THE PROBLEM OF COURT CONGESTION: EVIDENCE FROM INDIAN LOWER COURTS

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We thank Joachim von Braun and Bibek Debroy for their support and helpful comments in pursuing this research. We are also grateful for comments from Christina Jones-Pauly, Stephan Klasen, and Dhammika Dharmapala. Any errors are the sole responsibility of the authors.

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Abstract

This paper explores the problem of court congestion in Indian lower courts. We use several measures to capture court congestion. These include: caseloads per capita and per judge, the number of cases older than a year per capita and per judge, and congestion rates calculated as the ratio of cases older than a year to cases disposed. We conclude that the Indian state judiciaries differ with respect to the nature and level of congestion they face. We can also identify the reasons why some judiciaries are more congested than others. The results show that large number of judges per capita is negatively related to congestion rates, while judgeship vacancies have significantly positive effect on caseloads per judge. Court productivity captured by the clearance rates has a significant and negative effect on both caseloads and congestion rates and seems to be crucial for the effectiveness of congestion-reduction programs. Finally, judiciaries with lower litigation rates display relatively better performance with respect to current caseloads, but are not efficient in addressing the "real" backlogs of cases pending for more than a year.

Keywords: court congestion, legal reform, India.
JEL Classification: **K40** Legal Procedure, the Legal System, and Illegal Behavior; **K41** Litigation Process.

I. Introduction

Court congestion, legal costs, and delays are the problems most often complained about by the public in most countries, and thus often perceived as the most pressing (Buscaglia & Dakolias, 1996; Brookings Institution, 1990). India is not an exception. The popular press and court administrators from year to year described the condition of the Indian judiciary as "beyond redemption," "distressing," or "a huge problem." In 2001 the Union Minister of Law commented: "If there is one sector which has kept away from the reforms process, it is the administration of justice."[1]

In India congestion and delays are pervasive in administration of both civil and criminal justice. There are about 20 million cases pending in lower courts and another 3.2 million cases in high courts.[2] According to Nagaraj (1995), a termination dispute that is contested all the way can take up to 20 years for disposal.[3] In the Principal Labor Court in Bangalore, for instance, 90 percent of termination disputes are not disposed of within a year. Writ petitions in high courts take about 8-10 years and in some courts nearly 20 years for disposal. The dockets of civil cases have been overcrowded and it may take years to get a trial on merit.

Large backlogs of cases and delays may affect both the fairness and efficiency of the judicial system, which in turns weakens democracy, the rule of law, and the ability to enforce human rights. To solve the problem, the Indian government has launched a number of judicial reforms. In addition, economists and judicial scholars have paid increasing

[1] R. N. Malhotra Memorial Lecture on "India's Judicial Reforms", at India International Centre, New Delhi, February 14, 2001.
[2] There are also pending cases in various tribunals. However, the precise number of pending cases in the tribunals is not known.

attention to the problem of court congestion (e.g., Dhawan, 1978; Khan et al. 1997; Rao, 2001). The problem has been, however, the lack of systematic data on court congestion, performance and efficiency. Data of relatively good quality have been available only for the Supreme Court and high courts, while data for lower courts were only presented in a highly aggregated form (e.g., at the country level). The lack of relevant data and solid empirical analysis has hampered policy prescriptions, which then invariably tended to lose focus. As a result, the attempts to solve the problem of court congestion have produced half-hearted results. Except for the Supreme Court, where arrears have decreased significantly, the other tiers of justice have only been strained further.

This paper aims to describe, analyze and explain the problem of court congestion in Indian lower courts and to provide data and advice to those designing, undertaking or evaluating legal and judicial reforms. In so doing, it focuses on a distinct set of indicators of judicial performance, including pending cases, clearance rates, and incoming cases. In particular, we have assembled a data set of congestion and performance indicators covering 27 states and union territories (UTs) over the period 1995-99. An important advantage of our data set is that it allows us to abstract from an international platform and focus on internal differences of a decentralized judiciary. This guarantees a common institutional framework in which the judicial quality is measured and not different systems.[4]

[3] If land is involved, it may take even longer time for disposal; a particular land-related case took more than 600 years to be resolved (Debroy, 2000).

[4] Cross-country studies on judicial performance are often subject to criticism, as each country has its own legal framework and legal culture. The main problem is related to comparability of institutions: the jurisdiction of courts might not be the same in different countries; what is a commercial case in one country might be classified as criminal in another; etc.

In India, lack of judges has been historically cited as the main reason for court congestion and delays.[5] Indeed, the number of judges per capita has been low compared to other countries. For instance, data for 30 selected countries from the World Bank *Justice Sector at a Glance* database indicate that in 2000 the average number of judges per 100,000 inhabitants was 6.38.[6] The corresponding number for India is about 2.7 judges.[7] Without a closer analysis, however, one cannot draw the conclusion that the court system is to blame for the backlogs because it is understaffed or underfunded. As our analysis shows, while the number of judges may still be important, this factor is hardly ever the only cause for the deficiencies.[8]

Our approach consists of the following steps. First, we construct several measures of court congestion. This allows us to identify the nature and level of court congestion across the Indian states, and to perform a number of checks on our results. Second, we ascertain structural and procedural problems of the court system by examining empirically the relative importance of both supply- and demand-side factors affecting court congestion. This helps to identify the reasons why some state judiciaries face larger caseloads or higher congestion rates than others. Third, having identified the most important determinants of court congestion, we attempt to pinpoint judicial areas in need of decongestion reform and the substantive nature of reforms that may be useful.

