) 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[17].

It is also useful to look at different judges' outcomes in order to fully understand the
reform's impact. Figure 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. Table 4 presents regression results. Column
(1) repeats the results of Table 3 Column (7) regarding the number of cases disposed
of according to the most complete specification. The dependent variable in Column
(2) is the number of cases filed by judge. This indicates that due to the reform and
accounting for common time effects, levels of district development and respect for law
and order, no extra cases were in fact filed before the same judge. This suggests that
the reform affected only the supply side of the judiciary and not its demand side[18]. As a
result, the impact on the overall duration required to treat a case is unambiguous. The

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dependent variable in Column (3) is 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. This indicates the average time it takes to treat a case if we believe the caseflow management technique to be of the "first in, first out" type. Thanks to the reform, it takes 1.4 less years to treat a case. The dependent variable in Column (4) is the ratio of the number of cases filed to the number of cases disposed. 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). It takes 1.1 less years to treat a case because of the reform.

Pakistan's judicial reform appears to have affected judges' performance. Judges dispose of 25 percent more cases because of it[19]. It takes one 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 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 caseflow 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.

V 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. They include a random sample of 370,000 individuals. 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[20], 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.[21]. 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. We will examine 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[22]. 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.

V.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 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:

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

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

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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, 2002]. 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.

V.2   Results

Table 5 examines the relationship between the reform and the two mechanisms high-lighted 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[23]. 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 reduc-

tion 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 percent. 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[24].

In Column (6) of Table 5, 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

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reform increases the likelihood of operating in the official sector by 10 percentage points. Again this is a significant effect considering that only 13 percent 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 percent 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 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 6 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

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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 percent of the unemployed took them[25]. 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 & 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 percent 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

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own account worker and finds similar results.

Table 7 investigates the relationship between the reform and the transition to entrepreneurship in various occupations. In Column (1), the dependent variable is a dummy variable equal to 1 where the individual is his own (non-agricultural) account worker (conditional on having been an employee a year ago), to 0 where he is a regular paid employee with fixed wage, a casual paid employee, a paid worker by piece rate or work performed, a paid non-family apprentice, or employer (also conditional on having been an employee the year previous). The results indicate that the judicial reform is associated with a 37 percentage point increase in such transitions. However, not enough observations have been kept for this result to have meaningful implications. Column (2) studies the transition from being an employee to an employer or one's own account worker. Results are similar. In Column (3), the dependent variable is a dummy variable equal to 1 if the individual is a employer or his own (non-agricultural) account worker (conditional on having been an account worker the year previous). Results are presented for the 14 self-representing cities in Pakistan. As predicted by the Banerjee and Newman [1993] model, there are more transitions from being self-employed to being an employer when the judiciary is more efficient.

VI   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. Caseflow 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 percent 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, have allowed us to test the two mechanisms through which judiciaries affect entrepreneurship. The judicial reform eliminated law and order situations preventing people from working, a reason cited by 10 percent 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 to 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.

I have addressed this concern in three ways. First, I explicitly tested this assumption by looking at the evolution of judges' performance and individuals' behavior in affected

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and non-affected areas one year before the reform was implemented. Second, the reform placement was an explicit function of the extent of the local judiciary's slowness prior to the reform. Thus, the estimate could potentially confound the effects of the reform with the mean reversion that would have taken place in its absence. An interacted term between reform placement and the initial level of cases pending in 2001 is included in the regressions to account for potential mean reversion. Third, the common time effects assumption is equivalent to the statement that there are no omitted time-varying and district-specific effects correlated with the reform. I have accounted for factors such as police strength to disentangle the reform's effect from any coincidental evolution in police forces.

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Notes

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

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

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

[4]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]The Pakistan Judicial Reform Project, Summer 2001, Livingston Armytage, The Asia Foundation, http://nasje.unm.edu/archives/summer01/printable.htm#pakistan

[6]The reason behind this is a shortage of prisoner-vans and an inadequate number of police staff to escort prisoners.

