Evaluating courts from a litigant's perspective: A project report

Pavithra Manivannan * Geetika Palta Susan Thomas
Bhargavi Zaveri-Shah

December 8, 2023

Abstract

Information systems about dispute resolution processes and forums that can aid litigants, a key stakeholder in the justice delivery system, are absent. We propose the development of a system that allows a litigant to comparatively evaluate the different forums where he can take his dispute for resolution. To develop this system, we first identify the types of information that can support the decision of a potential litigant on whether to take her matter to court and if yes, which court. We find that information on efficiency, effectiveness, fairness, predictability, and access to courts are crucial for a litigant's decision-making process. Subsequently, we locate data sources required to quantify such measures from the viewpoint of periodically publishing such measures in the public domain. For this purpose, the case type was narrowed down to debt disputes. We systematically collect quantifiable information about cases from the select courts' websites, namely, the Bombay High Court (Bombay HC), the Mumbai bench of the National Company Law Tribunal (NCLT), and the Debt Recovery Tribunal (DRT). We use data from these courts up to September 2022. We find that a litigant has the lowest chance of getting a first hearing within the first year of filing a case at the Bombay HC (37%) as compared to the NCLT or the DRT. The chance for disposal within the first year is even slimmer. There is a 1/3rd chance of disposal at the NCLT within one year of filing, while it is less than 1/5th at both the Bombay HC and the DRT. However, a case is likely to have the highest number of hearings at the NCLT. A survey questionnaire is designed and deployed to capture features of a case that cannot be quantified. We deploy the survey to capture

*Pavithra Manivannan is senior research associate at XKDR Forum, Mumbai. Geetika Palta is research associate at XKDR Forum, Mumbai. Susan Thomas is Senior research fellow at XKDR Forum, Mumbai. Bhargavi Zaveri-Shah is a doctoral candidate at the National University of Singapore. Authors' email: pavithra.manivannan4@gmail.com; geetikapalta11@gmail.com; sthomas.entp@gmail.com; bhargavizaveri@gmail.com. We thank Agami for supporting this work. The findings and opinions presented in this chapter are those of the authors and not of their employers or affiliated institutions. All errors remain our own.

the relative performance of each of the three courts to a sample of respondents who have litigated frequently in the courts of our interest. The results of the survey indicate that the NCLT is ranked the highest by survey participants. Bombay HC comes second, and the DRT is ranked third.

JEL classification: C, C53, K, K41

Contents

List of Figures

List of Tables

"What is not defined cannot be measured. What is not measured, cannot be improved."

William Thomson Kelvin (1824-1907)

1 Executive Summary

As with most parts of society, the legal system is being transformed through the use of modern computing and communication technologies. The working of physical court hearings is transformed through digital submission of documents and through scheduling systems. Outside the court room, computer technology helps to manage databases of laws and orders. There is effort on pushing on the frontiers of current judicial services, using technologies such as machine translation or large language models.

In India, this is new territory, where the domain is vast and the emergence of technology is nascent. This project was undertaken with the idea that the decision to litigate is not well understood, and there is need to build networks and systems that can offer better advice. At present, the most important advisors to litigants are lawyers, and then there are two problems: impressionistic views based on conversations as opposed to systematic evidence, and the conflict of interest where lawyers derive revenues from more litigation or from litigating at specific forums which may not be optimal for a to be litigant.

Advances in computer technology have improved the transparency of courts in India. Over the last two decades, courts in India have achieved public access to information such as cause-lists. This makes possible third-party initiatives to collate this data, and apply statistical analysis to build a better evidentiary base.

This project was undertaken with the goal to develop performance measures for Indian courts that adjudicate commercial disputes, which can help these litigants or persons who are deciding whether to litigate. The aim of developing such a system is two-fold: identify the types of information that can support the decision of a potential litigant on whether to take her matter to court, and to locate data sources required to quantify such measures from the viewpoint of periodically publishing such measures in the public domain.

The work was carried out through a series of steps: Conduct a systematic review of the existing literature about measures that capture the performance of commercial courts; Combine learning from the systematic review with information about the Mumbai courts to propose a measurement framework that is meaningful for a litigant; Hold meetings with the Project Advisory Committee for feedback; Publish a working paper with the proposed framework in the public domain for comments from the broader community; Conduct a pilot of the measurement framework using data from courts in Mumbai; Create and deploy perception surveys as part of the pilot; Conceptualise and co-create a user friendly information tool to assist the decisions of litigants of debt dispute resolution matters.

The choice of courts was driven largely by the legal matter. We elected to study measures that can aid decision making by parties involved in debt disputes. This could be on whether to litigate. If they chose to litigate, the decision on which court to file the matter in. Debt contract disputes were considered to be an ideal prototype for this measurement

framework because they are ubiquitous in commerce. Since several laws in India provide remedies for the enforcement of debt contracts in different forms, it provides a unique opportunity to compare the relative performance of courts. The courts in Mumbai where such matters can be heard, and where there is a robust availability and access of data, are the Bombay High Court (Bombay HC), Debt Recovery Tribunals (DRT) and National Companies Law Tribunal (NCLT).

A critical starting point was to identify the measure. Traditional measures focus on the vantage point of the judiciary itself. A measurement system that is ligitant-centric will seek to measure features of judicial services different from what the judiciary seeks to measure. For instance, the *pendency* of courts is not important to a litigant, because the production of judicial services is not of interest to the litigant. Instead, the litigant has a focus on resolving the legal problem with *efficiency*, *effectiveness*, *fairness*, high *predictability* and easy *access*. Put together, these features of judicial services ensure that the litigant will spend as small an amount of time, funds, and opportunity costs, as is required to obtain an equitable and final outcome to the dispute.

This clarity is important for both the litigant as well as the court. When there is clarity about which court offers what combination of these features, the decision made to litigate is better balanced. In the absence of such information, the decision to litigate can be arbitrary, tending towards more litigation than is optimal for the litigant. When the lack of measures is systematic, sub-optimal decisions aggregated over multiple litigants can lead to over-loaded courts, where the pendency is high, and justice delivery has a poor reputation.

Thus, the next step was to identify ways to calculate empirical values for the features listed above. For this, we examine how a litigant's case proceeds through the judicial system. For example, a litigant expects that her case moves forward when it gets a 'hearing' before a judge at the court. In the case of debt contract dispute cases, litigants anticipate that a court order to stay certain actions, will take place in the first hearing itself. From this examination, we arrive at the following questions that can help a litigant evaluate the costs and benefits of taking her case through court: (1) What is the chance of getting a first hearing within a year of filing the case? (2) What is the chance of getting a disposal within a year of filing? (3) What is the average number of hearings from filing to disposal?

The first two quantitative measures are probabilities that can calculated using data about orders from a court, once the case has been filed. For example, we can calculate the chance of getting a first hearing within (say) *a month*, or *a year* of filing the case. Another example of a useful statistic is the chance of getting a disposal within (say) three months or a year of filing the case. Another useful statistic for the litigant is to understand how many hearings the case is likely to go through at a court. Each hearing has a cost in both legal fees and charges as well as time – both time spent in the court as well as the opportunity cost of time away from normal activities. This statistic can be useful to decide both *whether* to litigate and *where* to litigate.

Our analysis finds that there is a 37% chance of getting a first hearing within one year of filing a debt dispute matter at the Bombay HC. This is higher (nearly $3\times$) at the Bombay DRT and Bombay NCLT. The chances of getting a disposal within the first year from filing is even slimmer. We find that there is a $1/3^{rd}$ chance of a disposal at the Bombay NCLT within one year of filing, while it is less than $1/5^{th}$ at either Bombay HC or Bombay DRT. On the other hand, we find that a case is likely to have the highest number of hearings at the NCLT (average of 4 hearings per case in this analysis).

The study uses data from these courts upto September 2022. These estimates can change as newer data becomes available. What this project establishes is an approach using which the proposed metrics can be updated over different time periods, as more data is published by these courts.

There were two motivations to include a perception survey to capture court performance for building litigant-centric measurement systems. First, most existing work on litigant-centric measurement systems, whether by academic researchers or court registries, use responses from perception surveys; (2) Perception surveys can include questions about features of the judicial system that cannot be calculated using data published by courts. For example, there is no measure, using data that is published by a court, about how fair the court is in judgements.

For these reasons, we conducted a perception survey, drafting a questionnaire to capture litigant-centric measures with a wider coverage including Access (example: 'It is affordable to resolve my case in this court'; 'The filing process is easy in this court'); Efficiency ('This court is most likely to dispose my matter in a timely manner'); Effectiveness ('It is easy for me to recover the amount specified in the judgement decree'); Independence ('I can trust this court to make an unbiased decision based on the merits of the case'); Predictability ('It is likely that a hearing will be held on the scheduled date in this court').

For each measure, the response is recorded as a ranking of courts. For example, for the Access question 'The filing process is easy in this court', the respondents are asked to rank courts, with Rank 1 being the best court in their view and Rank 3 being the worst. The perception survey delivers a ranking of each court, at the level of individual questions asked, with each court being ranked by the average response across 18 respondents. The results of the survey conducted indicate that the Bombay NCLT is ranked the highest by survey participants. Bombay HC comes second, and DRT is ranked the third. Unlike the quantitative measures, these measures can only be used to understand how litigants rank courts. These measures do not provide guidance on the question of *whether* to litigate.

The last challenge is to figure out how to deliver this information to a litigant or decision maker in the most user friendly and easy to understand manner. Here, there is considerable knowledge in the field of design on what makes for a good user interface and user experience. As an experiment, we partnered with OOLOI LABS in developing a litigant facing web based interface that communicates this information to a litigant or a decision maker seeking it. The tool can be accessed here. It aims to provide a guided or

interactive experience to the user.

In summary, AGAMI and XKDR FORUM undertook this project to create a litigant-centric measurement framework, recognising that measures are an important input to improve judicial service quality and delivery for litigants, whether through technology or otherwise. We have developed a litigant-centric measurement framework along with a system that uses two sources of data to estimate the values of these metrics. We found that it is possible to establish processes and systems that can regularly update the quantitative metrics, given a continued access to the data from courts. In the case of the perception survey, while the fixed cost of the development of the survey questionnaire has been paid, additional funding will be required if the metrics are to be regularly updated.

The framework we developed in this project serves as a demonstration of an information support system for advice on whether to take a debt contract dispute to court, and where. Given the commonality of the structure of court information across matters, this can be deployed to create similar information support systems for other civil matters. It also provides guidance on how to create similar information systems for other courts, both on debt contract dispute resolution and other matters.