[5] See Section II.B for more on this issue.
[6] The number of judges per 100,000 inhabitants ranged from 0.13 in Canada to 23.21 in the Slovak Republic, not showing significant correlation with GDP per capita. It should be noted, however, that for some of the countries the statistics covered only the federal court system (excluding the state or provincial court systems).
[7] The *actual* number of judges is even lower since the calculation is based on the sanctioned judge strength, not accounting for vacancies. This is a point we will return to later (see Section III.A).
[8] This is in line with Hammergren's (2002) conclusion that in Latin America the traditional, institutionalized remedies have not worked any miracles and occasionally have even made things worse.

The rest of this paper is organized as follows. Section II presents an overview of the Indian judicial system and reviews the literature on the congestion problem in Indian courts. A discussion of the data, the variables used in the study, conceptual issues related to variables introduced to measure court congestion, and the econometric analysis is given in Section III. Section IV concludes by summarizing the main findings of our analysis and outlining strategies for further research.

II. Institutional Framework

A. Context

In terms of structure and procedure, India's legal system is based on English common law, codified laws, and non-codified religious and customary laws. The judiciary is vertically structured with the Supreme Court at the top. The Supreme Court exercises appellate jurisdiction for final appeals in civil, criminal and administrative matters, as well as original jurisdiction in constitutional matters.[9] The state judiciary consists of a high court and lower courts. The high courts have the appellate jurisdiction for the lower courts in the respective state or assigned union territory.[10] They establish the administrative procedures for the lower courts and, through precedent, outline standards the interpretation of the *Code of Civil Procedure* and the *Indian Evidence Act* for civil and administrative cases and the *Code of Criminal Procedure* for criminal cases.

[9] The original jurisdiction of the Supreme Court also extends to any dispute between the Union and the states or between the states.

[10] Only six of the high courts (the high courts of Chennai, Delhi, Himachal Pradesh, Jammu and Kashmir, Kolkata, and Mumbai) exercise original jurisdiction, i.e. civil suits can be directly filed in these courts, provided the monetary value of the suit is above a certain amount.

The lower judiciary consists of district, subordinate, sessions, and magisterial courts. The first two cater to civil cases and the latter two deal with criminal cases. In addition, there are other types of courts such as specialized tribunals (e.g., labor, land, and tax tribunals), consumer courts, family courts, etc. The tribunals were created because they were thought to be faster than the court system, being free of cumbersome procedures. However, decisions taken in tribunals are not final, as there is always scope for appeal to the high courts and the Supreme Court.

The system of alternative dispute resolution is in its nascent stage. In this regard, the system of Lok Adalats is an interesting experiment. The Lok Adalats were initiated in the late 1970s as a system of voluntary organizations for informal dispute resolution to provide cheap legal services to the poor.[11] There is also an additional layer of informal rural judiciary. Panchayats are traditional institutions for individual dispute resolution, administrative issues, and allocation of common goods in rural areas. Unfortunately, there is no comprehensive statistical data on the use of Lok Adalats or Panchayats.[12]

B. Literature Overview

Among academic attempts, only Dhawan (1978, 1986) studied extensively the problem of judicial delays in India. However, his work was confined to the Supreme Court and was conducted in the late 1970s and the early 1980s, a period when a

[11] The *Legal Services Authorities Act* of 1987 regulates the Lok Adalats as voluntary agencies utilizing arbitration and conciliation.

[12] Examining court congestion in conjunction with alternative ways to settle disputes could provide valuable insights. However, what happens outside the courts system is hard to measure and is outside the scope of this study. We will just mention here that conciliation, mediation, and arbitration have never taken off in India. One of the problems with conciliation and mediation has been a lack of credible conciliators and mediators. Arbitration, on the other hand, has not been freed from the apron strings of courts. For a more extensive discussion on the alternative dispute resolution mechanisms in India, see Debroy (2000).

considerable backlog of cases existed in the Supreme Court. Recently the Supreme Court has managed to drastically reduce its arrears and now the backlog there is trivial.

Apart from the work of Dhawan, the literature on court congestion is official, i.e. it is compiled in various reports by the Law Commission of India (LCI) and special committees appointed by the Government of India (GOI). Most of these reports tend to expound in detail various procedural aspects that the high courts as well as the cases are subject to. In the process, the reports usually get caught in the quagmire of myriad procedural laws. This deters any policy maker who does not have a legal background. Therefore, our primary attempt has been to delineate the legal predicament from the problem of court congestion and present the enormity of the impasse in simple terms and language.

One of the first government efforts to study the efficient functioning of the judicial system was undertaken by the Civil Justice Committee in 1924, also known as the *Rankin Committee Report*. The report contained a "note on causes of delay in civil courts" and listed the insufficient judge strength in some of the high courts as the main cause for delays. The High Court Arrears Committee, set up in 1949 under Justice S. R. Das, recommended that inordinate delays in filling up vacancies in the high court bench should be avoided as much as possible. The committee also advocated an immediate increase in the judge strength of high courts, which had not been commensurate with the existing volume of work.

