



NITI Aayog



EASE OF DOING BUSINESS

AN ENTERPRISE SURVEY OF INDIAN STATES




NITI Aayog



IDFC INSTITUTE

EASE OF DOING BUSINESS

An Enterprise Survey of Indian States



This report is based on an enterprise survey launched jointly by the NITI Aayog, Government of India and IDFC Institute. It is meant to be a research document and its contents do not represent the views of the Government of India, the NITI Aayog or the IDFC Institute.

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Foreword

India needs to create an environment that fosters globally competitive firms, capable of driving and sustaining economic growth. The government's Ease of Doing Business initiative is critical for achieving and tracking this favourable environment.

Recognising the importance of monitoring the business environment, the NITI Aayog, along with the IDFC Institute, a Mumbai-based think tank, launched an Enterprise Survey of manufacturing firms across Indian states and union territories. The idea was to assess the business regulations and enabling environment across India from the viewpoint of firms.

On June 5, 2015, the NITI Aayog constituted a working group to finalise the scope and methodology of this Enterprise Survey. The working group includes senior government officials and outside experts. Subsequently, on July 17, 2015, the NITI Aayog and IDFC Institute signed a Memorandum of Understanding (MoU) to jointly monitor and analyse the Enterprise Survey. Since the signing of the MoU, several meetings have been held to discuss progress, review survey results and analyse key findings.

This report is a final outcome of the analysis of the survey data collected during 2016. It draws trends across states, sectors and types of firms. It proposes reforms to facilitate doing business and create an enabling ecosystem. The volume differs from previous efforts to document and monitor progress in the ease of doing business in India in two key respects. First, it studies the business environment as viewed by enterprises instead of government officers. Second, it studies variations in perceptions across states, sectors and enterprises of different kinds. A future volume will analyse the state of business environment in individual states.

The survey covers more than 3,000 firms located in all states and Union Territories (UTs), except Arunachal Pradesh, Mizoram, Andaman and Nicobar and Lakshadweep. It focuses on the ultimate beneficiaries of doing business reforms: the enterprises. In addition to enterprise data, the exercise also involved conducting interviews with lawyers, chartered accountants and secretaries to provide further details on the intricacies of the business environment. Where applicable, the re-

port juxtaposes the present survey results with existing, outside data.

It deserves noting that being a research document, the report faithfully notes the findings as they have emerged out of the survey. While most findings are plausible and consistent with other existing research, it is not always so. As an example, according to our survey, the time taken to set up a business is much longer on average than that according to the World Bank ease of doing business survey. In the spirit of research work, we have reported such findings as per data and provided possible explanations. These findings deserve to be investigated further.

At early stages of the work, the team received valuable support from the Department of Industrial Policy and Promotion, Government of India. B.N. Satpathy, Senior Adviser, and later Consultant, Industries Vertical at the NITI Aayog, navigated the project about three-fourths of the way. Subsequently, C. Muralikrishna Kumar, Senior Consultant, Industries Vertical, assumed that role. Sudhir Kumar, Joint Adviser; R.A. Jena, Former Adviser, Industries Vertical; Rahul Ahluwalia, Officer on Special Duty (OSD); and Suneet Mohan, Young Professional (YP) played a supporting role at various stages of the project. In the final stages, Atisha Kumar and Chinmaya Goyal, both economists at the NITI Aayog, along with Rahul Ahluwalia, greatly contributed to editing and writing of the document. Contributions of the trio were critical to completing the report in time.

While the NITI Aayog team interacted with the IDFC Institute team on a continuous basis with numerous face-to-face meetings throughout the project, the processing and analysis of the survey data was done almost entirely by the latter. The IDFC Institute also provided invaluable intellectual inputs to the Enterprise Survey, supervised closely the fieldwork and produced the first draft of the report. It has been a pleasure for my colleagues and me to work closely with the IDFC Institute team.

I hope policy makers, investors, enterprises and policy analysts will find the volume useful. In order to sustain robust economic growth, we must continue to enhance our business environment.