2 The Question

The need to develop systems for measuring the performance of courts and tribunals in India has been acknowledged for some time now (Narasappa, 2016). Several studies have attempted to understand specific facets of court performance in India. For example, the India Justice Report (2019) measures the relative performance of states on four facets of access to justice, namely, police, prisons, judiciary and legal aid. DAKSH (2016) surveys litigants across the civil and criminal judiciary to understand their socio-economic profiles, their preferred modes of dispute resolution, their perceptions on court delays and the costs associated with accessing courts in India. Others have sought to measure the administrative and judicial capacity of Indian courts (NALSAR University of Law, 2016; Vidhi Centre for Legal Policy, 2021).

There are multiple research initiatives and centres, both at educational institutions and elsewhere, that study courts in India. These are dedicated to mapping the state of the Indian judiciary, and analysing court data disseminated voluntarily or extracted through web scraping, RTI and other means. Examples include efforts by DAKSH, the Agami Data for Justice Hub, and the Justice, Access, and Lowering Delays in India initiative. Such ongoing initiatives have given a sustained momentum toward working with court data, including creating discrete methods for the measurement of the functions of different kinds of courts.

The research described above has generated important information on the performance of different parts of the judiciary in India. However, these studies have been largely sporadic. They are often inhibited by the availability of information either on court websites or data from the court administration. A measurement framework that can be deployed on an ongoing basis across courts performing different kinds of adjudication functions, so that their relative performance can be better understood, is missing.

Another element that is often missing in the research on court performance is a general evaluation framework, which is principles-based. Courts operate within the context of the laws and procedures of a country, and these vary widely in character and quality. This makes it difficult to justify a single standard of court performance, that can be applied universally. For example, the judicial system in India is divided along civil and criminal lines. Courts adjudicate either civil or criminal cases. The procedure involved in the adjudication of civil and criminal cases is different, as are the stakeholders involved in civil and criminal cases. In criminal cases, the prosecution is state-led, which suffers from its own set of deficiencies that may impact the case proceedings. Even within civil cases, some types of cases may be inherently more complex than others, which render common benchmarking systems redundant.

Two measures that are typically employed to measure court performance is the *pendency ratio* (which is a fraction of cases that are filed and closed on the number of cases that are filed and pending) and *time-to-disposal* (which is the average time taken by the court to close a case). A well performing court should have a high pendency ratio and a

low time-to-disposal. However, a court with relatively lower workload may be able to dispose of cases faster than one with a higher workload, but this does not imply that this court is more efficient than the other. Further, how does such a measure account for the complexity of the law that different courts administer? Finally, how does such a measure account for the quality of the judgements delivered by the court?

In this background, a framework that seeks to evaluate the performance of courts in India, and perhaps in all other jurisdictions, faces the following challenges:

1. How do we develop standard measures of performance that can hold for all types of courts, or at least a majority of these?
2. Assuming that we are able to develop such measures, can we operationalise the evaluation, at some periodic regularity?

Relative benchmarking

The first of the two challenges can be addressed through relative benchmarking. Instead of developing universal measures that can be applied to all the courts of the land, a court's performance can be evaluated relative to a 'comparable' court, that is, one that carries out similar functions or adjudicates similar laws. A second approach to evaluating court performance can be to measure the performance of the *same* court regularly over a span of time. This approach dispenses with the complexity of identifying similar courts. Such a time series of measures also allows the administration to make interventions and evaluate the impact of these interventions by observing the performance of the same court over time.

A useful case-in-point is *CourTools*. This is a measurement system for trial courts in the US, which has been developed by the 'National Centre for State Courts'. There are ten measures which can be uniformly applied to measure the performance of *trial courts* across all states in the US. These are listed in Table 1.

Table 1 illustrates that, while some of the metrics are useful for trial courts, the same metrics would be of lower utility in measuring the performance of say, writ courts. A measurement system for civil courts must factor in metrics that indicate whether litigants feel comfortable using commercial courts. This is less important for criminal courts, in which the state is responsible for prosecution. Thus, in the first instance, it is important to recognise the need to set up different performance measurement criteria for civil and criminal courts. Pertinently, most of the metrics in Table 1 would be relevant for courts adjudicating commercial cases.

Measurement from whose perspective?

Whichever approach one adopts, there is little consensus on what an optimally performing court looks like. The literature on the performance evaluation of the judiciary captures the perspectives of judges, researchers and court administrators. Each of these stakeholders value different aspects of a court's performance. Similarly, it is not obvi-

Table 1 Overview of *CourTools*

	Metric	Description
1.	Access and fairness	Court's accessibility and its treatment of customers in terms of fairness, equality and respect.
2.	Clearance rates	Institution to disposal ratio
3.	Time to disposal	% of cases disposed of within defined timelines.
4.	Age of pending cases	Age of active cases pending before the court.
5.	Trial date certainty	No. of times disposed of cases were scheduled for trial.
6.	Reliability & integrity of case files	% of files that can be retrieved within established time-frames.
7a.	Fairness in legal financial obligations (LFOs)	Whether the court was fair, respectful and compassionate in imposing LFOs.
7b.	Management of LFOs	% of cases in which LFOs were fully met.
7c.	Fair practices for LFOs.	Court's practices to enforce compliance of LFOs
8.	Effective use of jurors	% of qualified and available jurors from the total number of jurors.
9.	Court employee satisfaction	Quality of work environment and staff-management relations.
10.	Cost per case	Avg. cost of processing a single case.

ous that a litigant who proposes to access the judiciary for the resolution of a dispute, would use the same or similar metrics as, say a judge, when evaluating the performance of courts. There is little systematic research on what a litigant wants and values, when approaching a court for dispute redress. While some aspects, such as speed and costs, seem obvious as an important metric to all participants in the justice system, it is unclear what other aspects litigants attach preferences to. More importantly, there is ambiguity in how important these preferences are to different participants. The preferences would have an import on how different measures should be weighted, when arriving at a single metric of the performance of a court.

Measurement using what data?

Finally, what is the input data that can be captured in a credible manner and at a regular periodicity, which can lend itself to creating a set of metrics on court performance? The example presented in Table 1 suggests that the measurement system may require a combination of secondary and primary data. For instance, Measures 1 and 9 in the table require perception surveys of litigants and court employees. But the other measures can be estimated using secondary data that is maintained by the court, under the assumption that the court's information management systems support the capture and storage of such data in a reliable and ready-to-access manner.

3 Approach

We used the idea of relative benchmarking described in Section 2 to develop a measurement framework, that could be applied to an identified set of comparable courts, namely, courts that enforce commercial contracts. We used the vantage point of *a litigant* in developing this measurement framework. We then used a mix of literature review, data disseminated by courts and survey instruments to pilot the measurement framework, on three debt enforcement courts in Mumbai. In this section, we elaborate on each of these elements of our approach.

Selection of case type

Since the late 1980s, a lot of literature has emerged seeking to investigate the links between effective enforcement of contracts and important economic variables. For instance, Mina (2006) looked at the impact of contract enforcement on investment rates, Palumbo *et al.* (2013) and von Lilenfeld-Toal *et al.* (2012) studied legal enforcement of debt contracts in relation to the credit market, and Sereno *et al.* (2009) analysed the relationship between cost of doing business in a jurisdiction and the courts ability to effectively enforce contractual obligations in that jurisdiction.[1] This literature finds some evidence of a link between the quality of contract enforcement and one or more of these economic variables, underscoring the important of measuring the quality of court performance in the context of enforcing commercial contracts.

We further narrowed our focus of measurement to one type of commercial contracts, namely *debt contracts*. Debt contracts are some of the most common form of commercial contract. While debt contracts are most commonly associated with formal finance and banks, they cover a wide range of litigants, ranging from vendors and suppliers whose dues remain unpaid, to unpaid employees. Given that most commercial contracts are likely to entail payments, the 'debt' element of commercial contracts cannot but be overstated. Further, the literature on court performance emphasizes the importance of court performance for good credit market related outcomes.

Given that multiple judicial courts provide redress on debt contracts enforcement, restricting the scope of the measurement framework to debt contracts gives us the additional advantage of optimizing the idea of relative benchmarking of courts explained in Section 2. Table 2 presents a few examples of the redress mechanisms available to a person who is owed money, and is seeking a legal remedy to enforce that promise.

While each of the courts listed in Table 2 can hear debt default situations at different pecuniary thresholds, in practice, the party at the receiving end of the breach evaluates all these options before identifying which one they should pursue when a debt contract

[1] For a more detailed description of the desk research conducted, please refer to Manivannan *et al.* (2022).

Table 2 Examples of commercial contracts and adjudication courts

Default type	Civil suit	NCLT	DRT	ADR	Criminal court*
Breach of a loan contract by a company	Y	Y	Y	Y	Y
Breach of a loan contract by an individual/ proprietorship	Y	N	Y	Y	Y
Non-payment of supplier dues by a company	Y	Y	N	Y	Y
Non-payment of supplier dues by a proprietorship	Y	N	N	Y	Y
Non-payment of salary	Y	Y	N	Y	Y
Non-payment of rent by company	Y	Y	N	Y	Y
Non-payment of rent by an individual/ proprietorship	Y	N	N	Y	Y

*When there is a cheque dishonour involved

is breached. In many cases, the party can pursue more than one option, simultaneously. The debt enforcement courts listed in Table 2 are, therefore, comparable to a large extent.

Selection of courts

In order to pilot the measurement framework, we calculate the metrics for the performance of three courts in Mumbai. They are the Bombay High Court, the Mumbai bench of the National Company Law Tribunal (NCLT), and the Mumbai bench of the Debt Recovery Tribunal (DRT).

As the financial and commercial capital of the country, Mumbai is home to courts responsible for the bulk of commercial adjudication in the country. The Bombay High Court is one of the five high courts in India with original jurisdiction, making it the first port of call for the adjudication of high value contract disputes. The lower civil judiciary in Mumbai comprises courts such as small causes courts, and city civil courts, spread across the city. Mumbai is one of the four Indian cities housing more than two benches of the DRT. The Mumbai bench of the NCLT comprises five court rooms, second in size only to the New Delhi bench of the NCLT, and shoulders the largest burden of disputes arising under the Companies Act, 2013 and the Insolvency and Bankruptcy Code, 2016. Finally, a first stage review of the websites of each of these three courts, established that information about the matters listed and heard was regularly updated for dissemination. For these reasons, we selected these three Mumbai courts as the pilot of the measurement framework.

Selection of vantage point

The literature on the performance evaluation of the judiciary largely captures the perspectives and preferences of judges, researchers and court administrators. However, these are the the source, or the suppliers of the justice delivery system. Therefore, while such metrics ultimately feed into the overall court experience, it is not obvious whether the same metrics are what matters most to the litigant as a *consumer* of justice delivery. More importantly, it is not obvious if the litigant would use the same metrics, as a consumer, to make informed choices on which court is best suited for their purpose.