The LCI was constituted in 1955 to undertake the task of reviewing the system of judicial administration in all its aspects. The *14th Report of the LCI* chided bureaucratic obstacles posed by the Ministry of Home Affairs in increasing the judge strength, which

in its view had led to accumulation of arrears (LCI, 1958). It advocated a limited role of the state executive in the matter of appointment of judges and also mentioned the delays in filling up vacancies as well as unsatisfactory appointments in high courts. The High Court Arrears Committee, appointed in 1972 under Justice J. C. Shah, expressed the same views (GOI, 1972). It recommended an increase of the permanent judgeships in high courts and appointment of additional and *ad hoc* judges for clearing the arrears. These observations were reiterated in the *79th Report of the LCI* (LCI, 1979) and in the *31st Report of the Estimates Committee* (GOI, 1986a).

The *121st Report of the LCI* (LCI, 1987) and the *124th Report of the LCI* (LCI, 1988) reiterated the earlier views on filling up vacancies expeditiously, augmenting the judge strength and appointing *ad hoc* judges to tackle the problem of arrears. The *Report of the Arrears Committee* (GOI, 1990), known as the *Malimath Committee Report*, also agreed with these views. It concluded that various reports "in one voice" highlighted the same factors, but "nothing worthwhile appears to have been done, resulting in worsening of the problem of arrears."

We can conclude that the main focus of the government reports has been on the supply-side solutions to the problem of court congestion. However, since recently increasing attention has been paid to the need to tackle the problem from the demand side by looking at the areas wherein litigation is at the maximum, and then devising methods to curtail frivolous litigation. The *Report of Justice Satish Chandra Committee* (GOI, 1986b) and the *Malimath Committee Report* are dealing extensively with reforms that can lead to a decline in the litigation rates. Both reports have identified a host of demand-related reasons for the congestion problem in Indian courts, including the original civil

jurisdiction of some high courts, accumulation of first appeals, extensive use of second appeals, granting of unnecessary adjournments, etc.

In summary, the government reports have mainly pointed out the infrastructure bottlenecks associated with dispute resolution as the main culprit. However, the reports have not tried to estimate the extent of infrastructure requirements and very little has been said about the congestion problem in lower courts. We next turn to an empirical estimation of the relative importance of both supply- and demand-side factors identified in the government reports as the most important causes of court congestion.

III. Data and Empirical Results

A. Data and Variables

The analysis that follows is mostly based on raw data provided by the Ministry of Law, Justice, and Company Affairs of the Government of India. Data were available for 27 states and UTs during the period 1995-99. We could collect a comprehensive data set of various judicial indicators, including civil and criminal caseloads, civil and criminal litigation, disposed cases, number of judges, vacancies, etc.[13] We were also able to compute indicators of judicial performance, such as clearance rates. Finally, we were able to differentiate among cases based on their duration. In the interest of brevity, only the results of the analysis using the data on civil and total (civil and criminal) cases are presented.[14]

[13] In India the civil law cases include personal contract and property disputes, rather than just the narrower group of commercial cases.
[14] The analysis based on criminal cases produces qualitatively similar results. These results are available from the authors upon request.

Table 1 presents definitions and summary statistics of the variables used in this study. The first problem is how to normalize the variables in order to account for significant variations in population and judicial infrastructure across the Indian states and UTs. In the absence of data on the total number of transactions or disputes, or even the number of legal entities that may be eligible to file these cases, we use both the per capita and per judge numbers as the normalization.[15]

We first focus on the dependent variable, i.e., on the court congestion. Of 20 million pending cases in Indian lower courts, criminal cases constitute around two-thirds, while civil cases make up one-third of the total caseload.[16] About 63 percent of civil cases are more than a year old (31 percent are more than 3 years old), while 59 percent of criminal cases are more than a year old (25 percent are more than 3 years old). This implies that civil cases tend to be dragged on for longer periods. The main reason is that for various (mostly non-judicial) reasons criminal cases get higher priority. Since most civil cases are commercial disputes, this hampers the settlement of economic disputes, leading to higher transaction costs and general inefficiency in commercial activity.

[15] On the problem of normalization for comparative purposes, see Ietswaart (1990).
[16] For criminal cases, the magisterial courts account for about 90 percent of the caseload.

Table 1: Variable Definitions, Sample Means and Standard Deviations

Variable	Definition	Mean	σ
LDT_pc	Total caseload per capita	0.020	0.017
1YT_pc	Number of cases older than a year per capita	0.011	0.010
LDCI_pc	Civil caseload per capita	0.007	0.006
1YCI_pc	Number of civil cases older than a year per capita	0.004	0.004
LDT_pj	Total caseload per judge (in 000)	1.625	1.354
1YT_pj	Number of cases older than a year per judge (in 000)	0.889	0.869
LDCI_pj	Civil caseload per judge (in 000)	0.590	0.421
1YCI_pj	Number of civil cases older than a year per judge (in 000)	0.353	0.285
CNRT	Total congestion rate (the ratio of total cases older than a year to total cases disposed)	0.762	0.567
CNRCI	Civil congestion rate (the ratio of civil cases older than a year to civil cases disposed)	1.244	0.987
JUD	Actual number of judges (the sanctioned judge strength minus vacancies) per 1,000 inhabitants	0.026	0.053
VAC	Vacancy (the ratio of unfilled judicial posts to sanctioned judge strength)	0.080	0.091
CLRT	Total clearance rate (the ratio of total cases disposed to total cases filed)	1.044	0.198
CLRCI	Civil clearance rate (the ratio of civil cases disposed to civil cases filed)	0.993	0.157
LTGT_pc	Total litigation (the number of total cases filed) per capita	0.017	0.018
LTGCI_pc	Civil litigation (the number of civil cases filed) per capita	0.004	0.004
LTGT_pj	Total litigation (the number of total cases filed) per judge (in 000)	1.342	1.228
LTGCI_pj	Civil litigation (the number of civil cases filed) per judge (in 000)	0.354	0.313
Log(GDP)	Logarithm of real Net State Domestic Product per capita	4.595	0.466

Notes: The means and standard deviations are calculated for the pooled data set, i.e. across all Indian states and UTs over the period 1995-99.

