CHAPTER 21

Estimating Capacity Requirements of the National Company Law Tribunal: Notes from the Field

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"God may be in the details, but the goddess is in the questions. Once we begin to ask them, there's no turning back."

– Gloria Steinem

SUMMARY

- Policymakers in India have generally used four metrics to estimate the number of judges needed: filings, pendency, disposal and population;
- In 2014, the Law Commission of India dismissed 'population' as an unreliable metric for assessing the judicial capacity;
- A framework for determining the strength of the National Company Law Tribunal (NCLT), a quasi-judicial body, is of utmost importance;
- A critical input is the ability to collect and collate data in a standardised, comprehensive and consistent manner across all NCLT benches;
- The weighted caseload method is a useful framework for estimating the capacity requirements of tribunals.

Introduction

How many judges does a court need to perform its functions? The popular discourse on judicial backlogs in India tends to focus on, and arguably even over-emphasises, the sanctioned strength[1] to vacancy ratio. However, what are the ideal metrics for determining the sanctioned strength? How do we identify whether the sanctioned strength is serving its purpose or is obsolete? As a corollary, if the sanctioned strength is met, what should we assume of the performance standards of courts? How can one keep the sanctioned strength numbers dynamic to take into account the changing needs of a court? These questions are critical not only to ensure that courts meet the needs of the people but also that the sanctioned strength numbers are rational, credible and practical. An estimate of sanctioned strength is 'rational' if it is proportionate not only to the existing but also the projected workload of that court. It is 'credible' if the sanctioned strength is actually filled up on time and the court delivers as per pre-defined expectations. It is 'practical' if it takes cognisance of the finite nature of human and financial resources to fill up judicial vacancies.

In this chapter, we propose the development of an estimation framework for determining the number of members required for the National Companies Law Tribunal (NCLT). While several committees have deliberated a framework for making such a determination for subordinate and higher courts, how the 'sanctioned strength' of tribunals is determined, remains unclear. As the number of tribunals in India increases and as tribunals start administering increasing swathes of Indian laws, the questions of the 'sanctioned strength' of tribunals become significant and even urgent. While we have developed this framework for estimating the optimal sanctioned strength of the NCLT, it could be potentially applied for a similar purpose to other courts and tribunals in India as well.

We begin by taking stock of the methods currently used in India to determine the appropriate strength of courts and describe their advantages and limitations. We argue that the current focus on absolute pendency and disposal numbers provides insufficient information for estimating and planning the capacity required at courts. There is a need to shift the focus from pendency and disposal numbers to the concept of 'judge time' required for achieving an optimal backlog. To estimate the 'judge time' required, three pieces of information, namely, the complexity of cases handled by the court, the time and resources consumed for dealing with different kinds of cases and the projected workload, are critical. We argue that the Weighted Caseload Method (WCM) is a useful framework for estimating the capacity requirements of tribunals as it takes these variables into account.

We propose the deployment of a WCM for estimating the judicial capacity requirements of the NCLT. Currently, the information systems at courts are not designed to capture the information needed to deploy this estimation framework at Indian courts and tribunals. This motivated us to develop proxies of these variables, based on the information available in the public domain.

We share our experience of having deployed this estimation framework to estimate the caseload and the capacity requirements at the NCLT and the limitations and constraints we faced in putting ideas into practice. As part of this, we put in place the NCLT Observation Program, in which researchers were engaged to observe the proceedings and back-end processes of the NCLT, continuously for a period of five working days. We conclude by making a case for augmenting information systems to make a more rational, credible and practical assessment of the judicial capacity.

Estimating Required Judicial Capacity

Policymakers in India have generally used four metrics to estimate the number of judges needed: filings, pendency, disposal and population. These metrics are used either in isolation or combination, in absolute or relative terms, to estimate the number of judges needed. For example, the Law Commission of India (LCI) used the ratio of the number of judges to population to determine the capacity requirements of Indian courts and recommended an increase from 10.5 judges to 50 judges per million Indians.[2]

In 2014, the LCI reversed this recommendation, dismissing 'population' as an unreliable metric for assessing the judicial capacity needed.[3] Instead, the LCI recommended the 'rate of disposal' as the appropriate parameter for making this assessment, while acknowledging that this too may not be an entirely 'scientific' approach. The report prescribed the *Weighted Caseload Method* (WCM) as a more 'scientific' method for assessing the number of judges required in Indian courts. However, the LCI recognised the absence of information required to deploy this framework and determined that the 'rate of disposal' is a more 'pragmatic' metric to make this assessment. It recommended the *ideal disposal ratio* as 1, which meant that for every new case instituted before a judge, the judge ought to have disposed of one case. The intuition was that if this ratio held for a period of one year, the court would not need more judges.