For instance, Rottman and Tyler (2014) survey more than 2000 residents of California as part of an experiment in the field of social psychology. They find that judges who were rated highly by legal professionals, were rated poorly by respondents who were not legal professionals. They attribute this difference to the observation that the evaluation criteria prioritized by attorneys were different from those prioritized by the public. These differences suggest that a judge or lawyer centric evaluation framework may lead to incomplete feedback loops. Similarly, in some states in the U.S.A, the idea of citizen based evaluation exercises for judges has been experimented with in the past. But recently, even court administrators have made a case for a more citizen centric view of courts infrastructure, processes and evaluation (Mahoney, 1989; Clarke and Borys, 2011; Hagan, 2018).

What such studies indicate is that court performance measurement frameworks can be drawn up from various perspectives. They will be different when reviewed from the perspective of a judge, a court administrator, a policymaker or a litigant. These frameworks may have some overlapping metrics. In this work, we choose the perspective of the litigant as the consumer, of the justice delivery system, to develop a court measurement framework because we find that it is justified for four reasons:

First: the trust of the public in the ability of the judiciary to deliver high quality and efficient outcomes speaks to the legitimacy of the judicial system. If people lose faith that the judiciary will help them resolve disputes fairly and efficiently, they will resort to other means of redress or restrict economic activity. Specifically in the case of debt contract enforcement, for example, several scholars show that in environments with weak judicial capacity, the cost of raising capital increases (Mina, 2006; Djankov *et al.*, 2008). The availability of consistent, regular and systematic information, which allows the average citizen to evaluate the performance of the judiciary herself can help alleviate issues of trust that may arise from "not knowing the system well".

Second: feedback from users will help judges, policymakers and court administrators understand the choke-points of the system from a user perspective. It will facilitate informed decisions on the infrastructure and human resource needs of the court, and help better plan for such needs.

The demands for a higher allocation of tax-payer funds are more likely to be accepted by legislators, if judicial institutions are willing to regularly measure themselves on metrics that matter to all the stakeholders. For instance, it is not enough to claim that a high vacancy ratio is responsible for an inefficient judicial system. This is because it could be, and has been, argued that surplus judges reduce the speed of disposal and scarcity leads to more optimum usage of resources (National Court Management Systems Committee, 2016). Thus, a demand for more resources is more effective, if it can be demonstrated that a higher number of judges and administrative staff or infrastructure will improve the experience of the average litigant. A regular measurement system can help demonstrate this.

Third: an evaluative framework that compares courts on parameters that are of importance to litigants will help them make informed decisions on various questions. A better idea about the expected time, cost and quality of judicial outcomes can help answer questions such as whether to litigate, where and when to litigate, and whether to accept a settlement offered by a counter-party.

Finally: the transparent dissemination of the results of a consumer centric measurement framework will enhance the accountability of the courts to the litigants themselves; reward well performing courts by enhancing their public reputation (which, by anecdote, is understood to be a driver for all public officials, including judges) and create incentives for more transparency in a competitive environment.

There is an emerging field of literature that looks at courts from the perspective of a litigant. More recent literature, including from court administrators, has focused on the impact of various issues, such as technological interventions, infrastructure adequacy and court design on consumers' access to the courts (Barendrecht *et al.*, 2006; Clarke and Borys, 2011; Cabral and Clarke, 2012; Cunha *et al.*, 2014; Hagan, 2018). There is an increasing chorus about the need for litigant centric judicial reforms in India. For example, Kinhal (2022) suggest the development of standardised metrics of measurement to evaluate the current state of litigant friendliness of courts.

4 Establishing what matters to a litigant

The first challenge of the project was to identify metrics that have been used to capture the performance of courts from the vantage point of a litigant before a commercial court, and adapt these for Indian courts. The existing literature on measuring courts covered studies on courts of specific jurisdictions, such as, the US, UK, Europe, Latin America and India, and literature that compares the courts of one or more jurisdictions Manivannan *et al.* (2022). This helped us to organise the development of the measurement framework into (i) the metrics that have been used by scholars around the world and their definitions; (ii) the proxies used to measure those metrics; and (iii) the tools or instruments that were used for such measurement.

Focus on outputs, as opposed to *determinants of outputs*

Many strands of literature measured court efficiency or productivity using the traditional method of the production function. This determines the link between the amount of input that are used, and the level of outputs that is generated. For instance, the quality and quantity of judges and judicial staff, the technology used, the costs incurred, the number of cases filed, were used as inputs that produce certain outputs such as disposals, warrants and sentences (Rosales-Lopez, 2008; Yeung and de Azevedo, 2011; National Center for State Courts, 2005). Early work in this field, focused on the outputs of performance such as independence, judicial efficiency, and accessibility (Dakolias, 1999; Prillaman, 2000; Staats *et al.*, 2005),

Given the litigant focus of our measurement framework, we did not consider the inputs in our framework. Instead, we focused on the outputs, as seen by the litigant as a consumer of the justice delivery system. For instance, information about the total workload or cases filed in a court does not provide much information to the decision making of the litigant about whether to sue. Instead, what is useful is information on how long her case would take to get disposed of, and what are her chances of getting a disposal within a particular period of time.

An analogy is consumers rating any other sovereign function, such as (say) the maintenance of street lights. There may be many reasons for why citizens might rate street lights in a given vicinity as poor. The reasons may include the non-availability of personnel, non-payment of city taxes, and so on. For the citizen, however, the criteria for rating is limited to whether or not the street lights work well.

The literature revealed five categories of metrics for a litigant-centric evaluation of court performance (i) Access; (ii) Efficiency; (iii) Effectiveness; (iv) Independence; and (v) Predictability. As each of the terms used in our framework can be interpreted and in fact have been interpreted in different ways, our next step involved defining these categories from the perspective of a litigant for a given case-type. In the case of debt contract disputes, the metrics can be defined as follows:

Access: Commonly used measures of access include physical access and cost. Given the recent advent of technology and the use of video conferencing for hearings, we did not consider geographical access as a barrier to litigants. Instead, we focused on convenience and costs of access. Convenience includes ease of filing a case in a court, courteousness of staff and judges (National Center for State Courts, 2005), availability of information on courts' websites (Kanubhai *et al.*, 2021), and ease of physical navigation within court complexes (Hagan, 2018). Costs of access includes all manner of fees and charges incurred by the litigant at various points of interfacing with the court, and is widely used in the literature (Djankov *et al.*, 2008; Palumbo *et al.*, 2013; Prillaman, 2000; Staats *et al.*, 2005).

Efficiency: Workload and timeliness are two commonly used measures of court efficiency, both in Indian as well as global empirical literature. Workload is measured as the number of cases filed and pending. Timeliness is measured as the time that has elapsed from the date

of filing of a case, until disposal. We restricted the dimension of efficiency to the timeliness of a court, since workload is a metric that is important to the court as the producer of justice while timeliness is a feature that is of direct interest to the litigant. The timeliness of a court may be based on (i) statutory timelines prescribed, if any; or (ii) drawing from the idea of relative benchmarking as explained earlier, timeliness of the court relative to other courts dealing with similar dispute; or the timeliness of the same court over different points in time. For this category, we identify the duration of disposed cases (time taken from filing to disposal of a case), and the duration of pending cases (time taken from filing to the time that a pending case is observed) as proxy measures for timeliness of a court.

Effectiveness: The literature defines the effectiveness of a court in terms of promoting civil liberties and protecting human rights, protecting the rights of the accused in criminal cases and, in providing justice to parties in civil cases. For the litigant, effectiveness is more directly measured as the costs of enforcement of decrees and orders in a commercial matter, such as a debt dispute. For instance, if a court passes an order for the payment of damages, the order would be ineffective if the judgment creditor cannot recover the money due to him from the judgment debtor. For this, how much money is recovered by judgment debtors as a ratio of the total monetary compensation awarded by courts is more likely pertinent (National Center for State Courts, 2005; International Consortium of Court Excellence, 2020).

Independence: The literature has used metrics like formal rules governing court administration and appointments, and press freedom, to measure the ability of courts to perform freely from the influence of government, particularly when the state is directly involved in the matter (Melton and Ginsburg, 2014; Linzer and Staton, 2015). When state is not involved, *fairness* has been used as a measure of independence (Staats *et al.*, 2005; Dougherty *et al.*, 2006; Palumbo *et al.*, 2013). Based on discussions in the literature, two proxies that can be used to measure judicial 'independence' in enforcement of commercial contracts included (i) *Procedural fairness*: the degree of adherence to the procedures prescribed under law; and (ii) *Distributive fairness*: the fairness and impartiality in the judgments delivered by the court.

Predictability: This means certainty on the outcome of a case, or certainty on how a case proceeds through court. This case-trajectory could include hearing-date certainty, or clarity on the different stages of a case, or certainty on case-resolution timelines. Certainty of outcome for the litigant would mean the ability to assess whether she will win or lose a case, *before* filing the case. However, disputes have complex facts, laws are often in-deterministic and open to interpretation, decisions may be limited to the quality of the arguments made by attorneys, courts are often bound by precedent and frequently make judgements on a case to case basis. This makes it difficult to create an objective measure for certainty of outcome of a case. Another measure proposed has been *appeal rates*, the percentage of appeals against the total number of judgments of a court (European Commission for the Efficiency of Justice, 2016). This too has several challenges. Appeals may not always be linked to the poor quality or error in judgment, but rather the financial strength of the losing party, and the incentives built within the legal system against appealing or the incentives of attorneys, dependent upon judgements in all the lower courts, may be fragmented across various findings in the judgement.

We restrict ourselves to measuring the certainty of case trajectory. As a proxy, we use estimates on the number of hearings expected for a case, as indicative of some predictability for the litigant (National Center for State Courts, 2005).

We summarise this discussion with Table 3, where we present the five categories of the metrics derived from the literature review, and the proxies that we identify are feasible when attempting to quantify these metrics.

Table 3 Court performance metrics for a debt-dispute resolution litigant

	Category	Metrics	Description
1.	Independence	Procedural fairness	Adherence to procedure and rule of law
		Distributive fairness	Fairness and impartiality in judgments
2.	Efficiency	Timeliness	Duration of disposed and pending cases
3.	Effectiveness	Enforceable	Ratio of the amount recovered to the amount awarded by court orders
4.	Predictability	Case trajectory certainty	Clarity on the stages of the case and what is likely to transpire at each stage
		Certainty about hearings	Certainty on number of hearings per case and time to hearings
5.	Accessibility	Monetary costs	Costs to the consumer
		Convenience	Ease and user-friendly for consumers

5 Quantifying what matters to a debt-dispute resolution litigant

Most of the literature we described in Section 4 relies on the data published by courts (Rosales-Lopez, 2008; Yeung and de Azevedo, 2011; Choi *et al.*, 2012). This leads to two challenges when quantifying the metrics for all the court performance categories listed in Table 3. First, not all metrics may be amenable to measurement using information that is publicly disseminated by the court. Most often, this information pertains to the orders published by the court. Such information lends itself to empirical values for objective metrics, such as efficiency and predictability. But more subjective metrics, such as judicial independence, are not amenable to measurement using courts data. The second challenge is on the quality of information and its dissemination. There are challenges of consistency, regularity, standardization and availability of data, which are exacerbated particularly in countries like India, where information systems are evolving, and standards vary widely across jurisdictions, each of which are empowered to use and establish their own standard. While this is important to enable flexibility of the court to reflect

their local requirements and needs, it presents challenges for litigants who have to seek justice across multiple jurisdictions, which is not unusual for enterprises in India.