In our analysis we use several measures of court congestion. This allows us to identify the nature and level of court congestion across the Indian states and to perform robustness checks on our findings regarding the effect of different factors. Standard indicators of court congestion include caseload per capita (LDT_pc, LDCI_pc) and caseload per judge (LDT_pj, LDCI_pj). Although the caseload does not provide information on the delays within the system, this indicator usually reflects the situation perceived by the population. Namely, the more cases are pending in the system, the less a quick decision can be expected. Among the Indian states and UTs used in the study, Gujarat has the highest average backlog of 70 cases per 1,000 inhabitants, followed by Chandigarh and Delhi with pendency figures of 66 and 36 cases, respectively. With the number of cases per judge varying from about 7 in Arunachal Pradesh to 6,240 in Gujarat, the mean across the sample is 1,625; in the U.S. state courts the mean is 1,164 (Dakolias, 1999).

The measures based on caseload per capita or per judge do not take into account that most cases require a certain minimum timeframe to be disposed. An operational definition of backlog would consider only cases still pending after a certain period of time. We assume that only cases older than a year constitute the "real" backlog and construct two additional measures: the number of cases older than a year per capita (1YT_pc, 1YCI_pc) and per judge (1YT_pj, 1YCI_pj).[17] According to these measures, the problem of congestion is mainly concentrated in Goa, Gujarat, Chandigarh, Maharashtra, and West Bengal.

[17] Additional research is needed to determine what time periods are reasonable for case resolution in the context of Indian judiciary.

The last measure we use is the congestion rate (CNRT, CNRCI) calculated as the ratio of backlog of cases older than a year to cases disposed. This measure reflects the time it would take a court to dispose of the cases older than a year given its current efficiency and clearance rates.[18] For instance, given the current productivity of courts in Bihar, it would take more than 2 years to dispose of their "real" backlogs, while courts in Mizoram would need less than a month. For civil cases, the expected time for disposition of the "real" backlog ranges from about a month in Mizoram to more than 4 years in Bihar.

Table 2 shows the correlation coefficients of the various measures of court congestion defined above. While the measures based on caseloads and the number of cases older than a year are strongly correlated among each other, their correlation with the congestion rates is much weaker. That is, the states with highest caseloads do not necessarily have the highest congestion rates. This anticipates the findings of our econometric analysis: the nature and level of court congestion differs across the states and, therefore, the set of judicial reforms to be considered in each state might also differ.

[18] The ratio has no units and multiplying it by 12 gives the figures in months.

Table 2: Correlation Matrix for Various Indicators of Court Congestion

Variable	Variable									
	LDT_pc	1YT_pc	LDT_pj	1YT_pj	CNRT	LDCI_pc	1YCI_pc	LDCI_pj	1YCI_pj	CNRCI
LDT_pc	1.00	0.89**	0.93**	0.81**	0.18*	0.78**	0.77**	0.73**	0.78**	0.37**
1YT_pc		1.00	0.87**	0.93**	0.40**	0.69**	0.80**	0.66**	0.82**	0.48**
LDT_pj			1.00	0.92**	0.24**	0.65**	0.64**	0.78**	0.82**	0.38**
1YT_pj				1.00	0.42**	0.54**	0.63**	0.67**	0.82**	0.51**
CNRT					1.00	0.08	0.25**	0.10	0.28**	0.81**
LDCI_pc						1.00	0.95**	0.86**	0.84**	0.14
1YCI_pc							1.00	0.78**	0.87**	0.30**
LDCI_pj								1.00	0.93**	0.18*
1YCI_pj									1.00	0.37**
CNRCI										1.00

Notes: The correlation coefficients are calculated for the pooled data set, i.e. across all Indian states and UTs over the period 1995-99.
** Correlation is significant at the .01 level
* Correlation is significant at the .05 level

Our set of independent variables consists of indicators measuring various aspects of judicial performance. The first independent variable of interest is the number of judges per 1,000 inhabitants (JUD). In particular, we look into the effect of the *actual* judge strength defined as the difference between the sanctioned judge strength (the number of allowable or "desirable" judgeships in the respective courts) and the number of vacancies. Assam, Uttar Pradesh and West Bengal have the lowest number of judges per capita.[19]

According to the Constitution, the power to appoint judges and determine the judge strength of high courts is vested in the President. As for the lower courts, the Chief Justice of the respective high court determines the number of judges and this figure is supposed to be calculated based on caseload, case content, case delay and other factors.[20] This implies that JUD could be endogenous with our measures of court congestion. However, the Hausman test could not confirm any endogeneity and we did not instrument this variable.[21] This is understandably so since quantitative data on judicial backlogs and performance were, at least until recently, very poor. Thus, in reality the number of judges could not have been determined based on congestion data.