Arvind Panagariya
Vice Chairman, NITI Aayog

21 August 2017

Preface

For far too long India paid insufficient attention to the centrality of the business environment for wealth creation, which is in turn critical to combating poverty. As a consequence, entrepreneurs, the engines of wealth creation, struggled to do business in the face of onerous policies and regulations that were designed to choke rather than enable business. The reforms of 1991 marked a clear change in direction as successive governments started paying attention to difficulties faced by businesses. Nonetheless, there remained far too many impediments. By and large, India remained a tough place to do business.

The present government has made easing the business environment, especially for small and medium businesses, a clear area of focus. Competitive federalism, which taps into the competitive instincts of the states, offers a powerful framework within which to reform the business environment. After all, in terms of population, large Indian states are bigger than most G-7 countries. Therefore, reforms at the state level are as important as reforms by the union government. This is especially true of numerous clearances and filings which small and medium enterprises must comply with to start and run their business.

This report was seeded by a series of discussions that I had in 2015 with the Vice-Chairman of NITI Aayog, Dr Arvind Panagariya, on how we could better analyse and measure the business environment in India and its states. We wanted to provide a level of analysis that would be useful to national and state governments to carry forward the work they had begun in 2014. After numerous discussions, we concluded that a nationwide survey of firms, designed to capture the gap between reforms put in place by national and state governments and the perceptions of enterprises, would be most constructive.

In addition, we decided to focus on small and medium enterprises (SME) in the manufacturing sector. It is the energy of these firms India must unleash to create good jobs for the masses. If the business environment for these firms can be made more competitive and conducive, the vast number of low productivity micro enterprises, which employ a disproportionately large part of India's non-agricultural workforce, will be encouraged to graduate to small and medium enterprise category.

The survey was conducted by Kantar-IMRB, a leading market research agency, under careful supervision of both NITI Aayog and IDFC Institute researchers. This volume is a national-level analysis of the survey results. A forthcoming companion volume will examine state-level results at a granular level. Besides Dr Panagariya, Amitabh Kant and the NITI team, I am immensely grateful to my colleagues at IDFC Institute, Dr Vivek Dehejia, Resident Senior Fellow; Dr Shamika Ravi, Visiting Senior Fellow; and Dr Vaidehi Tandel, Junior Fellow, for leading a superb research team consisting of Komal Hiranandani, Rithika Kumar, and Kadambari Shah. I thank How India Lives for designing and visualising the data for the report. Last, but not least, I owe a debt of gratitude to Dr Rajiv Lall, Vikram Limaye and Animesh Kumar for their unstinting support of both this project and the IDFC Institute.

I hope this report will be useful to academics, investors, the media, analysts, entrepreneurs, and most of all to policy makers. India's prosperity vitally depends on continued economic dynamism at the state level. Therefore, our fervent hope is that this report will provide additional support to governments in creating a business friendly environment, conducive to wealth creation and poverty eradication.



Reuben Abraham
CEO & Senior Fellow, IDFC Institute

21 August 2017

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List of Abbreviations

ASI	Annual Survey of Industries
DIPP	Department of Industrial Policy and Promotion
DTF	Distance to Frontier
EoDB	Ease of Doing Business
GDP	Gross Domestic Product
NIC	National Industrial Classification
NOC	No Objection Certificate
OAE	Own Account Enterprises
PPSWR	Probability Proportional to Size With Replacement
SMEs	Small and Medium Enterprises
SRSWOR	Simple Random Sampling Without Replacement
SSI	Small Scale Industries
UTs	Union Territories

Executive Summary



The NITI Aayog-IDFC Institute Enterprise Survey is a unique effort to document and analyse the experience and perceptions of manufacturing firms¹ on doing business in India. It differs from the World Bank's Doing Business Surveys and the Department of Industrial Policy and Promotion's (DIPP) Ease of Doing Business Rankings in that it focuses on how organised manufacturing firms, rather than experts or implementing agencies, view the business environment in their respective states. The present survey also covers all states and Union Territories (UTs), except Arunachal Pradesh, Mizoram, Andaman and Nicobar, and Lakshadweep. Therefore, its scope is much wider than the World Bank Doing Business Surveys which currently focus only on Delhi and Mumbai. Our survey further includes in-depth interviews with lawyers, chartered accountants, and company secretaries in several states.