We point out that these challenges are not restricted to any geography, which is reflected in the literature on this topic. As in *CourTools*, the various metrics and categories rely only *partly* on public information disseminated by courts. Much of the information about court performance, particularly relative metrics, are developed using 'perception surveys' which are conducted to obtain responses from litigants on their experiences and perceptions about these various performance metrics.

In this Section, we describe the different sources of data we used to quantify performance metrics for the debt-dispute resolution litigant for the selected courts in Mumbai.

5.1 Secondary data from courts

Courts in India today present a variety of information through court websites. There are multiple sources for court information through websites today. Some of the most often used and popularly cited are the following:

1. `e-courts` portal: this provides case life-cycle information of *district courts*. The portal is updated daily for orders passed on any particular day. However, this data on orders is not comprehensive, does not cover tribunals and high courts, and poses some challenges for use (Damle and Anand, 2020).

2. `NJDG`: The website provides case-type-wise/ age-wise aggregate number of cases pending and disposed, at High Courts and district courts. However, the website does not track life-cycle of the cases, and does not provide the information that is important to deploy a litigant-centric measurement of courts. This is updated daily.

3. High Court websites: Each of the 25 High Courts in the country publish information of case status and orders. These websites also publish daily cause-lists. Put together, we are able to construct the full life-cycle of a case by tracking orders and case status over the life of any given case. These are updated on a daily basis.

4. Tribunal websites: Similar to the information published by the high courts – case status, orders and cause-lists. These are updated daily.

For the purpose of our research, we extract data directly from the website of the selected courts in Mumbai. The orders information was programmatically collected, and parsed to link orders that are part of the same case. This helps us to construct the case life-cycle information. The final set of cases that are constructed for each of the three courts, contain both disposed and pending cases. For the three courts that we study in this report, the data collated are described in the following:

Bombay HC: We selected four case-types out of the 231 case-types available on the website. These include *suits*, *summary suits*, *commercial suits* and *commercial summary*

suits, filed under its original jurisdiction. We believe that cases involving debt enforcement will be covered under these four case-types.

For the Bombay HC, the sample period of data collected starts in `01-01-2017` and ends in `31-12-2022`.

DRT: We extracted cases arising under the Recovery of Debts Due to Banks and Financial Institutions (RDDBFI) Act, 1993, and the Securitization & Reconstruction of Financial Assets & Enforcement of Security Interest (SARFAESI) Act, 2002.

The sample period of data collected starts in `01-01-2019` and ends in `31-12-2022`.

NCLT: Out of the three laws covered in the NCLT jurisdiction (Companies Act, 2013, Insolvency and Bankruptcy Code, 2016, (IBC), Limited Liability Partnership Act, 2008), we only extract the cases filed under the IBC from the NCLT's website.

The sample period of data collected starts in `09-09-2021` and ends in `31-12-2022`.

Table 4 Description of sample data of court orders to quantify metrics from three debt dispute resolution courts

	Total	**Disposed**	**Pending**	**Disposed (%)**	**Pending (%)**
Bombay HC	1243	159	1084	12.79	87.21
DRT	843	125	718	14.83	85.17
NCLT	2645	897	1748	33.91	66.09

Table 4 gives an overview of the orders data that was collated and used to calculate the survival probabilities of the three selected courts described above. The orders data that we extract from the three courts studied in this project, give us information about two critical elements to set expectations about the life-cycle of a debt-dispute resolution case: the various orders issued by the courts and the dates on which these orders are issued. This allows us to construct a time-line of various hearings the case has gone through. We use this to answer questions related to the metrics categories under efficiency and predictability, that can be useful for a litigant in a debt-dispute resolution matter.

Challenges

While there has been considerable improvement in form and access to data on the High Court and Tribunal websites over the last few decades, there remains challenges to the organised data collection that be used towards the objective of this project.

For one, courts vary in how the (older) archived data is made accessible. This presents a challenge in constructing datasets that are exactly the same for each court at different points in time, which can then be used to calculate metrics of court performance in older time periods. This presents a barrier both in getting a clear understanding how the courts compare at present, and about how the performance of the courts have evolved over time

Secondly, there remain challenges in accessing the case information in a **uniform** manner. For example, cases at the Bombay HC are recorded by the date on which the case is filed. This means that the case information is available from the date of *filing*. This is not the same for the DRT and the NCLT. A given case is first visible on the websites of these two tribunals only on the date of the *first hearing*. When the case appears on these court websites, the case record includes the date of filing. However, at any given point in time, the number of cases related to debt disputes will be more accurate on the website of the Bombay HC compared to the number of similar matters on the DRT or the NCLT, simply because the filed cases are not visible on their respective websites until the matter is listed for hearing for the first time.

Another perspective is that, since the information about filed cases is missing from the DRT and the NCLT, all matters that are negotiated out of court and settled before the first hearing, will not be captured in the data for the DRT and the NCLT. This implies that comparisons, particularly of the workload, between the Bombay HC and the other two courts will contain a bias against the Bombay HC, to the extent of the matters that are filed and get settled before being heard at the DRT and NCLT. At present, given the non-standardisation in how information is published between the Bombay HC, and the DRT and NCLT, there is no automated way in which the bias can be calculated and adjusted for. This is a caveat when using the performance metrics based on case data from the websites, which a litigant must be aware of.

5.2 Perception surveys

Perception surveys of stakeholders in the litigation eco-system are used as a standard measurement approach by scholars to evaluate court performance (Dougherty *et al.*, 2006; Rottman and Tyler, 2014; Staats *et al.*, 2005; European Commission for the Efficiency of Justice, 2016; National Center for State Courts, 2005). The advantages of the survey tool is that it can be used to: (i) collect information that is not available through secondary data; and (ii) corroborate the information derived from the secondary data.

We sought to identify the preferences of litigants when choosing between several dispute resolution courts when they are faced with a contract default. In our design of the perception survey for the litigants, we followed the approach of presenting survey respondents with a canonical problem, after which the respondents are asked to compare their experience in different courts and rank these courts on each of the metrics identified above. This approach of using a canonical problem based on which to facilitate comparison and assign scores to alternative judicial courts, is often used for the purpose of globally benchmarking systems, including for activities such as enforcing debt around the world (Djankov *et al.*, 2008).

We presented the following canonical problem to them and asked them to rank the three courts in their order of preference for dealing with the problem.

"ABC is a large public listed company. It has availed of a working capital loan

of Rs. 7 crores from RandomNBFC, a small sized NBFC, repayable within three years with simple interest @16p.a. Both ABC and RandomNBFC are 100% domestically owned. As collateral for the loan, ABC has granted RandomNBFC a floating charge over its some of its movable assets, for example, its machinery or its inventory. One year into the loan, ABC defaults on its loan to RandomNBFC. The outstanding amount exceeds Rs.1 crore. Post-dated cheques issued by ABC towards interest payment bounce due to insufficient funds in ABC's bank account. The collateral is not sufficient to cover the outstanding amount. You are advising RandomNBFC."

We asked respondents to make two assumptions while assigning ranks to the identified courts: (1) The limitation period is the same across all the courts. (2) All courts have jurisdiction.

These questions of the perception survey aims to quantify the respondents perception of the quality of the court, using the above case as the context for the evaluation. We included the Alternative Dispute Resolution (ADR), and the Metropolitan Magistrate (MM) courts, when asking respondents to rank Mumbai courts on resolution of the above case, given that arbitration clauses and post dated cheques are frequently used in the context of debt contracts. Thus, while the main focus of the performance evaluation remained the three selected Mumbai courts, we also obtained a relative benchmarking of the three courts with respect to these additional two courts, from the pilot of the perception survey. Section B of the Appendix includes the complete set of questions that were administered to the respondents of the perception survey.

We administered the survey to 18 respondents, identified on the basis of their frequent interaction at one or more of the three identified courts. 16 of these respondents were lawyers and two were key managerial personnel at a debt financing firm and a corporate restructuring firm. Eight of our respondents had experience in dealing with debt disputes under the *Below 20 years* category, 6 under the *20 to 30 years* category and 2 under the *Above 30 years* category. Finally, 14 out of 18 of our respondents had experience with the NCLT and the Bombay High Court, and 11 with the DRT.

5.3 Consolidating comparisons

In the previous two sections, we identified a set of measures to capture information along all five categories of court performance metrics, from the viewpoint of a litigant. But while some of the measures can be used to tangibly support the decision of whether to litigate, others are perceptions of court performance. Each are different in nature, even though some of these measures capture information about the same aspect of court performance evaluation. This can be seen in Table 5, which presents the different categories of measures, how these measures can be evaluated using questions in a perception survey, and how they can be quantified using orders data. How can we credibly combine the information from both types of sources to inform a litigant?

Table 5 Court performance metrics and sources for a debt-dispute resolution litigant

	Perception survey	**Secondary data**
Access	• I can afford to resolve my case in this court. • It is easy to physically navigate through this court. • The court staff is helpful. • The website has the information that I was looking for. • The filing process is easy in this court.	
		• Number of hearings likely to take until disposal.
Effectiveness	• Judgement of the court will be complied with in a timely manner.	
Efficiency	• This court is most likely to dispose of my matter in a timely manner.	
		• Chances of a case being heard atleast once within the first year from the date on which it is filed. • Chances of the case being disposed within one year from filing.
Independence	• Can trust the court to make an unbiased decision based on the merits of the case.	
Predictability	• Have clarity on the sequence of stages in my case.	

We draw upon the idea of relative bench-marking across courts explained in Section 2, and develop a ranking/ comparative framework for courts. The objective of the framework is to allow litigants and the public to compare the *relative* performance of the three courts we identified earlier. Such a framework would be useful to compare courts on the attributes that matter to litigants, while taking all types of information into account, whether it is quantitative or qualitative (such as from perception surveys).

We do this by shifting from values to ranks for each court, for each measure of court performance. The advantage of using ranks as a metric of court performance evaluation is that it can be calculated in the same way, for primary data or secondary data. For example, the perception survey question about the independence asked the respondents to rank the identified courts on the following statement: "I can trust this court to make an unbiased decision based on the merits of the case." Respondents were asked to assign a higher rank (rank 1) to the court that they believed they could trust more, relative to the others (lower rank values). The same approach to ranking courts is even more easily done, when there are quantitative measures that can be estimated using orders data. A court with a higher value of a quantitative measure will have a higher rank than a court with a lower value of the same measure.