The second independent variable of interest is the percentage of vacancies (VAC). This is an important variable in the Indian context, since most Indian courts have vacancies and are very seldom at full strength. The problem is most severe in Delhi,

[19] Unfortunately, it is not possible to break up the number of judges into judges that deal only with civil cases or only with criminal cases.
[20] The Supreme Court authorizes expansions in lower court judgeships suggested by the Chief Justice. As in other countries, politics plays a role in both the calculation of the number of judgeships by the Chief Justice and the court expansion decisions of the Supreme Court. See de Figueiredo et al. (2000) for interesting findings on how much politics matters in comparison with caseload pressure when it comes to court expansion decisions of the Congress in the USA.
[21] The Hausman test could not reject the null hypothesis regardless of whether we used the actual or the sanctioned judge strength in our specification.

where almost 40 percent of the judicial posts are unfilled. One of the reasons for vacancies is that a large number of judges are appointed for chairmen of various commissions, committees, etc. Another, probably more important, reason are the delays in appointment of judges.[22] The Chief Justice should be in a position to determine when a vacancy is coming up and initiate the proposal well in advance. However, such advance planning is seldom done. Furthermore, district court appointments are made by the governor of the state, who consults with the Chief Justice. The governor has to check the integrity of the candidate and this also takes a long time. Indeed, there is a stipulated time of one month by which the governors have to give their opinion, but this deadline is seldom obeyed, nor is there any effort to strictly enforce it.[23]

The third independent variable is the clearance rate (CLRT, CLRCI), measured as the ratio of cases disposed to cases filed. This indicator is a measure of court productivity in dispute resolution and a determining factor in the growth of pending cases. Only when the clearance rate is greater than 100 percent are the courts able to catch up on case backlogs. The total clearance rate (CLRT) varied significantly across the Indian states and UTs with some of the lowest values calculated for Andaman & Nicobar (70 percent) and some of the highest in Manipur (242 percent). However, for most states the CLRT remained between 90 and 105 percent. This is similar to the United States, which has a median clearance rate of 97 percent in its state courts, and stands in sharp contrast to many developing countries that have much lower clearance rates and are not able to meet the demand for judicial services.[24]

[22] The Malimath Committee Report deals extensively with various causes of vacancies.
[23] Frequently, the governor recommends his own candidate and a new proposal has to be drawn up, delaying further the appointment process.
[24] Clearance rates in U.S. state courts vary from 35-266 percent (Dakolias, 1999).

The fourth independent variable is litigation (LTGT, LTGCI), which measures the number of new cases filed each year. The number of cases filed per capita or per judge is usually used to determine the demand on the court system, the expected caseload, and the ability of the court system to manage the national docket.[25] In India the situation is somewhat special, given the fact that courts are slow and overburdened but nevertheless heavily used. The average number of filed cases per judge during the 1995-99 period was about 1,300 which is again comparable to the U.S. average.[26] The courts in Chandigarh have the highest workload, reporting on average 6,000 filed cases per judge.

Since the large backlogs and delays might be an additional incentive for litigants to misuse the court system by fraudulent litigation, the litigation variables could be endogenous.[27] Alternatively, as noted by Priest (1989), the extent of congestion could have an important influence on the motivations of the parties to settle or litigate a dispute. Indeed, the endogeneity of the litigation variables was confirmed by the Hausman test and they were instrumented for use in our regressions. We used the following instruments: cases disposed per capita (or per judge), population density, percentage of urban population, literacy rates, and Panchayats per capita.

Finally, since the level of economic development might be an important explanatory variable, we control for per capita income, i.e., the logarithm of per capita Net State Domestic Product in constant 1980 Rupees.

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[25] The number of cases filed per year may not reflect the full demand on the judiciary, however, as it does not account for those disputes not filed because of resource constraints of the parties, lack of confidence in the judicial system or other reasons.

[26] In contrast, German judges receive only 176 cases per year (Dakolias, 1999).

[27] Indeed, the early and very influential study by Zeisel et al. (1959) has been largely criticized for its failure to account for endogeneity of litigation. That is, the authors presumed that the rate that disputes were brought to litigation was exogenous with respect to court congestion.

B. Econometric Analysis

Our data set combining time series and cross sections calls for a panel analysis. Although data are available only from 1995-99, the data set includes 27 Indian states and UTs that display considerable variation, thus reducing the risk of spurious results and weak inferences. Tables 3 and 4 report the results of fixed effects regressions.[28] The state fixed effects account for unmeasured factors determining court congestion, such as a jurisdiction's local legal culture and its informal rules of litigation behaviour. The standard errors are listed in parentheses below the variables. All significance tests are two-sided asymptotic *t*-tests that are consistent in the presence of heteroskedasticity. Since autocorrelation was detected for the pending cases older than a year, the FGLS procedure was used (Greene, 2003) and AR(1) consistent standard errors are listed for regressions (2), (4), (8), and (10).

We first run a set of regressions to examine the effects of independent variables on total caseloads (Table 3). As shown by our estimates, the number of judges per capita appears to offer little in the way of explaining the total caseloads. The coefficient on JUD has a significantly (though only marginally) negative effect only on the congestion rates, while its effect on the other measures of court congestion is insignificant. This allows us to conclude that increasing the number of judges may not always solve the problem. Similarly, the coefficient on vacancies is mostly insignificant. However, eliminating the vacancies seems to be particularly important in jurisdictions with a large number of pending cases per judge.