Reports that assess the business environment by speaking to experts or government officials capture the *de jure* processes of compliances and regulations. But there can be differences between *de jure* processes and *de facto* reality due to issues of implementation and understanding of systems by user enterprises. Hallward-Driemeier and Pritchett (2015)² find that for comparable questions such as time taken to start a business or time taken to get construction permits, the results of the Doing Business reports of the World Bank and the Enterprise Survey globally are poorly correlated.

The survey comprises 3,276 manufacturing enterprises, including 141 early stage firms. The enterprises surveyed cover 23 manufacturing sector categories. The report assesses the implications of regulations and compliance requirements for enterprises by focusing on time taken for getting various approvals, whether costs incurred in fulfilling regulatory compliances are higher than the prescribed fees and enterprises' perceptions of how different regulatory processes impede their businesses.

An important and surprising finding of the report is that the awareness among enterprises about single window systems, instituted by states, is low. On aver-

age, only about 20% of start-ups, which are of recent origin, report using single window facilities introduced by state governments for setting up a business. Even among experts, only 41% have any knowledge of the existence of these facilities. Therefore, there is a clear need for creating greater awareness. In cases in which the lack of use is due to poor functioning of the service, the functioning must be improved.

We compare manufacturing start-ups with all firms and young firms with old. Newer and younger firms report a more favourable business environment in that they take less time in obtaining approvals. In addition, young firms report that most regulatory processes don't constitute a major obstacle to doing business. These findings strongly point to an improvement in the business environment in recent years.

Labour-intensive sectors have a special importance in policy as they can create proportionately more jobs per unit of capital investment. We find that labour-intensive sectors feel more constrained by labour related regulations. More of them report that finding skilled workers, hiring contract labour, and terminating employees is a major or very severe obstacle. They also lose more days due to strikes and lockouts. These findings point to the centrality of labour law reforms to the expansion of labour-intensive sectors and job creation. Further, labour-intensive sectors also report significantly higher average time taken for environmental approvals, and more hours of power shortage in a month. Addressing these is likely to favourably impact the growth of labour-intensive sectors and hence job availability.

The report also compares the business environment for enterprises in power-intensive and non-power-intensive sectors. Firms in industries that have intensive power-use experience longer wait times, on average, for getting electricity connections. They also face more power shortages, all of which impede their efficiency.

According to our findings, enterprises in high-growth states are significantly less likely to report major or very severe obstacles in land and construction related approvals, environmental approvals and water

¹ The terms 'firms' and 'enterprises' are used interchangeably in this report.

² Hallward-Driemeier, M., & Pritchett, L. (2015). How business is done in the developing world: Deals versus rules, *Journal of Economic Perspectives*, 29(3), pp.121-40.

and sanitation availability as compared to enterprises located in low-growth states. Further, enterprises in high-growth states report taking less time on average for nearly all aspects of doing business. The specific areas where high-growth states do very well are in getting construction permits, labour renewals, and access to electricity and water connections. Quite remarkably, firms in high-growth states also report 25% less power shortage in a typical month, compared to firms in low-growth states.

We also find the experience of firms with fewer employees is different from that of larger firms. Firms with more than 100 employees took significantly longer to get necessary approvals than smaller firms with less than 10 employees. Large firms were also more likely to complain that regulatory obstacles were a major impediment to doing business. They are also more likely to report incurring higher costs for getting necessary approvals. The experiences and grievances of large firms indicate that it remains very hard

for firms to scale up or grow in size. This could explain why firms in India are overwhelmingly small and remain small. For example, according to the latest Economic Census conducted during 2013 and 2014, a gigantic 98.6% of non-agricultural establishments had less than ten workers.

An enterprise-friendly regulatory environment will allow easy entry and exit of enterprises, enable them to reach an optimal size and scale, and boost job creation. There is a strong correlation between a higher level of economic activity and doing better on a range of doing business indicators. While available data do not allow us to establish causation running from ease of doing business to growth, they strongly indicate the existence of feedback loops between the doing business climate and economic activity. If India is to enter the “double digit” economic growth club, clearly it will need to continually streamline and improve the business environment.