We operationlise both these approaches in the following sections. Section 6 discusses a pilot conducted on a sample of orders data collected from the three courts (as discussed in Section 5.1). Section 7 discusses a pilot perception survey on these courts using two sample sets of respondents (as discussed in Section 5.2).

6 Operationlising the framework for decision support

We use data on the cases described in Table 4 which were collected from the website of the three courts. Table 5 presents three metrics that this data can quantify, which can help the litigant estimate the amount of time and other resources that she is likely to spend if she decides to litigate a debt dispute in one of these three courts. The traditional approach is to calculate the average value of these metrics. Thus, the data can be used to calculate the average time to first hearing, average time to disposal, and the average number of hearings. We present these estimates in Table 6 below.

These estimates present some challenges to use. Some of these can be calculated only using a subset of the data. For example, the average time to disposal can only be meaningfully calculated for the set of cases that are disposed. However, more than half of the cases in each of these courts are pending cases. It is not correct to assume that the pending cases will take the same average time to get disposed. Similarly, the average number of hearings is calculated using the number of hearings for both disposed cases as well as for pending cases. It is not correct to assume that the pending cases will have the same average number of hearings till they get disposed. The same argument will hold for the average time to first hearing. There is a bias in each of these estimates, which needs to

Table 6 Case statistics to inform a debt-dispute resolution litigant, traditional calculation

	Average		
	Time to 1^{st} hearing (in years)	Time to disposal (in years)	Number of hearings
Bombay HC	0.50	0.68	0.4
DRT	0.23	0.34	2.7
NCLT	0.12	0.25	4.0

The average number of hearings estimated for the Bombay HC is 0.4, because there are cases which have not yet had a first hearing.

be corrected if they are to be used by anyone who is making the decision to litigate.

In the next section, we suggest an alternative approach to using the complete information available from the courts, that can provide more robust estimates to help the decision to litigate.

6.1 New approaches in estimating efficiency of courts from orders

Instead of using expectations using partial information that is likely to present a biased view to a potential litigant, we estimate an unbiased estimate which uses the full information about cases at a court. This is done using the 'survival probability' modelling approach.

Survival probability of disposal refers to the chance with which cases remain pending at any given point in time. This is the corollary of the chance of a case getting disposed of at that point in time. This analysis is a statistical technique that helps determine the probability of chosen event at a chosen time. For instance, we want to estimate the probability of the event (say, of *disposal of cases*) at any time 't' (say, *one year from filing*).

Survival analysis models provides an estimate of the survival probability as the probability with which the event *does not occur* up until time 't'. In this example, the value of the survival probability informs us about number of cases that do not get disposed within one year from filing. This may appear counter-intuitive, but this is the chance that the case does **not** get disposed in one year. The reverse calculation of (1 - survival probability) informs us of the chance that the case *does* get disposed in one year.

When the survival probability (probability of the event not having taken place till time t) is plotted on the y-axis with time to event on the x-axis, it is referred to as a 'survival curve'. As time passed, fewer and fewer cases ought to remain to be (say) disposed. As a consequence, the graph of any survival curve shows a down-ward sloping curve, that decreases with time. Further, the faster the curve drops, the faster are the cases getting disposed over time.

Therefore, when plotting the survival curves for disposal of cases across multiple courts

in the same graph, the survival curve for a court that disposes cases quicker will slope downwards quicker than another court which disposes cases slower.

We apply the survival analysis on this data to answer two questions to support the decision of the debt-dispute resolution litigant when making the choice to take her matter to court. These are:

1. What is the probability of a case being heard at-least once within the first year of filing?
2. What is the probability of a case getting disposed of within the first year of filing?

Chances of getting a first hearing in the first year from filing:

Figure 1 Chances of getting a first hearing within one year from filing, in three debt dispute resolution courts

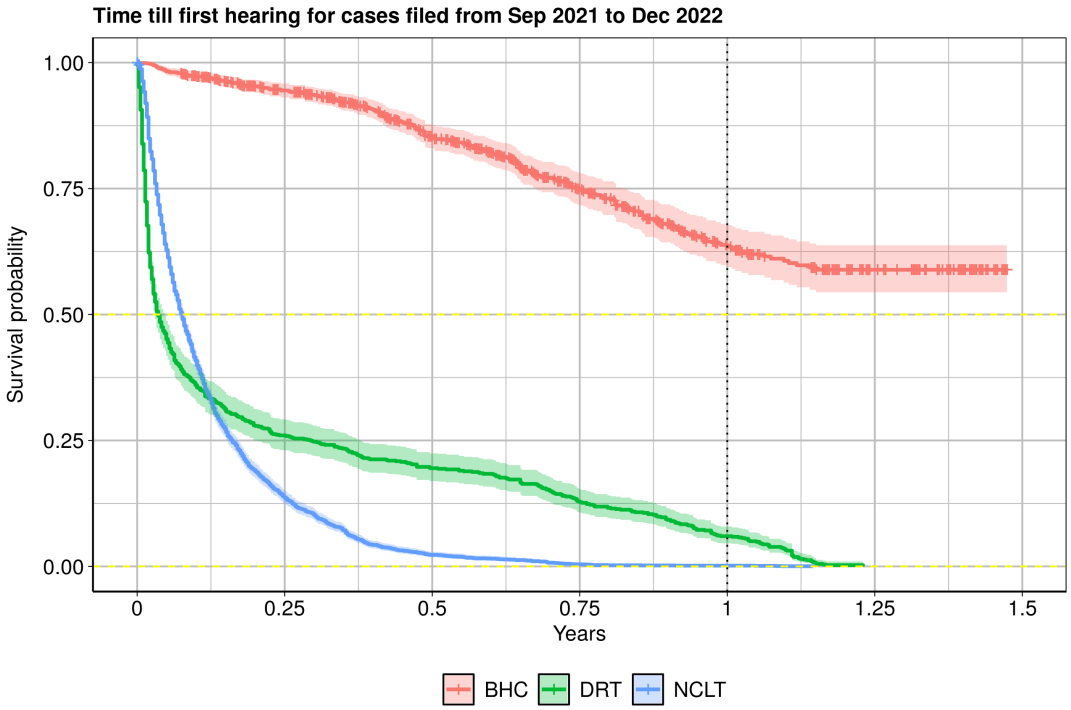


Figure 1 presents a graph of the survivor curve for a matter getting a first hearing across the Bombay HC, the DRT and the NCLT. Here, time taken to a first hearing is plotted on the x-axis. Higher values of time on the x-axis means a longer and longer time to have a *first hearing*. From this graph, we see that the graph for the Bombay HC slopes downward the least. This indicates that, out of all the cases that filed, the change in the number of cases that get a first hearing is very slow. The court where this changes the fastest is the DRT, where the curve slopes downward most rapidly in the first two weeks of filing. However, by the first month after filing, the NCLT is the court where the curve slopes the most.

The probability of not getting to the first hearing is plotted on the y-axis. Each point on the y-axis is (out of a 100) the chance that there will not be a first hearing. We use this to calculate the chance of getting a first hearing as (1 - value on the y-axis). We then use the three curves to calculate the chance of getting a first hearing within a year by locating the point on the curve corresponding to t=1 year on the x-axis. We calculate these for the three courts, and present this in Table 7.

Table 7 Chance of first hearing within one year from filing, at three debt dispute resolution courts

Court	**(in %)**
Bombay HC	36.6
DRT	94.0
NCLT	99.8

This indicates that a comparable case at the NCLT has the highest chance (of nearly 100%) of being heard within the first year from its filing followed by a matter at the DRT which has a 94% chance of doing so. At the Bombay HC, there is a less than 40% chance that a similar matter will get a first hearing within a year of being filed.

We are able to estimate the chance of a case being heard for the first time within say, the first three months of filing. Our analysis finds that for a litigant at the NCLT, there is an 86% chance of getting the first hearing within the first three months of filing a case. The corresponding chance for the DRT and the Bombay HC are 74% and 5% respectively.

Chances of getting a case disposed in the first year from filing of a case:

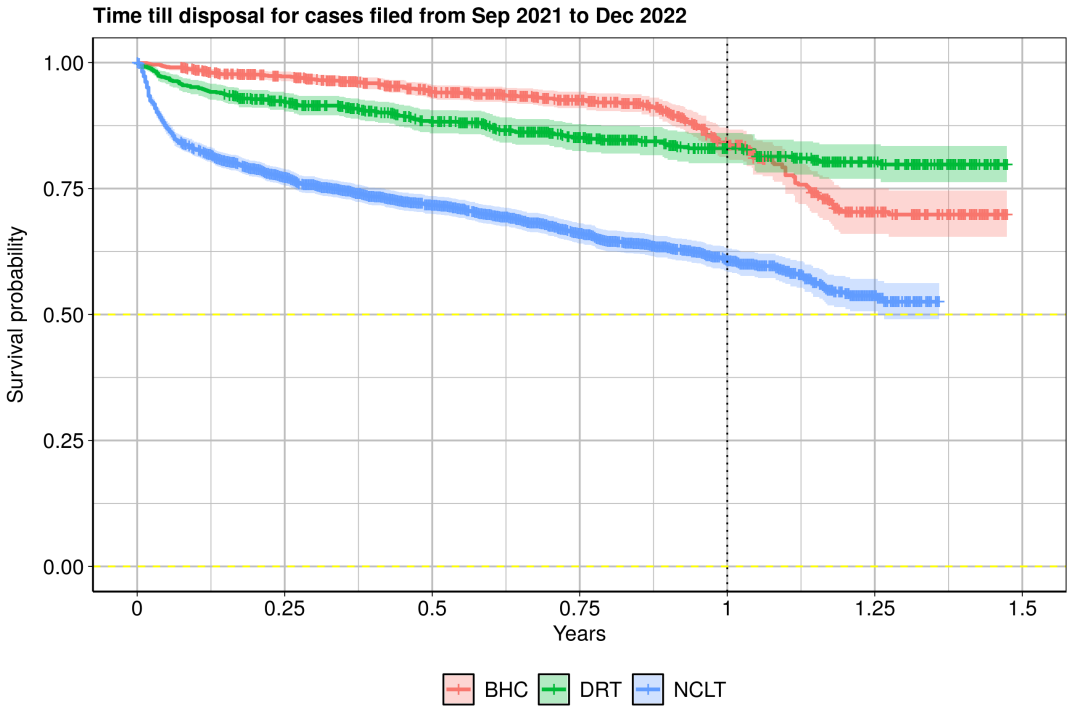
We use a similar approach to answer how likely it is that a case is disposed by the court in the very first year. We use the data on the time taken for a case to get disposed, from the day that it was filed. The standard techniques of survival analysis fare well on harnessing information about all cases in a court, be they disposed or pending cases. Using this technique, we compute and report the chances of disposal of a case per court, within one year from filing in Figure 2.