[28] The Hausman test for the fixed and random effects regressions confirmed that the fixed effects model is the better choice.

The clearance rates have a significant and negative effect on caseloads per capita and per judge, as well as on the congestion rates. That is, court productivity is a very important factor in reducing court backlogs and congestion. The effect of CRLT on the backlog of cases older than a year is insignificant, indicating that the courts are focusing mainly on the new cases filed each year and are not addressing their pending cases. Indeed, during the period 1995-99, the courts tended to adjust their productivity only to the number of cases filed, not to their full caseloads. Such measures make it difficult to reduce the "real" backlogs.[29] Other studies (Goerdt et al., 1989; Dakolias, 1999) have also found that an increase in filed cases may cause courts to internally adapt to the change to maintain their rates of case resolution.[30]

As expected, the litigation has a positive and significant effect on the caseloads. This is consistent with the argument often raised by litigation economics that there are factors offsetting the effect of delay reduction programs. The negative effect of litigation on the congestion rate again confirms that the courts are adjusting their productivity merely to the number of filings.[31]

[29] The 1924 *Rankin Committee Report* was the first one to mention this problem: "So long as such arrears exist, there is temptation to which many presiding officers succumb, to hold back the heavier contested suits and devote attention to the lighter ones. The turnout of decisions in contested suits is thus maintained somewhere near the figure of institution, while the really difficult work is pushed back into the ground."
[30] On the other hand, Priest (1989) argues that there is a reverse causality. According to him, there is some equilibrium level of court congestion. When reforms are implemented and delays decrease, more cases are filed in the courts thereby bringing congestion back toward an equilibrium level.
[31] In a separate set of regression, the number of cases filed displayed a robustly positive effect on the disposal of cases. This effect is stronger than the positive effect of the filings on the backlog of cases older than a year, resulting in a negative effect of the filings on the congestion rate.

Table 3: Fixed Effects Estimates for Total Cases

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Var.	LDT_pc	1YT_pc	LDT_pj	1YT_pj	CNRT	CNRT
JUD	.0042	.0281	-.5144	-1.650	-6.262*	-7.344*
	(.0639)	(.0634)	(5.647)	(5.640)	(3.882)	(3.899)
VAC	.0011	.0003	1.392**	.9367***	-.2212	.0487
	(.0072)	(.0037)	(.6326)	(.3494)	(.4354)	(.4368)
CLRT	-.0034**	-.0011	-.2900**	-.1030	-.5315***	-.5039***
	(.0015)	(.0007)	(.1365)	(.0674)	(.0921)	(.0942)
LTGT_pc[1)]	.4013***	.3782***	-	-	-11.70**	-
	(.0750)	(.0611)			(4.551)	
LTGT_pj[1)]	-	-	.4687***	.1532***	-	-.1969**
			(.1015)	(.0557)		(.0700)
Log(GDP)	-.0166***	-.0039*	-1.210***	-.4619**	-.7906***	-.7919***
	(.0028)	(.0024)	(.2452)	(.2283)	(.1709)	(.1693)
No. obs.	132	105	132	105	132	132
Adj. R^2	.9748	.9778	.9698	.9672	.9156	.9166
$\hat{\sigma}$	.0027	.0013	.2353	.1185	.1634	.1625

Notes: In regressions 1, 3, 5 and 6, White heteroskedasticity-consistent standard errors are given in parentheses. Regressions 2 and 4 are estimated by FGLS procedure correcting for autocorrelation and AR(1) consistent standard errors are given in parentheses.
*** indicate significance at the 1% level, ** at the 5 %, and * at the 10% level.
[1)] In regressions 1, 3, 5 and 6, the variables have been instrumented to correct for possible endogeneity bias. The instruments used were: cases disposed per capita (or per judge), population density, percentage of urban population, literacy rate, and Panchayats per capita.

The negative coefficient on income can be explained by the fact that higher amount of available resources contributes to a higher clearance rate.[32] Alternatively, the size of the government increases with the per capita income (Mueller, 2003). Thus, a higher per capita income can explain more judges per capita, higher clearance rates, and lower caseloads.

Table 4 presents yet a further effort to explain civil court congestion. The coefficients on JUD and VAC are insignificant, regardless of the measure of congestion

[32] Indeed, regressions using clearance rates as a dependent variable revealed a significantly positive effect of the per capita income.

used.[33] The clearance rates and volume of litigation have similar effects as in the case of total cases. The coefficient on income remains mainly negative and significant.

The results of our empirical analysis imply that the effect of any single reform measure will differ across state jurisdictions as the values of the various measures of court congestion across jurisdictions differ. Thus, for example, a doubling of judges within one jurisdiction may have a substantially different effect from a doubling of judges in another jurisdiction if there are differences between the jurisdictions in their congestion rates. Similarly, even within a single jurisdiction, a reform such as a doubling of judges in one year may have a substantially different effect than a doubling in a different year since the congestion rate changes over the years.

[33] Note, however, that the coefficients on JUD and VAC have mostly the expected negative signs but have large standard errors. One reason for these insignificant results may be the measurement of the variables. We were not able to obtain data on the number of judges dealing exclusively (or mainly) with civil cases, or to measure the time the judges spend on resolving civil cases.