Two years later, a National Court Management Systems (NCMS) Committee submitted a report to the Supreme Court which identified two key weaknesses in the rate of disposal approach.[4] First was that the approach ignored the complexity of different types of cases, and assigned an equal weight to all cases. Second was that the approach implicitly incentivised lower disposals. The NCMS committee also underscored the fact that the High Courts had conventionally used the disposal ratio to determine sanctioned strength for the lower courts without making a significant dent in the capacity of these courts to handle case backlogs. Further, pegging judicial capacity to ideal disposal rates incentivises higher disposals, but not necessarily an improvement in the quality of the disposal. In the same year, the Centre for Research and Planning set up by the Supreme Court of India recommended that distance or proximity of courts to citizens should be used as a benchmark to determine the 'judicial capacity' needed in the country.[5]

Each of these metrics shares some of the same disadvantages as the metrics used earlier. Finally, none of these approaches involves studying the case-flow process or the bottlenecks in each step of the process to improve the marginal efficiency in each such step. As a result, they leave little scope to consider improvements in processes and the adoption of technology, which may reduce the time and resource commitment required of the bench. Having surveyed different approaches used across 50 states in the United States, Flango and Ostrom argue that no single approach has been able to define and estimate the needs of the judicial system with complete accuracy (including the number of judges).[6] However, this feature only underscores the difficulty of carrying out the estimation, and not that it is necessary to do.

The idea of 'judicial time' has increasingly gained traction in developed countries as the basis for determining the sanctioned strength. On any given day, the judiciary performs a complex set of tasks involving a mix of administrative functions and judicial functions. What is visible to the public is usually only one part of the time that the judges spend on deciding cases. The 'back-end' administrative functions involve a series of tasks starting from the case being filed with the court registry, the case papers being checked by the registry officials for completeness and procedural compliance, the case being listed for hearing before a judge, and so on. As an example, consider the process once a case was filed with the Registry at the NCLT. There are *four stages* before it is listed for hearing before a judge. The time taken for each stage may vary. Often, this depends upon the responsiveness of the party filing the case. Since the case is already filed, there is time spent by the Registry in processing and getting it ready for hearing. In addition to the time spent in actually hearing a case, the judge spends time reading the case papers, researching the points of law and facts raised by the parties (with or without the assistance of law clerks) and writing the order.

The WCM can incorporate the difference in time taken for each step of the case while calculating the overall judicial time taken for a case. Underlying the WCM is the classical time and motion approach, widely applied in organisational and efficiency studies.[7] This approach involves a shift away from other metrics such as pendency, population and filings which present an aggregated perspective when conducting a judicial needs assessment exercise. Over the years, the WCM has found growing acceptance across the world as an essential practice in court management. Many state jurisdictions in the United States employ case-weighting either by itself or in combination with other approaches to assess judicial needs. For example, the Judicial Council of California, in its annual Court Statistics Report, describes using WCM to assign or retire judges across its Supreme Court, Court of Appeals as well as Superior Courts.[8] At least 15 other states are estimated to rely on case-weighting including states of Michigan, Wisconsin, North Carolina, and Virginia.[9] The method has also been deployed in several European countries such as Austria, Germany, the Netherlands, Spain and Switzerland.[10]

Methodology

A key intuition underlying the WCM is that all case types are not equal, and need a different amount of time to complete. The weight that is assigned to each case type is the amount of court time it takes to be completed. The attempt is to determine the equivalence of one case type to another in terms of court time. As an analogy: if a traffic violation case takes 10 minutes of court time and a cheque bounce case takes 100 minutes of court time, ten traffic violation cases are deemed to be equal to one cheque bounce case, in terms of court time. This suggests that two key inputs are required to compute the weighted caseload for any court:

1. The mix or fraction of case-type-wise filings in the court,
2. The weights for each case type which is the time that the court is observed to have taken, on average, from the start of a case type to its completion.

This would be measured in units of time (in minutes) that each case of a given type takes aggregated over the number of hearings that it takes to complete the case. Typically, this would be presented as an average of the time taken across all the cases or a sample of the cases, observed at the court.

If there are n case types with corresponding weights W_1, W_2, ... , W_3 and the number of cases of each type is C_1, C_1, ... , C_n then the estimated weighted caseload (WCL) can be calculated as:

$$\text{WCL} = \sum_{i=1}^{n} (W_i \times C_i)$$

This estimated CL may be used as an input to estimate the *required judicial capacity* (J_E) as follows:

$$J_E = \frac{WCL}{\text{JudgeYearValue}}$$

Here, the "Judge Year Value" is the total time (in days) for which a judge hears cases *in a given year*. If there are case types that take a multi-year period to complete, the period over which the weighted caseload method is deployed may need to be adjusted.