Each graph in Figure 2 shows the litigant the chances of a debt dispute resolution matter *not* getting disposed, for one court. We subtract these values from 1 to get the chance of the matter getting disposed.

We present the graph for all three courts in the same figure, to allow for an easy comparison of the chances of getting a case disposed across the three courts. The court where cases have the best chance of being disposed quickly is the court with lowest graph in the figure. The court where cases have the lowest chance of a quick disposal is represented by the highest graph in the figure.

The graphs in Figure 2 tell us what are the chances of disposal at different times

Figure 2 Chances of getting a case disposed within one year from filing, in three debt dispute resolution courts



(in years) as marked on the x-axis. In Table 8, we extract the chance of disposal of a case within the *first year* of being filed. This corresponds to the point (year = 1) on the x-axis.

Table 8 Chance of disposal within one year from filing, in three debt dispute resolution courts

Court	(in %)
Bombay HC	16.1
DRT	17.0
NCLT	39.3

Table 8 shows us that the NCLT has the highest chance of disposal at nearly 40%. Cases in the DRT and the Bombay HC have less than half the chance of disposal within the first year, at 17% and ∼16% respectively.

It is useful to point out that the survival method is useful to establish expectations about multiple aspects of the matter, if it gets filed in a given court. For example, intuition would lead us to expect that the chance of getting a first hearing is higher than the chance of getting disposed, once the case has been filed in any of these courts. When we compare the graphs for the chance of first hearing in Figure 1 for (say) the NCLT to the chance of getting disposed in Figure 2, we see that the first hearing graph is lower than the disposal graph.

Though these values from the survival analysis approach have been calculated for specific event time (which is within one year from filing), they can be estimated as the expected values across all values of event time. Here, we present these values as within one year from filing, driven by two motivations: (1) as a demonstration of the approach that can be used, and (2) that litigants can plan for such time horizons with greater clarity than over longer periods.

7 Operationalising the perception-based comparison framework

The previous section examined how data published by courts on orders and hearings can be used to create models that can support the decision of whether to litigate using the chances of getting a hearing, or getting a disposal, at three different courts in Mumbai. These give the litigant a tangible sense of what to expect if she takes the decision to take her matter to a court, in terms of the time that the case can be expected to take, either to give her clarity from a decision at the first hearing or to get her matter disposed.

However, there is other information that is useful for a litigant that the information from orders data published by courts cannot provide (Table 5). Similar to the global literature

on this topic, in this project, we conducted a perception survey to assess how litigants evaluated court performance, using the approach described in Section 5.2.

We describe the ranking of the courts separately for each metric in the following. As discussed in Section 5.2, the respondents were asked to rank five courts. Therefore, the graphs present the ranks of five courts. However, in the tables, we only present the ranks for the Bombay HC, DRT and NCLT.

Comparison on *independence*

Figure 3 shows the percentage of respondents who assigned Ranks 1 to 5 to the 5 courts on the metric of independence. We asked the respondents the to rank these courts on the following statement:

> *I trust this court to make an unbiased decision based on the merits of the case.*

Figure 3 Litigant perception of independence of five debt resolution courts in Bombay

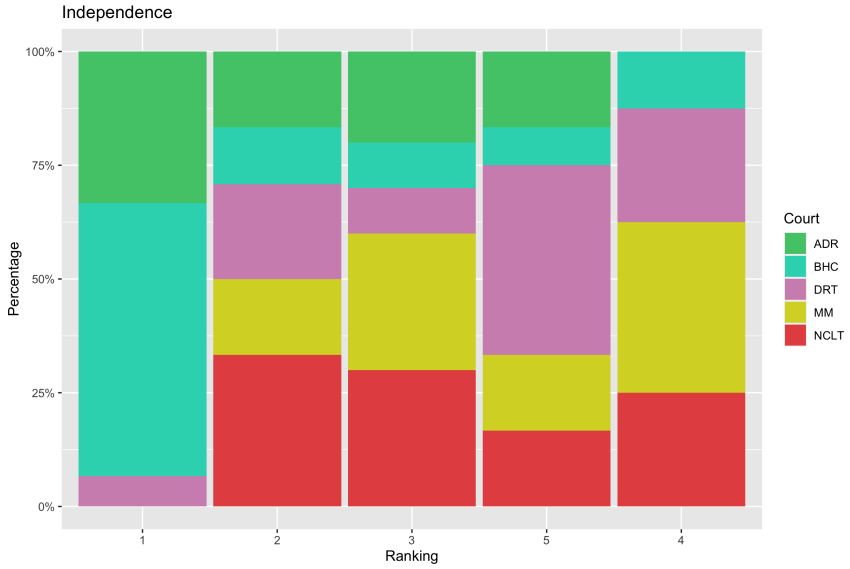


Figure 3 shows that most of respondents ranked the Bombay HC as having the highest level of independence. About 50% of the respondents who ranked NCLT, have ranked it 2^{nd} in terms of independence. DRT is the lowest ranked court in this metric, where 35% of the respondents have given it Rank 5. We assign Rank 1 to the Bombay HC, and Ranks 2 and 3 to the NCLT and the DRT, respectively.

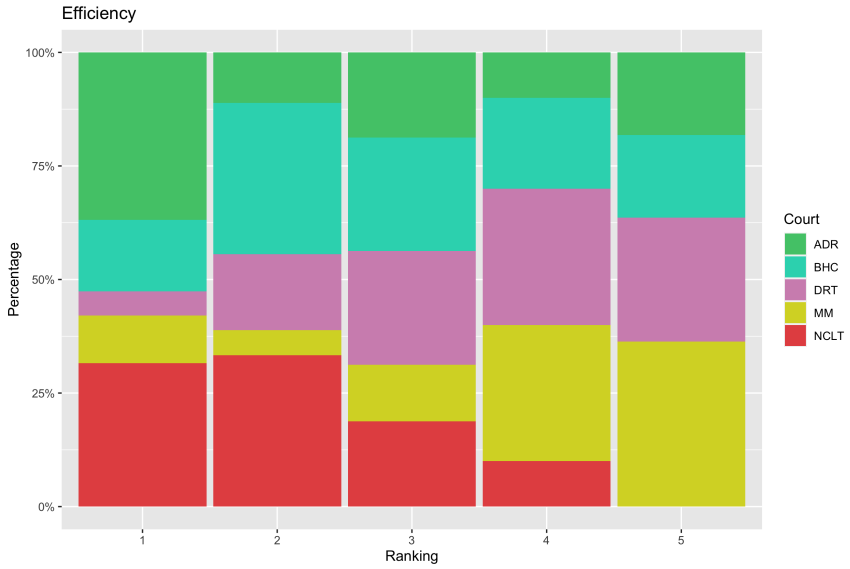
Comparison on *efficiency*

Figure 4 shows that at least one or more respondents have ranked all three courts as Rank 1 on timeliness. Of the three, NCLT was ranked as timely by most respondents.

Table 9 Ranking three debt dispute resolution courts based on litigant perception of independence

	Bombay HC	DRT	NCLT
Independence	1	3	2

Figure 4 Litigant perception of efficiency of five debt resolution courts in Bombay



Therefore, we assign Rank 1 to NCLT on efficiency. On the other hand 25% of the respondents ranked the DRT as the slowest. More respondents have given the Bombay HC 1st or 2nd rank as compared to 4th or 5th. Bombay HC is assigned Rank 2, and the DRT Rank 3.

Table 10 Ranking three debt dispute resolution courts based on litigant perception of efficiency

	Bombay HC	DRT	NCLT
Efficiency	2	3	1

Comparison on *effectiveness*

Figure 5 Litigant perception of effectiveness of five debt resolution courts in Bombay

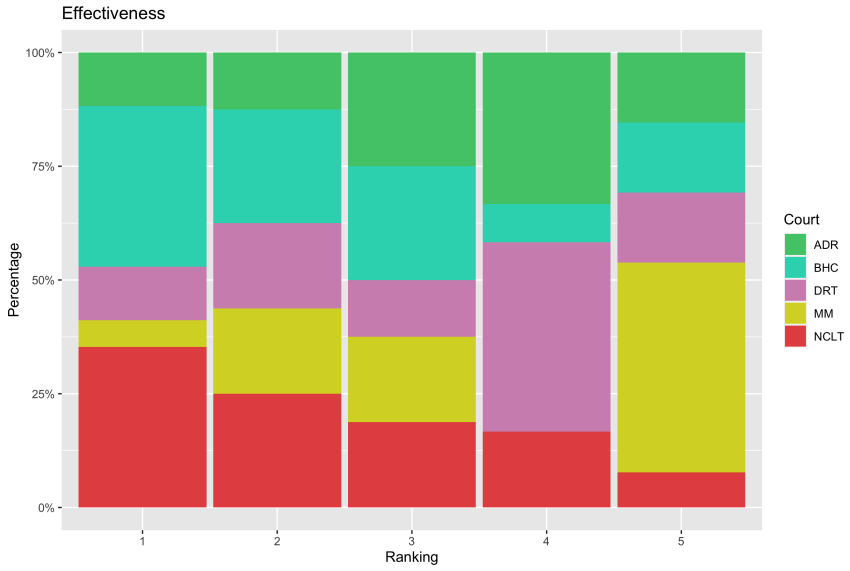


Figure 5 represents the ability of a court to enforce its rulings effectively. The perception of the respondents on this metric seems to widely differ from one another. While about 35% of them have ranked Bombay HC as the most effective (Rank 1), 50% have ranked it as Rank 2 or 3. Similarly, while about 37% of the respondents ranked NCLT as the most effective (Rank 1), about another 45% of them have ranked it 2^{nd} and 3^{rd} as well. When taken using the number of votes, the NCLT is perceived to be the most effective in terms of contracts being enforced, followed by the Bombay HC. On this basis, NCLT is ranked 1, the Bombay HC is ranked 2 and the DRT is ranked 3 on effectiveness.