[7]http://www.ajp.gov.pk/docs/Technical%20Reports/Integrated_DFR%20TA3015.pdf

This report argues that research on delay reduction has shown that the primary obstacle to overcoming delay is the prevailing legal culture. Changing that culture and the broader institutional reform that must accompany it, requires innovative solutions. Pilot projects are a vital part of any large judicial reform programme seeking court modernization. Comparative experience has shown that pilot projects serve the following purposes: judiciaries develop tools to implement larger efforts; leaders are identified and created; teamwork is developed; personnel is trained and exposed to comparative experience; the costs of future reforms are more precisely determined, as is the time needed to implement them and the obstacles to further reform; the risk of waste in scaling-up reform efforts is reduced; and a vision of the change process is communicated in concrete and active, rather than rhetorical, terms. During their first two years of operation, the pilot projects were extensively evaluated and refined for replication in both medium and long term.

[8]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.

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

[10]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".

[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]First, the reform aimed at improving access to Justice by translating laws into local languages, examining barriers to women's entry into the judiciary and investigating freedom of information. Second, the reform included a judicial training aspect by enhancing the institutional capacity of the Federal Judicial Academy and by developing bench-books in law, court practice and civil and criminal court procedure for use by district judges, written wherever possible by local judges selected for their expertise in particular subjects and designed as practice (and not theoretical) manuals to assist judges in performing their judicial duties on a day-to-day basis. Third, the reform examined the possibility of creating centres of excellence in legal education and strengthening the legal profession through recommendations on admission requirements, disciplinary processes, improved legal education and legal information, and the development and reform of laws favouring a sustainable profession. Fourth, awareness of institutions was to be improved and commercial dispute resolution procedures were to be strengthened. Fifth, a modern system of judicial statistics was designed and Annual Reports were to be published by each Superior Court. Sixth, legal experts amended the Civil Procedure Code and High Court Rules on measures reducing levels of court delay, both in High and Subordinate Courts.

[13]"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.

[14]It is also interesting to note that the reform was widely discussed and criticized. It is therefore likely that individuals knew about this reform and that short-term perceptions about the judiciary changed.

[15]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.

[16]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.

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

[18]This calls for a longer term exploration of the reform's impact. It could be argued

that when the judiciary improves its efficiency, people will seek judicial help in the belief that help will be forthcoming. When people realise they can have greater confidence in the judiciary, we should see an increase in cases filed.

[19]According to the preferred specification, a "trained" judge will dispose of 166 more cases. Pakistani judges disposed of on average 720 cases per year between 2001 and 2003.

[20]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).

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

[22]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.

[23]Other reasons preventing agents from working are illness, injury, strike, bad weather and mechanical breakdown.

[24]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 available on request.

[25]I did not find any effect of the reform on other steps taken during the last year in search of work.

Appendix 1: Delay Reduction project (from Project Completion Report, Action Plan on Delay Reduction, Section2 Technical Reports):

DELAY REDUCTION PROCESSES

A.   Inventory of pending cases

The next stage in the process is to conduct a comprehensive inventory of all pending cases in each pilot court site. This inventory should provide a listing by date of filing from oldest to newest of all the cases in the court. The listing should also indicate the date of last time there was some legal process that occurred in the case and the nature of the legal action that occurred. Cases where there has not been any legal action for more than a year will be placed in a separate category labeled "inactive".

B.   Special calendar for older cases

The pilot courts should establish a special calendar every week dedicated to disposition of the older cases. The calendar should foster dispositions in the cases that are pending. In those cases where the parties indicate that they intend to continue the litigation process, the court should discuss what steps are necessary to bring to closure the case. These steps should be memorialized and agreed to in writing by the attorneys with the court. If the parties cannot agree to a course of action for the resolution of the case, the court can order the case be placed on the inactive status until the moving party indicates a plan for resolution of the case.

The conclusion of the calendar call in each of the pending cases should result in one of the following dispositions(1.) judgment based on settlement; (2.) a schedule with dates for preparation for a single trial date;(3.) a subsequent hearing date where the case will be dismissed if the parties are not ready to proceed;(4.) another hearing date where the litigants provide an update regarding the problems of finding a party or witness.