Finally, if the current judge's capacity is (J_C), then the incremental judicial capacity required (ΔJ) is calculated, by first calculating what the current judge capacity is and deducting this from the estimated capacity.

$$\Delta J = J_E - J_C$$

Thus, in order to calculate the estimated capacity for a defined workload of a court, which is defined by an observed number of cases (N_i) of a given set of (I) types of cases that are filed at the court, then we would need to know: the weights to use for each case type, W_i, and the "Judge year value" to be used.

Table 1: Case weight of a fictional sample of 10 IBC cases

Task	Freq.	Time spent	Freq.	Task weight
	(a)	(b)	(c)=10/(a)	(d) = b*c
1st hearing	10	10	1	10
2nd hearing	5	30	2	60
Hearing for withdrawal	5	20	2	40
Hearing in the resolution process	3	45	1.9	85.5
Hearing for approval of the plan	3	30	1.9	57
Hearing for liquidation	2	30	2.5	75

Source: Fictional data for demonstration, compiled by authors.

Typically, case-weight calculations require an analysis of the number of hearings in the life cycle of a particular case type. This includes the initial appearance, preliminary hearing, trial and sentencing. The average judge time spent on each hearing is then scaled up or down by how frequently that type of hearing takes place during the period of the analysis, to give us a "task weight". The task weights across a given case type are then aggregated to compute the weight of that case type. Table 1 presents an example of calculating the weight of 10 fictional cases under the Insolvency and Bankruptcy Code (IBC). The Time spent refers to the average time spent by a judge on that task across all cases and all courts, and is recorded in minutes.

Limitations

The biggest challenge with using the WCM approach is the data that is required as input for computation. While collecting data on the number of cases is relatively simple, the collection of information about case types, tasks, the frequency of tasks, and the time spent on these tasks, across different case types, is hard. In general, such information is collected using a sample of cases. It necessarily assumes that either the information systems of the court will capture this data or that the court will allow such information to be captured through a rigorous observation of its proceedings and back-end processes.

More importantly, the WCM defines judicial time in a limited manner. As demonstrated in Table 1, a key input in determining case weights is the estimated time required for each task. The time spent on a task may be defined narrowly to include only the time spent in hearing the case or it may be defined more realistically to include the time spent in preparing for the hearing. This includes, for example, the time taken in:

1. Pre-case and mid-case conferences with parties and their legal representatives to decide on case schedule and other matters,
2. Researching and writing the order.

A more realistic definition of the time taken in a task increases the complexity of data collection. It will necessarily involve estimates, which in turn, affect the precision of computing the case-weights.

Another limitation of the WCM is that it focuses only on judicial time and does not take into account the time taken by the court Registry to process a case and make it ready for judges to hear. Any effort to improve court efficiency will require both judicial capacity and the capacity of the registry to be suitably estimated.

The WCM is often criticised on the ground that it entrenches existing inefficiencies, as it takes into account historical data on the time spent on cases. Court capacity computations must be aspirational. They must be designed to achieve a certain benchmark output. Indeed, the WCM does not set an aspirational goal. But neither do other metrics of judicial capacity such as population, filings, and disposal rates. For each of these metrics, the researcher or policymaker has to design the benchmark or optimal backlog either by using a theoretical framework created as a function of the economic and institutional background or using data from other jurisdictions on a similar matter. A third way to approach the creation of a benchmark is to understand how the measures behave under simulation scenarios of projected workloads. In the following section, we illustrate this approach to assess the required workload for the NCLT.

Applying the Framework to the NCLT

In India, the WCM methodology is not typically used to assess judicial requirements because of data constraints .[11] A few recent studies have sought to use the time and motion studies approach for assessing the total workload of some civil and criminal courts.[12] A recent paper applies the WCM to the Supreme Court to estimate the amount of judge time that will be required to clear the pending cases.[13] The authors of this paper use the daily display board published by the Supreme Court to identify the time spent by judges on cases and triangulate this data with the daily cause list data for a period of one year. They find that it will take 20 years for the Supreme Court, at the then prevailing strength, to clear its backlog.

Sourcing Data from Daily Cause Lists

Since the data required for the WCM calculation does not exist for the NCLT, we identify and use proxies that can be used instead. One source is the daily cause lists published by the NCLT. This information is published regularly, and the information in these cause lists gives us a unique opportunity to study the manner in which this court assigns its time to different types of cases. Each bench of the NCLT has one or more courtrooms and each courtroom has a separate cause-list of the matters to be heard that day. The daily cause lists contain information about the hearings scheduled for any particular working day in each courtroom

and bench of the NCLT. At the end of each day, each courtroom publishes two cause lists:

1. Information about matters that are scheduled for the following day, and
2. The outcome of hearings that were conducted during the day is updated at the end of the day for the cause list.