Chapter 1. Introduction: Making India a Friendlier Place to do Business

The first NITI Aayog and IDFC Institute Enterprise Survey, conducted in 2016, is intended to take an in-depth look at the “Ease of Doing Business” (EoDB) environment from the vantage point of firms. The main objective behind this exercise is to help better understand how enterprises view the changes being brought about by joint efforts of the central and state governments to improve the business environment. If states are to effectively compete and set off a virtuous cycle of economic activity, they need to know whether enterprises are successfully taking advantage of the changes they are making to improve the environment. They also need to better understand the relationship of the business environment to growth and job creation.

The World Bank, which popularised the exercise of ranking countries according to the Ease of Doing Business, relies in its surveys on responses from experts, chartered accountants and lawyers. India’s Department of Industrial Policy and Promotion (DIPP) likewise bases its rankings of states on the responses by state governments on whether or not they have implemented the DIPP-recommended best practices in different areas. The approach taken by the World Bank largely tells us the story from the viewpoint of experts who closely follow the developments in business environment and that by DIPP from the viewpoint of the implementing agencies.

But it is also important for us to know whether firms that are expected to benefit from the changes that states have initiated are actually benefiting from those changes. This is the approach taken in the present report. It focuses principally on how enterprises themselves view the business environment in

their respective states. As an additional check, however, the survey questionnaire underlying the report has also been posed to industry associations and experts like lawyers, chartered accountants, and company secretaries in the larger states. This allows us to understand gaps between what enterprises experience and what experts believe.

It is important to note that our sample has been drawn from enterprises registered under the Factories Act, 1948. The enterprises surveyed belong to the organised manufacturing sector and are therefore subject to some regulation. Generally, the degree of regulation rises with the enterprise size. It must be remembered, however, that a substantial share of manufacturing output and the vast majority of employment are in the unorganised sector. This report does not capture the experience of these unorganised sector enterprises.

While we describe methodological differences between this report and the World Bank’s annual Doing Business report in detail in Chapter 2, we may note some key differences here:

1. This report is based on a nationwide survey, rather than just Mumbai and Delhi to which the World Bank survey is confined
2. Our survey focuses only on the organised manufacturing sector whereas the World Bank survey extends to services as well
3. The survey fundamentally relies on enterprise responses though an effort has also been made to interview lawyers, chartered accountants, and company secretaries in larger states

If states are to engage in healthy competition and

take inspiration from each other, they must know the ground reality at home and in other states. In a nutshell, this is the rationale behind our detailed state-level analysis, which will follow in a separate volume based on the survey. We hope this will be a ready reference for state government officials to see at a glance where their efforts are succeeding, where they need to communicate better the reforms undertaken to the enterprises and where they need to tweak their systems and policies to make them yet more relevant and useful to enterprises.

We have deliberately abstained from creating any ranking of the states, the way that the World Bank ranks countries. The objective here is to direct the attention of the states to specific aspects of business environment in which they lag. While rankings can provide a trigger for competition, they may also mask the details underlying the rankings and may distract from specific areas of concern for enterprises. It is felt that the enterprise survey produces rich details and would promote the cause of business environment better by drawing attention of the states to the details of what concerns the enterprises.

While thus recognising the usefulness of the survey in revealing the ground reality of business environment at the level of the state, we also realise that the broader readership of the report may exhibit greater appreciation for national-level findings. For example, it is of interest to know how different dimensions of business environment correlate with growth and how the business environment impacts enterprises in labour-intensive sectors differently from those in capital-intensive sectors. These are the types of questions on which we focus in this report.

We now turn to the structure of the report. Besides this introduction and a concluding chapter with our recommendations, the report contains eight chapters, which are divided into two parts. Part I contains chapters 2 to 4 and details the relevant aspects of the survey and a broad overview of the results. Part II includes chapters 5 to 9 and it studies the responses of enterprises across different characteristics of sectors, states and enterprises.

Chapter 2 describes the data used for the sample frame, the sample size of respondents, sampling method, and the construction of weights. In addition, the chapter sets out the key elements of the survey instrument that was administered to enterprises.

Chapter 3 provides an overview of the characteristics

of the firms surveyed. It provides the industry sector-wise distribution of firms, sorts firms into different size classes based on both their turnover and number of employees, and their average age. This, again, is a basic methodological chapter, as the preceding one, which sets the stage for the analysis to follow.