C.   Classification of cases – introduction of case 'tracks'

The age of the caseload is the barometer of the effectiveness of the caseflow management system. Consideration should be given to grouping the pending cases according to those which are the easiest to conclude. In order to determine this condition the pilot courts are going to require assistance from the Registrar's office.

D.   Resources – allocation of responsibilities to staff

Each of the pilot court programs requires a person to provide full time services. The Registrar's office is primary locus for support for the courts. A person should be designated to assist the PSC's, the Supervising District Judge and the Pilot Judges in the administration of the project. This person will develop the statistical data base for measuring the progress of the project, assist with the coordination with the Bar, provide communications with the community, coordinate the delivery and installation of equipment in the pilot courts, and maintain close daily contact with all the stakeholders in the project.

F.   Timelines and schedules

The project will conduct further workshops for participants of the pilot projects each three months, commencing in September. This will involve developing 4 sets of plans each lasting for 90 days over the next twelve months. At each quarterly meeting the pilot courts will review their progress to date and make revisions accordingly. In this manner the projects can take advantage of the evolving nature of the process.

WORK PLAN FOR PILOT COURT JUDGES AT LAHORE

Under the given circumstances the pilot courts at Lahore shall try to improve their output and reduce the delay in the disposal by adopting following measures.

1. Presiding Officer shall himself fix the cases for daily cause diary.

2. In the daily cause diary, date of institution of each case shall be written against it so that while dealing with the cases on the fixed date the old cases remain in notice of the court.

3. Cause list should be balanced.

4. While preparing daily cause diary following points shall be kept in mind:

a) Number of cases to be fixed

b) Nature of cases

c) Fixing of cases keeping in mind how much time different cases are likely to take

d) Old and commercial cases shall take priority.

5. Before leaving the court, the Presiding Officer shall have a glance at the cases fixed for the next day to chalk out a strategy as to how to deal with them. In such a manner the old cases, the cases of commercial nature and other cases requiring early disposal shall be given special attention.

6. If miscellaneous applications are moved the presiding officer shall not stay the main suit. The proceeding of the suit shall continue and for disposal of application short adjournments shall be given.

7. In cases where it is permissible under Rule 10A of Order 5 CPC, the summons shall be sent by registered post A/D, and subject to provision of Rule 20 substituted service shall be ordered.

8. For effecting service of the witnesses who are to be served through court, summons shall be sent through the process-serving agency and through registered letter with acknowledgment card through post to ensure service.

9. Coercive measures like attachment of salary and issuance of warrants can also be adopted, where the witnesses fail to attend court despite the service of summons to him/her.

10. Adjournments shall not be granted unnecessarily.

11. Following provisions of C.P.C. shall be put to use in order to eliminate procedural delay:-

a) Order X C.P.C. (examination of Parties)

b) Order XI C.P.C (Discovery and inspection)

c) Order XII C.P.C. (Admissions)

d)   Order XV C.P.C. (Disposal of suit at first hearing)

e)   Order XIV Rule 4 C.P.C (Examination of parties before framing issues).

f)   Order XIV Rule 2 C.P.C. (Framing of preliminary issue on question of law and decide it first)

g)   Order 8 rule 9 C.P.C. (Court can ask both parties to submit subsequent pleadings.

h)   Order 6, Rule 5 C.P. C (Better statement of parties)

12.   Under section 30 C.P.C., the court can suo moto make such order as may be necessary or reasonable in all matters relating to the delivery and answering of interrogatories, the admission of documents and facts and the discovery and inspection.

13.   It shall be ensured that all documents in possession of the plaintiff and defendant or on which they rely are attached and relied by them so that on the first date of hearing for settlement of issues, the court may be in a position to frame issues to start with the trial out wastage of time. (Relevant Provisions: Order 5, Rule 3; Order 7, Rule 14; Order 8, Rule 1 and Order 13, Rule 1 C.P.C)