The first set includes basic information about the matter listed for hearing such as the names of the counter-parties and the section of the Act under which the case has been filed. The NCLT adjudicates three legislations, namely, the Insolvency and Bankruptcy Code, 2016 (IBC), the Companies Act, 2013 (CA 2013) and the Limited Liability Partnership Act, 2008. We develop a dataset to analyse the workload taken up by the courtroom in terms of the intensity of the workload (measured as the number of hearings listed) and the type of cases (which is denoted by the Act under which the case is filed).

For the analysis used in our illustration, we collected data from 23 February 2018 to 23 July 2019. This is a sample period of 515 days (called the "study period" in the following text). Within the study period, cause-list data available across various courtrooms varies depending on two factors. The first was whether the courtroom was functioning on the relevant dates, and the second was whether the registry for that courtroom uploaded the cause list on the website.

We classify cases in the daily cause list into case types based on the legal provisions under which they are generated. This allows us to create hearings-based case weights as follows:

1. For IBC cases,
2. For 'M&A' cases under CA 2013, and
3. For 'Other' cases under the CA 2013.

The Appendix gives a detailed overview of the data and the fields from the cause lists that we used for this analysis.

Summary Statistics

The data set can be used to measure the functioning of the NCLT across three dimensions:

1. At the level of a case,
2. At the level of a courtroom/bench, and
3. The time period of observation started from February 2018 to July 2019.

In this sample, we observe 136,440 hearings. Almost all of these (136,437 of these hearings) can be seen to have 35,952 unique case numbers (Table 6 in the Appendix).[14] This suggests an average of four hearings per case.

Since we are able to see the location of the benches from which the cause-list data is extracted, we can augment our data set as arising from the following set of benches: Mumbai, New Delhi, the Principal Bench,[15] Bengaluru, Chandigarh, and Kolkata.[16] These benches account for 94% of the total hearings and around 91% of the total cases (as can be seen in Table 9 in the Appendix).

We find that the number of daily hearings scheduled varies by each bench. While the Bengaluru, Mumbai and New Delhi benches schedule an average of 35-40 hearings daily, the Chandigarh and Kolkata benches schedule a daily average of 15-25 hearings. On an average, 50 per cent of the hearings and cases are IBC-related matters, 15 per cent are M&A-related matters and the remaining 35 per cent are other categories of matters under CA 2013 (as can be seen in Table 10 in the Appendix).

On average, every unique case in our sample had four hearings irrespective of the classification as IBC, M&A or Other. Further, the benches at Bengaluru and New Delhi conducted, on an average, a higher number of hearings relative to other benches (see Table in the Appendix for hearings to case ratio). We also find that most of the cases had less than four hearings during the study period (Table 9 in the Appendix).

An examination of the trends in these statistics over time, we observe that there has been a change in the mix of matters in the stock of cases within the daily NCLT cause lists. IBC cases have seen a rise, while M&A and other CA 2013 matters have seen a drop. Over time, the NCLT has also been changing its hearing mix in line with its case mix: as IBC cases have increased, the NCLT allocates more hearings to IBC matters. Figure 1 shows a quarterly time series of the number of cases (IBC.c; M&A.c; Other.c) and the number of hearings (IBC.h; M&A.h; Other.h) as a proportion of the total number of cases and hearings respectively for (for three case-types for twelve benches of the NCLT for the period beginning 23 February 2018 and ending on 23 July 2019.

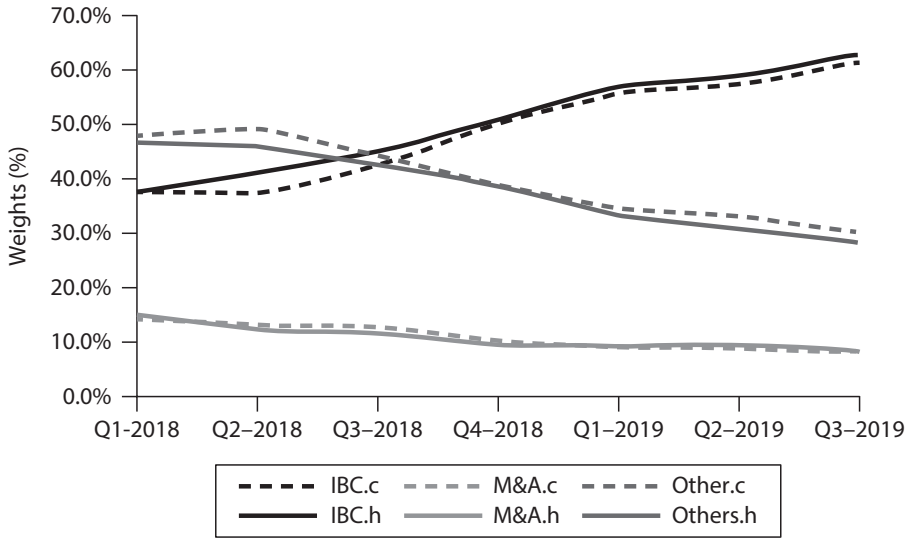

Figure 1: Quarterly case weights for select NCLT benches (Feb 2018-July 2019)

