



## Private Enterprise Development in Low-Income Countries

### Misallocation in the Market for Inputs: Enforcement and the Organization of Production

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*The timely enforcement of supplier contracts by courts of justice is an important determinant of firms' organizational structure and overall productivity.*

## Introduction

What are the factors affecting the firms' allocation of resources? How much do they matter in shaping aggregate economic performance? During the last ten years, economists have pointed out that firm's use of production factors, in particular capital, appears systematically distorted in developing countries, and that these distortions should have first-order implications for the level of development. What is less well understood, however, is where these distortions are coming from. Is it that some firms have worse access to financing? Are labor regulations holding firms back from hiring the right workers? Are managers ill-informed about demand, or about their own firm's capabilities? How much do each of these potential problems matter?

In this project, we study the firm-level and macro-level consequences of one particular institutional failure – the slow enforcement of contracts by the courts of justice. Firms rely on contracts to source intermediate inputs (supplier contracts) and to hire labor (employment contracts). When supplier contracts cannot be enforced, firms may not be able to get their suppliers to honor their agreements, and their managers may decide to perform more of the production process themselves instead of outsourcing them to potentially more productive trading partners. Likewise, when firms or employees are unable to resolve employment disputes in a timely fashion, the usefulness of labor to the firm is diminished, and firms may substitute other production factors for labor. In both cases the firms' effective cost of production is increased, which also distorts choices of firms that are further downstream.

## Data and methodology

We study these topics in the context of India, a country where courts and the judicial process are notoriously slow<sup>1</sup>. We collect data on pending cases in high courts – the instance that is most relevant for the enforcement of firm-to-firm contracts. The average age of pending civil cases varies from about one year in Goa and Sikkim to about four-and-a-half years in Uttar Pradesh and West Bengal. We also find that the most important driver of these differences is the age of the high court: courts accumulate backlogs over time, and the fastest courts are those that have been newly created whenever a new state was carved out of an old one (e.g. most recently Uttarakhand), or when a new bench was set up (e.g. the Goa bench of the Bombay High Court); see Figure 1. While the Law Commission of India has repeatedly pointed out the heavy congestion in courts, none of the various reforms seem to have had a noticeable impact.

## Research findings

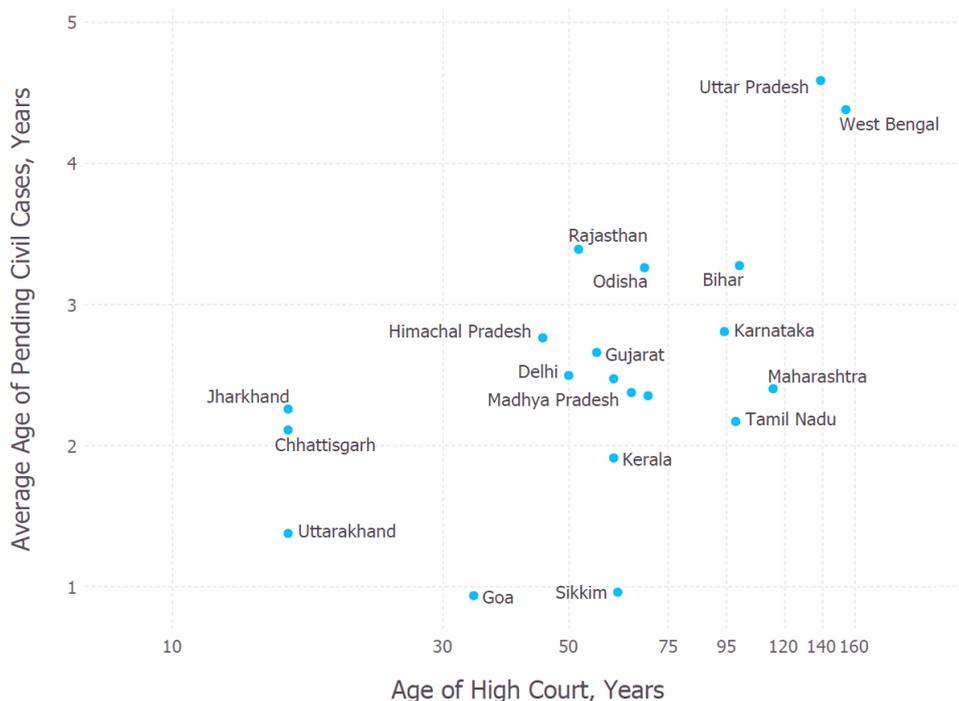
We relate the quality of courts (as measured by the average age of pending civil cases in High Courts) to the organization of production among formal manufacturing firms. In states where courts are slow, firms seem to be more integrated – in particular those that rely heavily on formal enforcement of supplier contracts because they require inputs that are tailored to them (“relationship-specific” inputs). Compared

<sup>1</sup> See The Economist (2016), “Dropping the scales: Overburdened yet overactive, India's courts are failing to do justice,” May 19th 2016.

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to their peers in states with fast courts, they have lower cost shares of materials, are using inputs that are further upstream from the output, and their input mix is tilted towards the use of standardized commodities (see Figure 2 below). These relationships are not driven by confounding state- or district-level characteristics such as per-capita income, population density, trust, or language- and caste fractionalization. Furthermore, the relationship persists when only using the cross-state variation in court quality that is explained by variation in the age of the high court (instrumental variable estimates).

**Figure 1: Relationship between court age and congestion**



We then explore the quantitative importance of contracting frictions using a general equilibrium model of input-output linkages across firms. Firms choose both their organization of production (e.g. whether to make cotton shirts from cotton cloth, or from cotton yarn) and factor inputs given technology and supplier match draws. Imperfect enforcement of contracts increases the shadow cost of relationship-specific inputs and of labor, which results in lower observed cost shares. We fit the model to the cross-state and cross-industry variation in the observed input shares and perform counterfactuals where we reduce frictions to the extent explained by court quality differences. Our results show that states could have several percent higher per-capita income if courts were as fast as those in the best states, suggesting that the economic cost of slow enforcement is substantial.

**Figure 2: Firms in states with slower courts tilt their input basket towards standardized inputs**



Note: Variables are de-meaned within products

## Potential policy implications

We hope to convince policymakers that speedy provision of justice is not only important for social reasons, but is also vital for firms to be competitive in the global economy. The ability of firms to source intermediate inputs from more productive firms relies on their ability to enforce contracts, and is a key determinant of the firms' cost of production. The positive impact of the foundation of new courts and benches in conjunction with the creation of new states demonstrates that setting up new and specialized courts (but not necessarily fast-track courts) is an avenue to reduce backlogs and re-establish trust in the speedy enforcement of contracts. At the same time, judicial manpower planning should be based on the demand for justice, i.e. the caseload that enters the system, instead of fixed judge-to-population ratios.

### Moving Forward...

Moving forward, we want to explore how judicial performance interacts with state-level legislation on employee protection. Besley and Burgess (2004) argue that states that passed pro-employee labor regulations experienced lower output, employment, and productivity among manufacturing firms. Some preliminary analysis shows that this relationship is only present when the courts are sufficiently fast – in other words, it seems that employment legislation only has a bite when labor contracts can be enforced in a timely fashion. Further substantiating this claim requires collecting data on the performance of labor courts and industrial tribunals.