TABLE I: 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
Number of Cases filed during the period	2783	793.36	1107.50	Justice Commission of Pakistan,
Number of Cases disposed during the period	2783	719.62	928.80	Annual Reports, Reports of the
Number of Cases pending at the end of the period	2783	553.95	896.53	Courts, http://www.ljcp.gov.pk/
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	
Does the enterprise (individual ownership) keep written accounts?	36765	0.13	0.34	
Work at own dwelling (not on street, in a shop, business, or industry)	95502	0.11	0.31	
In search of work, arrange for financial resources, apply for loan?	162092	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	Federal Bureau of Statistics
Transition to employer from unemployed	3065	0.005	0.07	Labor Force Surveys
Transition to own account worker from unemployed	3065	0.09	0.29	2000, 2002, 2004
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	372829	0.52	0.5	
Age	372829	21.98	18.11	
Education level (degree achieved)	372829	2.96	2.43	
Residence status	372829	1.01	0.11	
Migration history (living since birth in this district(=0) or has migrated?)	372829	0.09	0.29	

TABLE II: DIFFERENCE-IN-DIFFERENCES ANALYSIS:
IMPACT OF THE JUDICIAL REFORM ON THE NUMBER OF CASES DISPOSED BY JUDGES

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

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Table III: Impact of the Reform on Cases Disposed per Judge

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Reform	Number of cases disposed per judge					
Number of cases pending at the beginning of 2001 per judge	0.0002 (1.90)*						
reform*2003		675.3296 (3.89)***	444.2570 (3.20)***	410.5463 (3.45)***	439.4594 (3.63)***	165.9326 (2.37)**	182.2839 (2.49)**
Reform		34.9619 (0.23)	-238.8974 (2.37)**	-204.8331 (2.23)**	-184.1619 (1.79)*		
Number of cases pending at the beginning of 2001 per judge placement of the reform			0.7396 (8.78)***	0.7392 (8.72)***	0.7029 (6.37)***		
reform*2002				-69.0500 (0.65)	-76.5783 (0.71)	-17.9801 (0.15)	-50.1059 (0.45)
Year Fixed Effects	No	Yes	Yes	Yes	Yes	Yes	Yes
Judge Fixed Effects	**No**	**No**	**No**	**No**	**No**	**Yes**	**Yes**
Rank Fixed Effects	No	No	No	No	Yes	No	No
District Controls	No	No	No	No	No	No	Yes
Observations	752	2782	1785	1785	1785	2782	2531
R-squared	0.04	0.05	0.05	0.05	0.07	0.84	0.85

The Table reports judge level OLS estimates of equation (1). Robust t statistics in parentheses, standard errors clustered at the level of district. * significant at 10%; ** significant at 5%; *** significant at 1%. In column 1, the dependent variable 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 districs to 1 in 2003. The interacted term "Reform*2002" is equal to 1 for the mentioned districs 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.

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TABLE IV: IMPACT OF THE REFORM ON OTHER OUTCOMES OF JUDGES

	(1)	(2)	(3)	(4)
	Number of cases disposed per judge	Number of cases filed per judge	(penbeg+filed)/disposed	filed/disposed
reform*2003	182.2839	8.2959	-1.4020	-1.0906
	(2.49)**	(0.12)	(2.03)**	(2.20)**
reform*2002	-50.1059	-21.9030	-0.4890	-0.0898
	(0.45)	(0.17)	(0.41)	(0.16)
Year Fixed Effects	Yes	Yes	Yes	Yes
Judge Fixed Effects	Yes	Yes	Yes	Yes
District Controls	Yes	Yes	Yes	Yes
Observations	2591	2591	2544	2544
R-squared	0.85	0.89	0.94	0.95

The Table reports judge level OLS estimates of equation (1) with different judge outcomes. Robust t statistics in parentheses, standard errors clustered at the level of district. * significant at 10%; ** significant at 5%; *** significant at 1%. Reform is a dummy variable 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 districs to 1 in 2003. The interacted term "Reform*2002" is equal to 1 for the mentioned districs to 1 in 2002. "(penbeg+filed)/disposed" is equal to the ratio of cases pending at the beginning of the period plus the number of cases filed divided by the number of cases disposed during the period. It is a measure of the average duration it takes to treat a case if cases are treated on a first in, first out basis. "filed/disposed" is a measure of the average duration it takes to treat a case if cases are treated on a last in, first out basis. District controls are number of police posts by district, number of cinemas by district, seating capacities of cinemas by district.