Calculating Case Weights from NCLT Cause Lists Data

We follow a four-step process to compute the weights for the three categories of case types. First, we classify each hearing for each case into these three case types. Next, we define the period over which case weights are to be computed. The period could be daily, monthly, quarterly or annual. Once the period is defined, we next compute the hearings-based weight for each category (HW) by dividing the number of hearings for that category by the total number of hearings during the period. Two assumptions are made when using hearings as a proxy for court time allocation: (1) that all hearings that are scheduled actually take place on the date on which they are scheduled, and (2) every hearing is the same in terms of time per hearing. These assumptions can be relaxed when more information about scheduled versus actual hearings and the time taken for every hearing, becomes available.

A key question in the weighted caseload method is the period over which the weights should be determined. Since the cause-list data is generated at daily frequency, we can choose any period, month, quarter, half-year, full year or full sample, to determine case weights. We use the principal bench, as an illustration, to show how weights vary by type of matter and by time period. Similar analysis for other benches can also be done using the cause-list data.

For example, we can calculate the weights attributable to cases under the IBC, M&A under CA2013 and Other matters under CA2013. In each case, we count the number of hearings under each of these case types during the period specified and divide this by the total number of hearings in the same period. Table 2 shows that for the Principal Bench, weights for IBC cases have increased, while those for M&A and other cases under CA 2013 have gone down. This holds irrespective of whether the period being analysed is a quarter (three months) or half-yearly (six months) or a year. This helps validate the proxy measure that we have used to capture the case weight of IBC vs. M&A under CA2013 or Others under CA2013 at the NCLT.

Once the WCL is calculated, it represents the throughput of the Principal bench with the assumptions about (1) its judicial and administrative capacity, (2) the stock of cases that are heard during the period[17], and (3) the mix of cases across the typology of IBC, M&A and Others. If we assume that this represents a steady-state throughput of the capacity of the Principal Bench, then we can simulate how this capacity will need to change under a change in the number of cases filed or a change in the case mix.

In the following Section, a scenario is a possible change in the workload (for example, an increase in cases of a particular type in the year or a change in the case mix at a bench). Under these change scenarios, our analysis will focus on how the workload at the bench will respond *holding other things constant*. This will help build an understanding of how the NCLT responds to changes in caseload. This, in turn, will help visualise how to structure resources for the NCLT to cope with the change.

Table 2: Hearing-based weights for different time periods for the Principal Bench

	W_{IBC}	W_{IBC}	W_{OTH}
Quarterly			
Q1-18	0.53	0.13	0.34
Q2-18	0.57	0.22	0.21
Q3-18	0.65	0.17	0.17
Q4-18	0.70	0.15	0.15
Q1-19	0.74	0.12	0.14
Q2-19	0.71	0.15	0.13
Q3-19	0.68	0.17	0.14
Half-yearly H1-18	0.56	0.19	0.25
H2-18	0.67	0.16	0.16
H1-19	0.73	0.13	0.14
H2-19	0.68	0.17	0.14
Yearly			
2018	0.63	0.17	0.19
2019	0.72	0.14	0.14
Full sample	0.68	0.16	0.17

Source: Weights estimated by authors using cause list data published on the website of the NCLT for the period 23 February 2018 to 23 July 2019.

Scenario Analysis of Judicial Capacity for the Principal Bench of the NCLT

In the following analysis, we discuss different scenarios using which to understand how the required capacity at the NCLT changes in response to changes in the stock of cases that are heard, the mix of case types and its own administrative capacity. Table 3 presents the case mix of hearings of matters under the IBC,

Table 3: Principal Bench throughput: current scenario

	Cases (C)	Hearings (H)	H/C	H per day	Matter weight
IBC	1,262	9,321	8	30	0.68
M&A	459	2,149	5	7	0.16
Others	566	2,292	5	7	0.17
Total	2,287	13,762	7	45	1.00

Source: Compiled by authors using cause list data published on the website of the NCLT for the period 23 February 2018 to 23 July 2019.

M&A and Other matters under the CA 2013 at the NCLT. This is a sample with daily cause-list data for 306 days.

This shows that the NCLT judicial time is skewed towards hearing IBC matters, which is around 55% compared to matters under the CA 2013. If we think about the NCLT as a system generating the above as a steady-state throughput, we consider what will be the impact on the required judicial time when there are changes in different elements that drive the throughput, such as the rate of hearings per day, the case-mix or the rate of arrival of cases per day. We calculate the new requirement in bench capacity as the ratio of Changed hearings per day in the scenario by the Current hearings per day as seen in Table 3.