Table 4: Fixed Effects Estimates for Civil Cases

	(7)	(8)	(9)	(10)	(11)	(12)
Dep. Var.	LDCI_pc	1YCI_pc	LDCI_pj	1YCI_pj	CNRCI	CNRCI
JUD	-.0135	-.0286	-1.903	-3.787	-7.173	-8.239
	(.0159)	(.0305)	(1.733)	(2.760)	(6.333)	(7.151)
VAC	-.0017	-.0016	.2110	.1663	.2468	.5126
	(.0018)	(.0016)	(.1920)	(.1502)	(.7027)	(.7922)
CLRCI	-.0012**	.0002	-.1199**	.0116	-.3107*	-.3762*
	(.0005)	(.0005)	(.0500)	(.0459)	(.1843)	(.2063)
LTGCI_pc[1)]	.2621***	.1219*	-	-	-183.3***	-
	(.0716)	(.0707)			(28.46)	
LTGCI_pj[1)]	-	-	.5985***	.0954*	-	-.9229***
			(.0634)	(.0557)		(.2617)
Log(GDP)	-.0018***	-.0021**	-.1769**	-.2162**	.1126	.2194
	(.0007)	(.0011)	(.7361)	(.1053)	(.2716)	(.3038)
No. obs.	132	105	132	105	132	132
Adj. R^2	.9863	.9770	.9706	.9437	.9284	.9099
$\hat{\sigma}$	.0007	.0005	.0720	.0509	.2650	.2973

Notes: In regressions 7, 9, 11 and 12, White heteroskedasticity-consistent standard errors are given in parentheses. Regressions 8 and 10 are estimated by FGLS procedure correcting for autocorrelation and AR(1) consistent standard errors are given in parentheses.
*** indicate significance at the 1% level, ** at the 5 %, and * at the 10% level.
[1)] In regressions 7, 9, 11 and 12, the variables have been instrumented to correct for possible endogeneity bias. The instruments used were: cases disposed per capita (or per judge), population density, percentage of urban population, literacy rate, and Panchayats per capita.

In summary, our estimates help us move away from the general "one-size-fits-all" remedies for observed deficiencies in the court system and develop more focused approach tailored to the needs of individual states and UTs. Thus, while increasing the number of judges might lead to reduction in congestion rates, this solution is not likely to contribute to an improvement of the situation in the court systems facing large caseloads. On the other hand, elimination of vacancies seems particularly relevant for judiciaries with large caseloads per judge. The clearance rates have a well-defined, negative effect on both caseloads and congestion rates. This suggests that improvements in court productivity are crucial for reducing the congestion in all state judiciaries. Finally,

reduction in litigation rates, coupled with an increased emphasis on resolving cases that are pending for a long time, is also likely to assist lower courts in every state to address their backlogs.

IV. Conclusion

Long delays in processing cases are common in the Indian judicial system. This is despite the fact that for more than 50 years judges, lawyers, and policymakers in India have experimented with ways to speed the processing of civil and criminal cases. Solutions have been usually sought in such structural reforms as increases in the number of judges and changes in procedures. Most of the delay reduction programs, however, have ended in failure. We argue here that a possible explanation for the failure of these programs is that they tended to give general prescriptions regardless of the nature and level of court congestion facing individual states and UTs.

In this paper, we conduct an empirical analysis of the congestion in Indian lower courts. Econometric analysis of institutions, such as the judiciary, has faced serious criticism since institutions tend to reflect the norms of the society they exist in. However, our data set covering 27 Indian states and UTs over the period 1995-99 guarantees a common institutional framework in which the judicial quality is measured and not different systems.

We use several measures to capture court congestion. These include caseloads per capita and per judge, the number of cases older than a year per capita and per judge, and congestion rates calculated as the ratio of cases older than a year to cases disposed. We

can conclude that the Indian state judiciaries differ with respect to the nature and level of congestion they face. We can also identify the reasons why some judiciaries are more congested than others. The results show that large number of judges per capita is negatively related to congestion rates, while vacancies have significantly positive effect on caseloads per judge. Court productivity captured by the clearance rates has a significant and negative effect on both caseloads and congestion rates and seems to be crucial for the effectiveness of congestion-reduction programs. Finally, judiciaries with lower litigation rates display relatively better performance with respect to current caseloads, but are not efficient in addressing the "real" backlogs of cases pending for more than a year.

Based on our findings, we discuss remedial measures, which can essentially be in two directions. The first involves improvements in infrastructure and court productivity, while the second involves adoption of procedurally and substantively efficient rules. Besides these remedies, a well-defined program for judicial reform needs to include a host of considerations that we have not attempted to canvas, but that would merit additional research. These include: the redefinition and/or expansion of legal education programs and training for students, lawyers, and judges; increasing the availability and efficiency of ADR mechanisms; the existence of judicial independence (i.e., budget autonomy, transparency of the appointment process, and job security) coupled with a transparent disciplinary system for court officers; etc.

In addition, future research could look into whether the findings of this study are relevant across national legal systems. As emphasized by Posner (1998), legal reform is an important part of the modernization process of poor countries. Probably the most

important lesson emerging from our study is that a well-conceived legal reform program should be based on solid empirical evidence. Empirical analysis is also crucial for evaluating progress in court performance, planning for future needs, and strategizing for new reform efforts. Although every court system is unique, reformers in other countries can look for appropriate data to identify the nature of congestion, highlight potential pitfalls of justice systems, or even suggest new approaches for delay reduction that are suitable for their unique local legal culture.