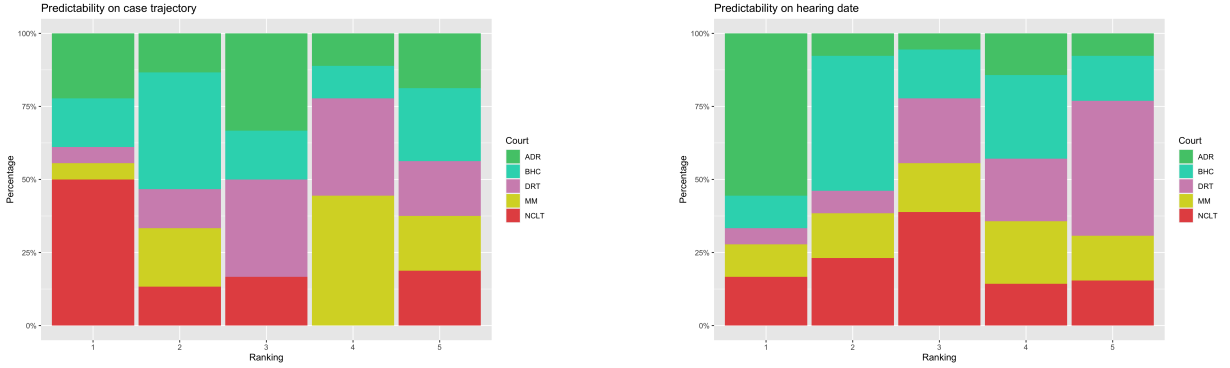
Comparison on *predictability*

Figure 6 presents two graphs on ranking the five courts on the predictability. The first graph presents the survey respondents ranking the five courts on how certain the re-

Table 11 Ranking three debt dispute resolution courts based on litigant perception of effectiveness

	Bombay HC	DRT	NCLT
Effectiveness	2	3	1

Figure 6 Litigant perception of predictability of five debt resolution courts in Bombay



spondent is about the trajectory that the case will take. The second graph presents the survey respondents ranking the five courts on certainty on the hearing date. For both the measures, more respondents have given the NCLT a higher rank, followed by the Bombay HC. DRT is perceived to be the most uncertain in terms of conducting a hearing as scheduled. Therefore, the NCLT has Rank 1, Bombay HC has Rank 2 and DRT has Rank 3.

Table 12 Ranking three debt dispute resolution courts based on litigant perception of predictability

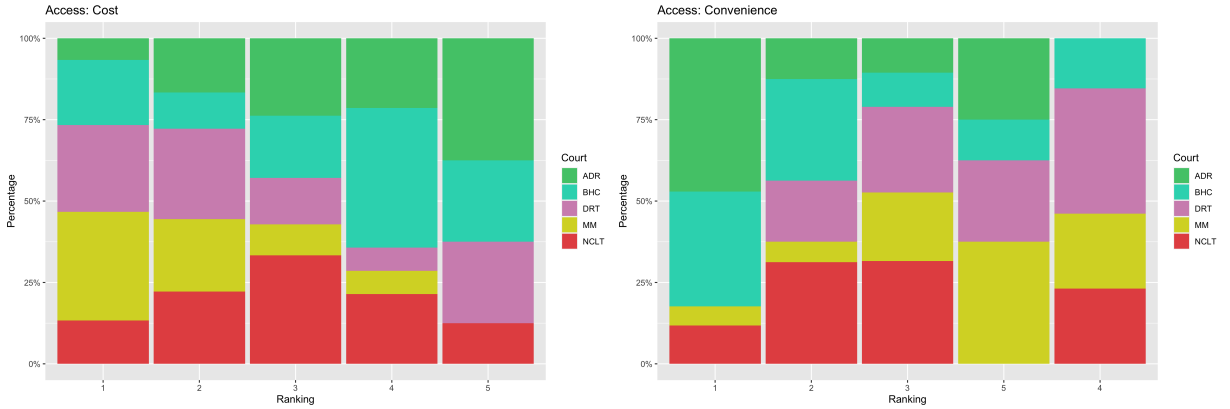
	Bombay HC	DRT	NCLT
Predictability	2	3	1

Comparison on *access*

Figure 7 presents how the litigant respondents ranked the five courts on perceptions about access, which we capture through questions on cost and convenience. The first graph captures the respondents' perception on the cost incurred to resolve a dispute in each of the five courts. Most of the respondents ranked the DRT to be the most affordable, and the Bombay HC is ranked as the most expensive. 6 out of 17 respondents ranked the NCLT as 1 or 2, while 7 of them gave it Rank 3. We rank NCLT as 2, the DRT as 1, Bombay HC as 3.

The second graph in Figure 7 presents the perception about convenience. Here, the respondents were required to assign ranks to the 5 courts based on four questions: (1) *It is easy to physically navigate through this court.*; (2) *The court's staff are helpful.*; (3)

Figure 7 Litigant perception of access of five debt resolution courts in Bombay



This court's website has the information that I was looking for.; and (4) *The filing process is easy in this court.* On this metric, the Bombay HC is perceived to be the most convenient. No respondent ranked DRT as Rank 1 on this metric. We assign Rank 1 to Bombay HC, Rank 2 to NCLT and Rank 3 to the DRT, on convenience.

Table 13 Ranking three debt dispute resolution courts based on litigant perception of predictability

	Bombay HC	DRT	NCLT
Access	2	3	1

7.1 A litigant centric perspective on comparing three courts debt dispute resolution

We use the information collected through the secondary data in Section 6 and the perception survey in Section 7 into an overall ranking of three courts in our analysis. We create one set of ranks for the three courts based on an ascending order of quantitative measures for efficiency and predictability. We obtain the second set of ranks for the three courts for each of the five metrics from the perception survey. We then order the three courts in order of their combined ranks in Table 14, where the column titled "Overall" in the table is the rank for each court, consolidated over the ranks of all the metrics.

Table 14 Ranks of courts, overall and by metric category, combining both perception survey and secondary data

Court	**Overall**	**Independence**	**Efficiency**	**Effectiveness**	**Predictability**	**Access**
Bombay HC	**2**	1	3	2	2	1
DRT	**3**	3	2	3	3	2
NCLT	**1**	2	1	1	1	3

Unlike with the quantitative measures, where every standalone value can have implications that are useful for the litigant, these measures can only be used to understand how litigants rank the courts. Therefore, these measures act as a signal of performance of the court itself, and is likely to be an innovation of measures for courts as they seek to improve their quality and delivery of judicial services. There is variation in the perception of litigants about the performance across these courts. While this study may not be conclusive of a particular attribute of a court, it presents insights about the three courts - (i) Most respondents report the most trust in the Bombay HC, and the least trust in the DRT; (ii) NCLT is perceived to be the most efficient on timeliness, and the DRT is the least; (iii) DRT is ranked as the most affordable court for resolution of a debt dispute, while Bombay HC is the most expensive. (iv) DRT is also ranked as the least convenient, while Bombay HC is ranked the most user-friendly. These are useful inputs to courts as they build systems to improve judicial services.

For the litigants themselves, or for those who are choosing to litigate, these measures act as a guidance on *where* to litigate, once they have *chosen* to litigate. These measures do not provide guidance on *whether* to litigate. These distinctions between the quantitative and the perception metrics are useful to take cognisance of, particularly as we continue on the path of building similar information based systems of monitoring and using metrics of court performance as inputs to guide litigants in how to use courts optimally.

8 Delivery to the user of courts

This project was undertaken with the goal to develop performance measures for Indian courts that adjudicate commercial disputes, which can help these litigants or persons who are deciding whether to litigate. The aim of developing such a system is two-fold: identify the types of information that can support the decision of a potential litigant on whether to take her matter to court, and to locate data sources required to quantify such measures from the viewpoint of periodically publishing such measures in the public domain.

The last step, therefore, is to figure out how to deliver this information to a litigant or decision maker in the most user friendly and easy to understand manner. Litigants are not a homogeneous group. In the case of debt contract disputes, the litigant can be an individual (such as an unpaid employee), a business enterprise (such as a vendor of goods) or a large institution such as a bank. The counterparty, in debt contracts, also varies in sophistication. The wide variety in the kinds of litigants in such litigation exacerbates the challenge of designing an interface that suits most litigants.

There is considerable knowledge in the field of design on what makes for a good user interface and user experience. As an experiment, we partnered with OOLOI LABS in developing a litigant facing web based interface that communicates this information to a litigant or a decision maker seeking it. The tool can be accessed here. There were

multiple alternatives in designing this interface, such as chatbots, webpages, and so on. In the interest of time and simplicity, we selected an interface that provides a guided or interactive experience to the user. Currently, the interface is in English. With time, it will be possible to present the same information in other languages that are widely used in India. It is important to publish this tool in the public domain and obtain user feedback to improve its features and the quality of its interface.

9 Future pathways

In this report, we presented the findings of a pilot exercise that compares debt contract adjudication forums in Mumbai on metrics that are important to litigants. We used two data sources and demonstrated that it is possible to define the metrics that litigants care about, identify proxies of such metrics and empirically calculate these. We argued that undertaking a comparative evaluation of courts adjudicating similar disputes will allow litigants to make better informed optimal decisions on whether to litigate or to settle, and which court is most suited for their purpose. For instance, if a potential litigant values 'access' or 'costs' over efficiency, she may choose to evaluate a less efficient, but more accessible forum more favourably than a forum that is ranked high on efficiency and low on access. The key point to note here is that the litigant perspective requires a researcher to zoom into case lifecycle data from aggregate data.

Based on the feedback received in the course of the project, we believe there are four paths to take this work further:

Scaling up across other debt contract enforcing benches and courts The first and most low hanging fruit is to scale this pilot across all 25 benches of the DRT, 16 benches of the NCLT and other civil courts in India which adjudicate debt contracts. This requires us to set up systems to regularly web scrape case lifecycle data from the websites of these forums. The advantage of this approach is that since all the benches of the NCLT and the DRT share a common website, they follow the same layout and disseminate the same case lifecycle information. We can, thus, be reasonably confident of extracting identical information across all their benches and courtrooms. This is harder for other civil courts that adjudicate debt contracts, because either have their own websites or are linked to the E-Courts system. For instance, the Bombay High Court has its own website, warranting a different web scraping program dedicated to itself. Further, unlike the NCLT and the DRT, the Bombay High Court also displays cases which have been filed but have not yet been heard even once. Also, since the Bombay High Court adjudicates all kinds of cases, and not just debt contracts, out of the cases that have been web scraped, only a subset of them pertain to debt contracts. It is not possible to identify the sub-set of debt contract cases these without parsing the orders passed in these cases. This is hard to automate, and manual parsing of orders is a time consuming and expensive exercise. A meaningful comparison of the Bombay High Court case lifecycles with those of

the NCLT and the DRT cases requires appropriately accounting for such anomalies. Finally, in addition to the Bomby High Court, four other high courts, namely, those of Delhi, Himachal Pradesh, Chennai and Kolkata, have original jurisdiction to adjudicate contracts.[2] This necessitates a High Court specific web scraper for each of these four other High Courts courts. For the rest of the country, the information on case lifecycles can be extracted from the E-courts website. This is potentially easier as it entails writing only one web scraping program and assures greater uniformity. Having said that, the identification of and subsetting debt contract related cases involving from the universe of civil cases, will continue to remain a challenge.

Automating order text parsing These problems lead us to the next pathway for furthering this work, namely, automating the process of parsing orders passed by courts. Throughout the project, we received questions and feedback on how case lifecycles should be linked to other nuances of the case, such as debt amounts, the kind of parties to the case, the identities of the judge, and so on. Many of these inputs were suggested as potential explanatory variables for different case trajectories. Doing this requires us to automate the parsing of orders passed in these cases.