We consider the following two scenarios:

Scenario 1: Change the case-mix so that there are double the number of hearings for IBC matters keeping the total number of hearings and the rate of hearings per day the same.

The hearing-based weights reflect the higher allocation for IBC, with the hearing weight in the last column of Table 4 increasing while the other cases see a drop in hearing weight. The table shows that with this change, the bench capacity will need to be increased from 1 to 1.67 benches.

Scenario 2: Change the case mix and change the rate of hearings per day. This scenario is the same as scenario 1 but the total number of hearings are conducted in 250 instead of 306 days.

We find from Table 4 that the ratio of Changed to Previous hearings per day indicates that the bench capacity needs to be increased from 1 to 2.05 benches. This increase in capacity takes place even as the weights remain the same as Scenario 1.

The scenario analysis shows us how information from the cause list implies a future capacity requirement at a court by changing one or the other inputs: number of benches, case flow by category, number of hearings per case for every category, and number of hearings per day. We also see how hearing-based weights change under the scenarios.

Table 4: Principal Bench capacity requirement change in Scenario 1

	Cases (C)	Hearings (H)	H/C	H per day	H weights
IBC	1,262	18,642	15	61	0.81
M&A	459	2,149	5	7	0.09
Others	566	2,292	5	7	0.10
Total	2,287	23,083	11	75	1.00

Source: Authors' calculations

Table 5: Principal Bench capacity requirement under the changes in Scenario 2

	Cases (C)	Hearings (H)	H/C	H per day	H weights
IBC	1,262	18,642	15	75	0.81
M&A	459	2,149	5	9	0.09
Others	566	2,292	5	9	0.10
Total	2,287	23,083	11	92	1.00

Source: Authors' calculations

Limitations of the Scenario Strategy

The limitation of this strategy is that it assumes that the relationship between the input variables remains *as is* and only changes proportionately. This may not be true in reality. One way of addressing this limitation is to measure these inputs periodically and to observe how the relationship between them evolves. Multiple such observations over time can generate data on which empirical techniques may be deployed to model the relationship between the various components that make up the NCLT throughput.

From Ideas to Implementation

The goal of this chapter was to describe and understand the WCM which is regularly used to measure judicial capacity in other jurisdictions. Given the documented data constraints in India, such a method faces massive bottlenecks in its implementation in the Indian environment. The previous sections identify data that is available in the public domain for the Principal bench of the NCLT which can be used as a proxy to calculate the WCM for the court. We are next able to demonstrate a few scenarios of changes in case filing and case mix, under which the WCM can be used to plan for capacity at the Principal Bench of the NCLT.

What will it take to implement such a measurement framework broadly across courts in India? A critical input is the ability to collect and collate data in a standardised, comprehensive and consistent manner across all the courtrooms of a given court. If such an information system can be developed that captures information on workloads, the time spent by judges on each stage of the case life-cycle and allows for estimation of projected workload for each bench, this can then be aggregated to better plan the capacity requirements of courts. Table 5 lists and describes the information needed.

During our efforts to develop such a model on a pilot basis at the NCLT, we found that there are significant problems with the regularity and consistency of cause-list data, making it hard to build precise estimates of a court's needs. For instance, in the case of the NCLT, we found significant gaps in the available cause-list data since every bench did not publish or archive its cause-lists. Even for the

Table 5: Information design for deploying the WCM

Variable	Description
Case types	Types of cases identified based on complexity
Case-events	Stages across each case type
Time	Time spent in case events of different types
Frequency	Frequency of case events across each case type
Volume	Current volume of cases across case-type

same bench, the number of days for which the cause lists were available differed across courtrooms.

Second, while what is required to be presented in the cause list is the same across benches, the manner in which this information is presented is not *standardised*. While it is understandable that the discussions at the hearings and the judgement delivered will be different from hearing to hearing, and case to case, the information required to build the WCM is far more easily regularised. However, there is significant variation in the manner in which the information is entered in the cause lists, both across benches and across courtrooms of the same bench. What can and must be standardised are the names of parties, case number, the identity of the law and the provision under which the case is filed, the purpose of the hearing, dates, and outcomes of a hearing, to make this data amenable to the WCM analysis. We believe that this problem exists across courts in India.

Finally, applying the WCM to assess the NCLT workload has involved working with *proxies* in place of the actual information required to apply the approach fully. The measurement includes various aspects of the functioning of the judiciary along the full path of a case, from the time of its origin to the time that it is closed. Multiple types of information are required to deploy the WCM. This includes the actual time taken from applying to being admitted, the average time taken by the bench at the first hearing, the average number of hearings for different types of cases, the average time taken at subsequent hearings, the average period of disposal across case-types and the time between hearings. Standard MIS systems, that are deployed in the smallest firms, need to be put in place as part of court administration, to be able to calibrate the functioning of the court and identify where the bottlenecks in the process arise so that these can be fixed. There are, by now, several instances of the interface between citizen and the state where such information is captured through regularised systems that minimises the incidence of error at data capture. Common examinations are administered across the length and breadth of the country. Such systems can and should be integrated into the information captured at the interface between parties and the judicial systems as well to make rational, credible and practical assessments of the number of judges and perhaps, even the overall judicial needs of India.