Finally, future study of courts as agents of legal government could move away from broad macro analysis of congestion, proceed to the micro level and actually examine the types of cases that are being over-litigated and where the accumulation of arrears has taken place. Analyzing court cases, category by category, and exploring the costs and benefits of different types of cases that are litigated are the subject of a next stage of our research.

Bibliography

Brookings Institution (1990), *Justice for All: Reducing Costs and Delay in Civil Litigation*. Washington, DC: Brookings Institution.

Buscaglia, Edgardo and Maria Dakolias (1996), "Judicial Reform in Latin American Courts: The Experience in Argentina and Ecuador," *World Bank Technical Paper* no. 350, Washington DC: World Bank.

Clark, David S. (1990), "Civil Litigation Trends in Europe and Latin America since 1945: The Advantage of Intracountry Comparisons," *Law and Society Review* 24, pp. 549-569.

Dakolias, Maria (1999), "Court Performance Around the World: A Comparative Perspective," *World Bank Technical Paper* no. 430, Washington, DC: World Bank.

Debroy, Bibek (2000), "Some Issues in Law Reform in India," in Jean-Jacques Dethier ed., *Governance, Decentralization and Reform in China, India and Russia*. Dordrecht, The Netherlands: Kluwer Academic Publishers.

Dhawan, Rajeev (1978), *The Supreme Court Under Strain: The Challenge of Arrears*. Bombay: M. N. Tripathi Pvt. Ltd.

Dhawan, Rajeev (1986), *Litigation Explosion in India*. Bombay: M. N. Tripathi Pvt. Ltd.

De Figueiredo, John M., Gerald S. Gryski, Emerson H. Tiller and Gary Zuk (2000), "Congress and the Political Expansion of the U.S. District Courts," *American Law and Economics Review* 2(1), pp. 107-25.

Goerdt, John, Chris Lomvardias, Geoff Gallas, and Barry Mahoney (1989), *Examining Court Delay: The Pace of Litigation in 26 Urban Trial Courts, 1987*. Williamsburg: National Center for State Courts.

Government of India (1972), *High Court Arrears Committee*. New Delhi: Supreme Court of India.

Government of India (1986a), *The Thirty First Report of the Estimates Committee to the Parliament*, New Delhi: Ministry of Law, Justice and Company Affairs.

Government of India (1986b), *Report of Justice Satish Chandra Committee*. New Delhi: Ministry of Law, Justice and Company Affairs.

Government of India (1990), *Report of the Arrears Committee*. New Delhi: Supreme Court of India.

Government of India (1989-90 to 1999-2000), *Annual Report of the Ministry of Law, Justice and Company Affairs*. New Delhi: Ministry of Law, Justice and Company Affairs.

Greene, William (2003), *Econometric Analysis*. New Jersey: Prentice-Hall Inc.

Hammergren, Linn (2002), "Fifteen Years of Judicial Reform in Latin America: Where We Are and Why We Haven't Made Any Progress," unpublished manuscript.

Ietswaart, Hellen F.P. (1990), "The International Comparison of Court Caseloads: The Experience of the European Working Group," *Law and Society Review* 24 (2), pp. 571.

Khan, Amir Ullah, Pushpa Sharma and Aparna Rajagopal (1997), *Identification of Bottlenecks in Judicial Procedure*. New Delhi: Allied Publishers.

Law Commission of India (1958), *The Fourteenth Report on Reform of Judicial Administration*. New Delhi: Ministry of Law, Justice and Company Affairs.

Law Commission of India (1979), *The Seventy Ninth Report on Delays and Arrears in High courts and Other Appellate Courts*. New Delhi: Ministry of Law, Justice and Company Affairs.

Law Commission of India (1987), *The One Hundred and Twenty First Report on a New Forum for Judicial Appointments*. New Delhi: Ministry of Law, Justice and Company Affairs.

Law Commission of India (1988), *The One Hundred and Twenty Fourth Report on High Court Arrears: A Fresh Look*. New Delhi: Ministry of Law, Justice and Company Affairs.

Milgrom, Paul R., C. Douglas C. North, and Barry W. Weingast (1990), "The Role of Institutions in the Revival of Trade: The Law Merchant, Private Judges, and the Champagne Fairs," *Economics and Politics* 2(1), pp.1.23.

Mueller, Dennis C. (2003), *Public Choice III*. Cambridge, NU: Cambridge University Press.

Nagaraj, V. (1995), "Labour Laws," in N.R. Madhava Menon and Bibek Debroy eds., *Legal Dimensions of Economic Reforms*. New Delhi: Allied Publishers, pp. 31-80.

Posner, Richard A. (1998), "Creating a Legal Framework for Economic Development," *The World Bank Research Observer* 13 (1), pp. 1-11.

Priest, George L. (1989), "Private Litigants and the Court Congestion Problem," *Boston University Law Review* 69(2), pp. 527-59.

Rao, Bathula V. (2001). *Crisis in Indian Judiciary*. Hyderabad: Legal Aid Centre.

Zeisel Hans, Hans Kalven, and Bernard Buchholz (1959). *Delay in the Court*. Westport, Conn.: Greenwood Press Publishers.