As a small experiment, we attempted to automate the identification of orders as 'substantive' or 'non-substantive', using a uniform identification criterion. We used a manually read sample of orders passed by the NCLT to train a program to identify each order passed in a case as 'substantive' or 'non-substantive'. We found that the program identified about 70% of the orders correctly. This simple binary classification exercise was our first foray into automating order text parsing. We believe that given enough time and resources, we will be able to scale this automation process to identify more case-specific parameters which are not obvious from the lifecycle data and with greater accuracy.

Other case types The evaluating framework of litigant-specific metrics can be applied across different case types. The five metrics identified in this work: independence, efficiency, predictability, effectiveness and access, are outputs that the users of any court system would aspire for. This framework thus allows the evaluation of court performance in almost any civil dispute, such as consumer disputes, property title disputes, as well as matrimonial disputes. Proxies of these metrics, such as the probability of obtaining a first hearing, the average number of hearings, and so on, are equally applicable to these case types.

Case trajectories across different levels of the judiciary A case in India may go through several levels of the Indian judiciary. While this project focused on the metrics that matter to the litigant at the level of one court (the court of first instance), information on similar metrics at the appellate level can help litigants make optimal decisions on whether to appeal and what to expect, when appealing. Additionally,

[2] All other High Courts have only appellate civil jurisdiction, which means that these courts do not deal with contract breaches, unless these cases go to them in appeal from a lower court.

tracing case trajectories across different levels of courts allows one to evaluate a court for its appeal rates, the rate of reversal of its orders, and that too can help a litigant decide whether to approach a court of first instance at all.

References

Barendrecht M, Mulder J, Giesen I (2006). "How to Measure the Price and Quality of Access to Justice?" *SSRN Electronic Journal*.

Cabral JE, Clarke TM (2012). "Access to Justice Integration with Emerging Court Technologies." *HARV. JL & TECH.*, **26**, 278–279.

Choi SJ, Gulati M, Posner EA (2012). "How well do measures of judicial ability predict judicial performance?: A study using securities class actions." *International Review of Law and Economics*.

Clarke J, Borys D (2011). "Usability is free: Improving efficiency by making the courts more user friendly." *National Center for State Courts, Future Trends in State Courts*, pp. 76–81.

Cunha L, De Oliviera F, Glezer R (2014). "o, Brazilian Justice Confidence Index – Measuring Public Perception on Judicial Performance in Brazil." *International Law, Revista Colombiana de Derecho Internacional*, **24**, 445–472.

Dakolias M (1999). "Court Performance around the world: A comparative perspective." *Yale Human Rights and Development Journal*, **2**.

DAKSH (2016). "Access to Justice Survey." *Technical report*.

Damle D, Anand T (2020). "Problems with the e-Courts data." *NIPFP WP Series*, (314).

Djankov S, Hart O, McLiesh C, Shleifer A (2008). "Debt Enforcement around the world." *Journal of Political Economy*, **116**. URL https://doi.org/10.1086/595015.

Dougherty GW, Lindquist SA, Bradbury MD (2006). "Evaluating Performance in State Judicial Institutions: Trust and Confidence in the Georgia Judiciary." *State and Local Government Review*.

European Commission for the Efficiency of Justice (2016). "Measuring quality of justice."

Hagan MD (2018). "A Human-Centered Design Approach to Access to Justice: Generating New Prototypes and Hypotheses for Intervention to Make Courts User-Friendly." *Indiana Journal of Law and Social Equality*, **6**(2), 199–239.

India Justice Report (2019). "India Justice Report: Ranking States on Police, Judiciary, Prison and Legal Aid." *Technical report*, Tata Trust.

International Consortium of Court Excellence (2020). "Global measure for Court Performance."

Kanubhai VJ, Naik S, Bolia N (2021). "User interface and user experience evaluation of Indian High Court websites." URL https://www.dakshindia.org/wp-content/uploads/2022/10/Book_27_August-1-1.pdf.

Kinhal D (2022). "New CJI should build 'litigant-centric' judiciary: Deepika Kinhal." URL https://www-theweek-in.cdn.ampproject.org/c/s/www.theweek.in/theweek/current/2022/11/04/new-cji-should-build-litigant-centric-judiciary-deepika-kinhal.amp.html.

Linzer DA, Staton JK (2015). "A Global Measure of Judicial Independence, 1948–2012." *Journal of Law and Courts*, **3**(2), 223–256.

Mahoney A (1989). "Citizen evaluation of judicial performance: the Colorado experience." *Judicature*, **72**, 210–216.

Manivannan P, Thomas S, Zaveri-Shah B (2022). "Evaluating contract enforcement by courts in India: a litigant's lens." *XKDR Working paper*, (16).

Melton J, Ginsburg T (2014). "Does De Jure Judicial Independence Really Matter?" *Journal of Law and Courts*, **2**(2), 187–217.

Mina W (2006). "Does contract enforcement matter for international lending." *Applied Economics Letter*.

NALSAR University of Law (2016). "A study of court management techniques for improving the efficiency of subordinate courts." *Technical report*.

Narasappa H (2016). "State of Judiciary Report." *Technical report*, DAKSH.

National Center for State Courts (2005). "CourTools."

National Court Management Systems Committee (2016). "Note for calculating required judge strength for subordinate courts." *Technical report*.

Palumbo G, Giupponi G, Nunziata L, Mora-Sanguinetti J (2013). "Judicial Performance and its Determinants: A cross country perspective." *OECD Economic Policy Papers*.

Prillaman W (2000). *The Judiciary and Democratic Decay in Latin America: Declining Confidence in the Rule of Law*. Westport: Praeger.

Rosales-Lopez V (2008). "Economics of court performance: An empirical analysis." *European Journal of Law and Economics*.

Rottman DB, Tyler TR (2014). "Thinking about judges and judicial performance: Perspective of the Public and Court users." *Onati Socio-legal Series*.

Sereno MLA, de Dios E, Capuno JJ (2009). "Justice and the cost of doing business in the Philippines." *Philippine Review of Economics*, **46**, 35–86.

Staats JL, Bowler S, Hiskey JT (2005). "Measuring Judicial Performance in Latin America." *Latin American Politics and Society*.

Vidhi Centre for Legal Policy (2021). "The Delhi High Court Roster Review: A Step Towards Judicial Performance Evaluation." *Technical report*.

von Lilenfeld-Toal U, Mookherjee D, Visaris S (2012). "The Distributive Impact of Reforms in Credit Enforcement: Evidence from Indian Debt Recovery Tribunals." *Econometrica*, **80**(2), 497–558.

Yeung LL, de Azevedo PF (2011). "Measuring efficiency of Brazilian Courts." *IMA Journal of Management Mathematics*.

A The Team

The project had the guidance of an advisory committee, comprising a mix of academics and practitioners in the field of justice reform. The members of the advisory committee are:

1. Justice (Retd.) A.K.Sikri
2. Dr. K.P. Krishnan
3. Dr. Arun Thiruvengadam
4. Dr. Harish Narasappa
5. Mr. Mahesh Krishnamurthy

The team comprised Susan Thomas, Bhargavi Zaveri Shah, Pavithra Manivannan, Geetika Palta and Karthik Suresh of XKDR Forum. We often drew upon the experience of practitioners and litigants who frequently interact with the set of courts that the project focused upon, as well as members of the wider team at XKDR Forum, for their inputs on the conceptualization, research methods and large chunks of project implementation.

The project was funded by Agami/ Vyayam, who continued to provide constant support of ideas and inspiration to the research team. Rashika Narain and Sachin Malhan have been cheerleaders of the project throughout, being enthusiastic both in being a ready sounding board for questions and thoughts from the team members as well as bring fresh ideas and energy at various stages of project. A special word of thanks to both Sachin and Supriya Sankaran for seeing the vision of this, in the very early days from when the project was an abstract idea.

During the project that spanned one and a half years, the team held three advisory committee meetings on 16^{th} May, 2022, 1^{st} September, 2022 and 30^{th} September, 2023. The goal of these meetings was for the research team to bring the advisory committee members up-to speed on the progress made in the project and get their inputs on the ongoing work.

In addition, the team organized two round-tables with Agami/ Vyayam. The first round-table was held in-person in Mumbai in June 2023, and another virtually in September 2023. The round-tables were attended by a mix of practising lawyers, civil society groups working in the judicial reforms space and academics. These discussions were recorded, and the recordings have been published at the XKDR YouTube channel.

B Survey questionnaire

Part 1: Profiling questions

No.	Questions	Answer format
1.	Name of the respondent	Free text
2.	Organisation associated with	Free text
3.	Designation at the organisation	Free text
4.	Are you a lawyer by profession?	Yes/No
5.	If yes, for how many years have you been in practice?	Free text
6.	Have you represented a client before the following courts in the last 5 years? Check the ones where you have.	DRT, NCLT, High Court, Metropolitan Magistrate Court
7.	If you haven't checked any of the courts in the previous question, have you advised any creditor or debtor on a debt recovery matter in the last 5 years?	Yes/No

Part 2: Perception of courts

In the context of the fictional problem, for the following questions, please *rank* the 5 courts from *1 to 5*, DRT, NCLT, High Court, NCLT, and Metropolitan Magistrate Court in the order of your preference, with 1 being the most preferred court and 5 being the least preferred court.

No.	Question	Answer format
Court choice		
8.	Which court would you approach to resolve your dispute?	Ranking
Efficiency		
9.	This court is most likely to dispose of my matter in a timely manner	Ranking
Effectiveness		
10.	Once a judgement is pronounced by this court, it is easy for me to recover the amount specified in the judgement decree	Ranking
Predictability		
11.	I had clarity on the sequence of stages in my matter in this court	Ranking
12.	It is likely that a hearing will be held on the scheduled date in this court	Ranking
Independence		
13.	I can trust this court to make an unbiased decision based on the merits of the case	Ranking

No.	Question	Answer format
Accessibility		
14.	It is affordable to resolve my case in this court	Ranking
15.	It is easy to physically navigate through this court	Ranking
16.	The court's staff are helpful and courteous	Ranking
17.	This court's website is most likely to have the information that I was looking for	Ranking
18.	The filing process is easy in this court	Ranking

Part 3: Lived reality
The questions in this part are independent of the fictional problem.

No.	Questions	Answer format
19.	In your opinion, how many times do you have to appear in court for a matter?	1, 2, 3, 4, > 4
20.	After filing a case, how long did you have to wait to get a first hearing?	<1 month, 1-2 months, 2-3 months, 3-4 months, >4 months
21.	What percentage of a debt claim are you willing to pay as lawyer fees?	<10%, 10-20%, 20-30%, >30%
22.	Other comments, if any	Free text