Editors' Comments

In line with the above, the next chapter ends the volume with a look at the possible and desirable future movement of the Indian justice system. It considers the evolution thus far including the first two phases of ecourts and state initiatives before that, analyse the ongoing third phase of the ecourts mission mode project along with its futuristic vision and makes suggestions for effective implementation of the corresponding plan.

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Appendix: Detailed data description

Duration and courtrooms

Table 6 provides bench and courtroom-wise information within the study period. It also presents as well as the number of days for which the cause lists are available. It is noteworthy that cause-list availability through this method of access is low for many benches (examples: Ahmedabad, Chennai, Cuttack and Hyderabad).

Table 6: Courtrooms-wise study period and data availability

Sr. no	Bench	Court	**Start date	End date	Observations
	Ahmedabad	Court I	20 Mar-18	23 Jan-19	24
	Bengaluru	Court I	23 Feb-18	28 Jun-19	277
	Chandigarh	Bench I	7 Mar-18	19 Jul-19	249
	Chennai	Court I	11 Jan-19	30 Apr-19	7
	Chennai	Court II	24 Apr-18	31 May-19	2
	Cuttack	Bench I	18 Mar-19	23 Jul-19	31
	Guwahati	Bench I	28 Feb-18	19 Jul-19	212
	Hyderabad	Court I	23 Feb-18	2 Jan-19	81
	Hyderabad	Court II	28 Feb-18	20 Dec-18	73
	Jaipur	Court I	13 Jul-18	19 Jul-19	79
	Kolkata	Court I	2 Jul-18	22 Jul-19	234
	Kolkata	Court II	23 Feb-18	23 Jul-19	304
	Mumbai	MBC I	6 Mar-18	22 Jul-19	286
	Mumbai	MBC II	23 Feb-18	22 Jul-19	290
	Mumbai	Court III	6 Mar-18	15 Jul-19	300
	New Delhi	Court II	23 Feb-18	23 Jul-19	256
	New Delhi	Court III	23 Feb-18	22 Jul-19	305
	New Delhi	Court IV	5 Apr-18	19 Jul-19	269
	Principal	Principal	23 Feb-18	23 Jul-19	306

Data fields

Table 7 shows the fields of data that are available. Some of these fields are directly extracted from the raw data, some are programmatically coded during the scraping process while others are manually cleaned and hand-coded.

Table 7: Data-fields captured

Sr. No.	Field	Data cleaning
	Sr. No. in cause-list	As is
	Date on which it is scheduled to be heard	Programatically coded
	Bench and courtroom	Programatically coded
	Coram	Programatically coded
	Case number	As is
	Purpose of the hearing	As is
	Act under which case is instituted	Hand-coded
	Section under which the case is instituted	Hand-coded
	Parties involved	As is
	Remarks (outcome of the hearing)	As is
	Representative Advocates	As is

Aggregate hearings and cases

Across our period of study, we observed 136,440 hearings. Of these, 136,437 of these hearings can be mapped to 35,952 unique case numbers. For 3 hearings, there is no unique case number available. Table 8 provides a bench-wise and courtroom-wise break-up of the number of hearings and unique cases.

Table 8: Number of bench and courtroom-wise hearings and unique cases

Courtroom	Data days	Hearings	Unique cases
Ahmedabad Court I	24	353	344
Bengaluru Court I	277	13,143	2,210
Chandigarh Bench	249	6,110	2,979
Chennai Court I	7	44	43
Chennai Court II	2	29	28
Cuttack Bench I	31	817	420
Guwahati Bench I	212	837	316
Hyderabad Court I	81	2,273	1,120
Hyderabad Court I	73	1,868	915
Jaipur Court I	79	2,351	999
Kolkata Court I	304	10,876	3,512
Kolkata Court II	234	8,821	2,390

Mumbai MBC I	286	14,296	4,766
Mumbai MBC II	290	12,346	4,372
Mumbai Court III	300	12,771	3,721
New Delhi Court I	256	14,344	2,482
New Delhi Court I	305	12,829	1,994
New Delhi Court I	269	8,498	1,966
Principal Bench	306	13,831	2,288

Source: Compiled by authors using cause list data published on the website of the NCLT for the period 23 February 2018 to 23 July 2019.