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TABLE V: 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		personal reason	written accounts	own dwelling	arrange for financial ressources,
	did not work last week							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	10169	93356	58046
Pseudo R2	0.15	0.14	0.20	0.20	0.21	0.08	0,05	0.02

The Table reports individual level probit estimates of equation (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 ressources, applied for loan, credit during the last year, in search of work. Individual controls are sex, age, education level (degree achieved), residence status, 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.

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Table VI: 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 R2	0.19	0.19	0.06	0.30	0.07

The Table reports individual level probit estimates of equation (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 Self employment given the necessary resources & facilities as opposed to Full-time paid employment with government, Full time paid employment with private business, industry, Other type 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 one year ago. Results are presented for the 14 self-representing cities in Pakistan. Individual controls are sex, age, education level (degree achieved), residence status, 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.

TABLE VII: IMPACT OF THE REFORM ON TRANSITION OUT OF SALARIED EMPLOYMENT AND SELF-EMPLOYMENT

Transition to	(1)	(2)	(3)
	own account worker	employer or own account worker	employer or own account worker
Conditional on being 1 year ago	employee	employee	own account worker
reform*2004	0.3709	0.3748	0.1054
	(9.39)***	(9.26)***	(7.27)***
reform*2002	0.0893	0.1006	0.0561
	(1.30)	(1.70)*	(1.49)
Year Fixed Effects	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes
District Controls	Yes	Yes	Yes
Observations	124	124	1944
Pseudo R2	0.21	0.21	0.13