Table 9: Benchwise share of hearings and cases

	Hearings	Cases
New Delhi (including Principal Bench)	36.3	24.3
Mumbai	28.9	35.8
Kolkata	14.4	16.4
Bengaluru	9.6	6.1
Chandigarh	4.5	8.3
Total	93.7	90.1

Source: Compiled by authors using cause list data published on the website of the NCLT for the period 23 February 2018 to 23 July 2019.

Hearings and cases mix across statutes and benches

Table 10: Type of matters heard across benches

Bench/Courtroom	Total	IBC	M&A	Others	Total	IBC	M&A	Others
	(No.)	(%)	(%)	(%)	(No.)	(%)	(%)	(%)
Bengaluru Court I	13,143	42.3	13.5	44.2	2,210	34.6	16.8	48.6
Chandigarh Court I	6,110	63.8	7.7	28.5	2,979	66.4	7.4	19.8
Kolkata Court I	10,876	47.9	18.7	33.4	3,512	47.9	20.6	31.5
Kolkata Court II	8,821	52.1	16.3	31.5	2,390	50.3	16.4	33.3
Mumbai MBC I	14,296	54.6	11.8	33.5	4,766	56.9	12.9	30.1
Mumbai MBC II	12,346	58.8	10.1	31.1	4,372	56.9	12.6	30.3
Mumbai Court III	12,771	59.9	10.7	29.4	3,721	46.2	16.4	37.4
Principal Bench	13,831	67.4	15.5	17.1	2,288	55.0	19.9	24.5
New Delhi Court II	14,344	45.2	2.2	52.6	2,482	38.2	3.2	58.8
New Delhi Court III	12,829	40.1	9.0	50.9	1,994	44.6	9.4	45.9
New Delhi Court IV	8,498	50.2	0.0	49.8	1,966	58.7	0.0	41.3
Total	1,27,865	52.5	10.7	36.8	32,680	51.4	12.9	35.0

Source: Compiled by authors using cause list data published on the website of the NCLT for the period 23 February 2018 to 23 July 2019.

Number of hearings per case

Table 11: Average number of hearings by type of matter and bench

Bench/court	IBC	M&A	Others	Total
Bengaluru Court I	7	5	5	6
Chandigarh Court I	2	2	2	2
Kolkata Court I	3	3	3	3
Kolkata Court II	4	4	3	4
Mumbai MBC I	3	3	3	3
Mumbai MBC II	3	2	3	3
Mumbai Court III	4	2	3	3
Principal Bench	7	5	4	6
New Delhi Court II	7	4	5	6
New Delhi Court III	6	6	7	6
New Court IV	4		5	4
Total	4	4	4	4

Compiled by authors using cause list data published on the website of the NCLT for the period 23 February 2018 to 23 July 2019.

Table 12: Distribution of cases by number of hearings per case

	IBC	M&A	Others
More than 30 hearings	0.2	-	0.0
21 to 30 hearings	1.0	0.2	0.2
11 to 20 hearings	5.9	3.6	6.4
4 to 10 hearings	32.3	19.1	38.8
than 4 hearings	60.6	77.1	54.7

Compiled by authors using cause list data published on the website of the NCLT for the period 23 February 2018 to 23 July 2019.

End Notes

1 The sanctioned strength refers to the total number of positions of judges in a given court. The sanctioned strength of the Supreme Court is determined by the Supreme Court (Number of Judges) Act, 1956. The sanctioned strength of the High Courts is determined by the President. The sanctioned strength of the District Courts is determined by the Governor of the State in consultation with the High Court of that State.
2 The Law Commission report of 1987 prescribed that this five-fold increase should be achieved within a timeframe of ten years.
3 Law Commission, 2014.
4 National Court Management Systems Committee, 2016.
5 Centre for Research and Planning, Supreme Court of India
6 Flango and Ostrom, 1996
7 For example, see Taylor, 1911.
8 *245th Report on Arrears and Backlog: Creating Additional Judicial (Wo)Manpower*, 2014
9 See, for example, Lienhard and Kettiger, 2011.
10 See generally Kleiman et al., 2018; Wittrup & Bogetoft, 2017; Gramckow, 2011; Flango and Ostrom, 1996.
11 Robinson, 2013; Law Commission of India, 2014; National Court Management Systems Committee, 2016.
12 See, for example, Vidyasagar & Narasappa, 2016; and DAKSH, 2016.
13 See, for example, Hemrajani and Agarwal, 2019.
14 There are three hearings 3 hearings that do not have a unique case number available.
15 The Principal bench is located in New Delhi but which publishes a separate cause-list each day.
16 For Ahemdabad, Chennai, Cuttack, Hyderabad and Jaipur benches, the number of days for which we are able to extract a cause-list each day from the bench website is low, and we do not include these locations in our analysis. Similarly, the number of hearings scheduled in the Guwahati bench over the period of study in low and we do not include this location in our analysis.
17 This includes new case flow + prior period cases - cases disposed off