The Table reports individual level probit estimates of equation (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 is an own account worker (non-agricultural) conditional on being an employee one year ago, to 0 if he is a regular paid employee with fixed wage, casual paid employee, paid worker by piece rate or work performed, paid non-family apprentice, employer; conditional on being an employee one year ago. The dependent variable in column 2 is a dummy variable equal to 1 if the individual is an employer or own account worker (non-agricultural) conditional on being an employee one year ago. The dependent variable in column 3 is a dummy variable equal to 1 if the individual is an employer or own account worker (non-agricultural) conditional on being an own account worker one year ago. Results are presented for the 14 self-representing cities in Pakistan. Individual controls are sex, age, education level (degree achieved), residence status, 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.
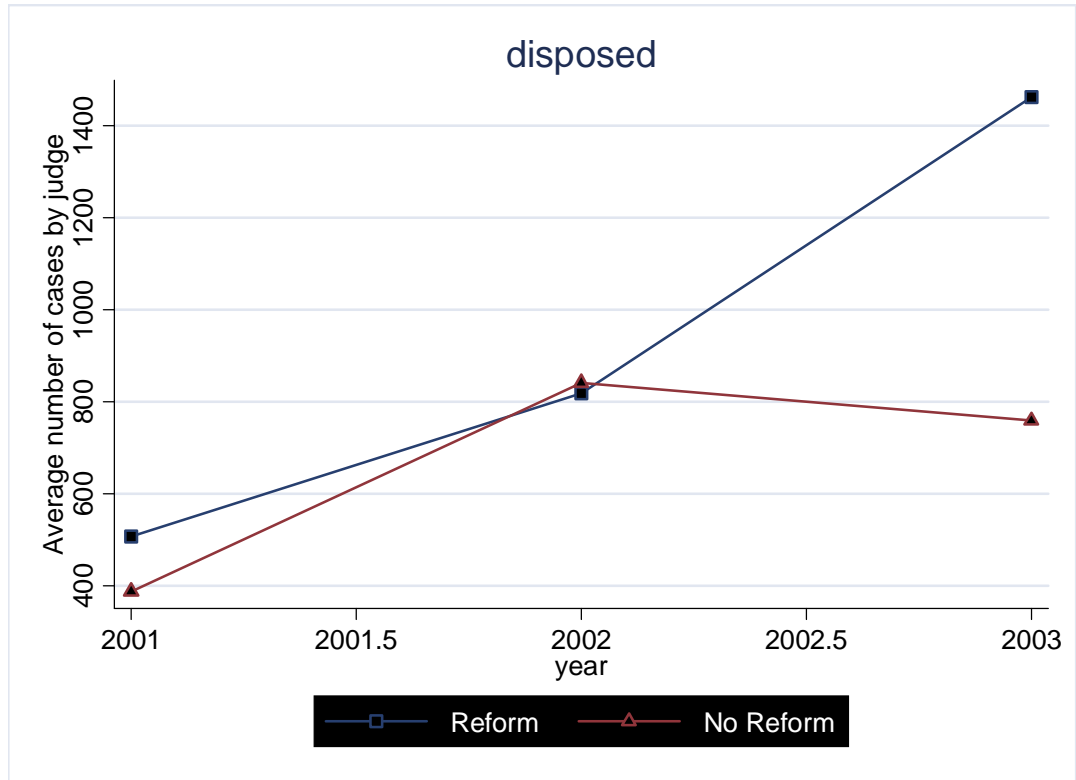
Figure I: Mean Number of Cases Disposed in Treated Districts (Square) as Opposed to the Mean Number of Cases Disposed in Non-Treated Districts (Triangle) Between 2001 and 2003.
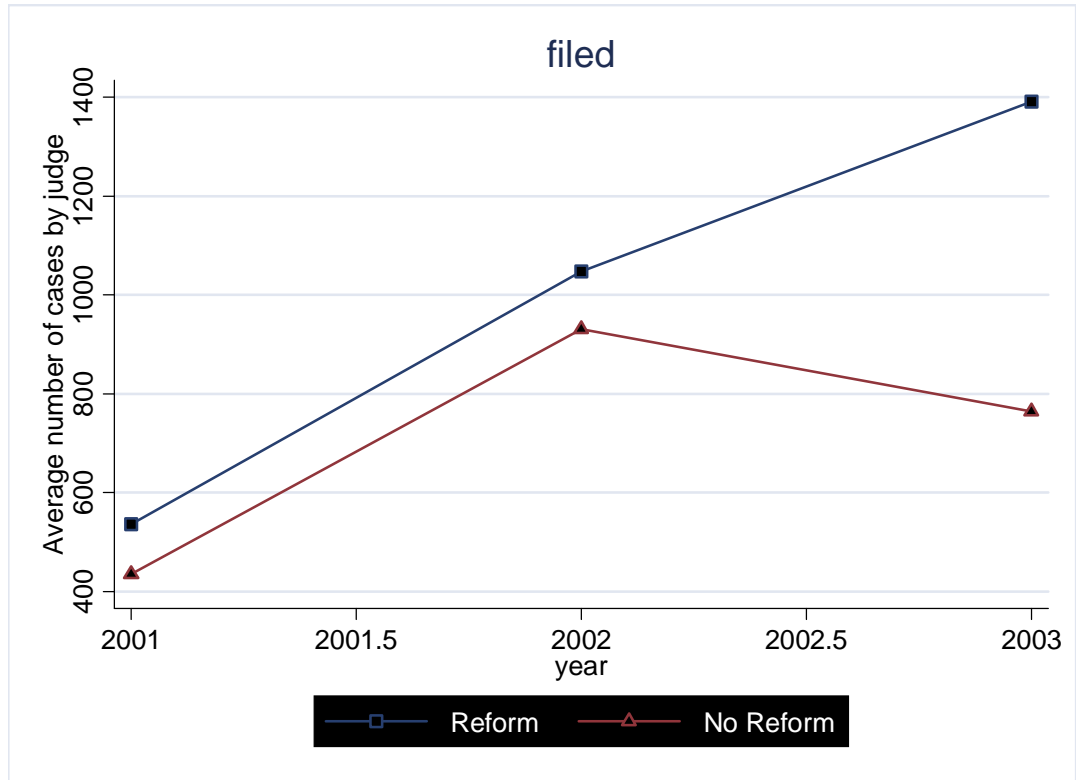
Figure II: Mean Number of Cases Filed in Treated Districs (Square) as Opposed to the Mean Number of Cases Filed in Non-Treated Districts (Triangle) Between 2001 and 2003.