Chapter 4 presents some of the key results of the national level analysis. Where appropriate, our calculations use weights that reflect the level of the population of firms (rather than the sample). The chapter looks at the use of a single window system set up by state governments for starting a business. It compares the responses of firms with those of experts. The chapter also describes the various sources of finance of firms and examines the severity of obstacles they face in accessing finance. It also reports the state-level variation in this regard. Further, the chapter summarises the experiences of firms in dealing with resolution of legal disputes and obstacles faced in exiting a business. It provides the average time taken and overall distribution of time to get various clearances and the perceptions of firms about whether the business regulatory environment has improved, worsened, or stayed the same since 2015. Lastly, it examines the relationship between time taken, firms reporting that the costs they incurred were higher than prescribed, and the severity of regulatory obstacles firms report.

Part II delves deeper into the responses and compares them across different characteristics of enterprises, sectors and states. This is discussed in Chapters 5 till Chapter 9.

Chapter 5 examines the impact of recent reforms implemented by state governments for easing the regulatory environment by analysing the responses of manufacturing start-ups (defined here as firms that began operations during or after 2014) against those of older enterprises. It reports the average time taken by start-ups as against other enterprises for getting various approvals and clearances. It also displays the share of start-ups that report paying higher than prescribed costs for getting approvals. The chapter shows that the business environment has seen an unambiguous improvement since 2014.

Chapter 6 focuses on the differences between young firms and old firms, where young firms are defined as those established no more than ten years ago and the rest are defined as old firms. The chapter focuses on issues relating to the running of business instead of those pertaining to setting up a business. It reports

the differences in regulatory environment faced by new and old firms in terms of the average time taken in obtaining various approvals and the severity of obstacles they faced while getting necessary approvals.

Chapter 7 compares the experience of doing business in labour-intensive versus capital-intensive sectors and the experience of firms in more and less power-intensive sectors. Focusing on the regulatory processes to be followed under various labour laws, it highlights the impact of recent regulatory reforms on the constraints faced by labour-intensive firms. It compares the average time taken to get necessary approvals for enterprises in labour-intensive as opposed to capital-intensive sectors. It examines whether the share of firms stating that they face major or very severe obstacles in getting different approvals is higher in labour-intensive sectors than that in capital-intensive ones. The chapter also examines whether time taken to get electricity connections and hours of power shortage faced is higher in more power-intensive sectors relative to less power-intensive sectors.

Chapter 8 scrutinises if the business environment varies based on economic growth of states in recent years. It divides enterprises into those operating in “high-growth” and “low-growth” states, taking into consideration the median growth rates of states between 2004-05 and 2013-14. It compares different indicators of doing business such as average time taken, higher than prescribed costs, and severity of obstacles faced by enterprises in high-growth versus low-growth states.

Chapter 9 explores the preponderance of small firms in India and whether a paucity of large firms correlates with a more onerous regulatory environment for large firms. The chapter describes the business environment for enterprises across different employee sizes, gauging the experience and perception of doing business for small and large firms. The size classes used are 0-9, 10-49, 50-99, 100-199 and 200+ employees. It reports average time taken for enterprises to acquire different approvals and compliances across enterprises of different employee size classes.

Finally, Chapter 10 draws conclusions and suggests future reform areas by emphasising the following: an improved business regulatory environment is vital to accelerate growth; greater effort must be made to inform enterprises about the improvements in business environment made by states; increasing flexibility in labour laws would help enterprises in labour-inten-

sive sectors and thus give a fillip to job creation; better access to electricity and fewer hours of electricity shortage are associated with higher growth; reducing barriers to entry and exit will foster a dynamic ecosystem; and improving access to finance will provide a significant boost to the business environment.

In the Appendix, we present tables with the results of the regression analyses that underpin our findings. In addition, the tables report summary statistics and characteristics of firms.

Before we turn to the analysis of the survey, we find it useful to step back and ask why the ease of doing business matters. It essentially lies in the fact that there are important and well-researched linkages between the doing business climate (or the business regulatory environment), job creation, the firm-size distribution in the industry, and the level of economic activity. A poor business environment results in the country failing to realise its true growth potential. It may also result in specialisation that is contrary to the country’s comparative advantage.

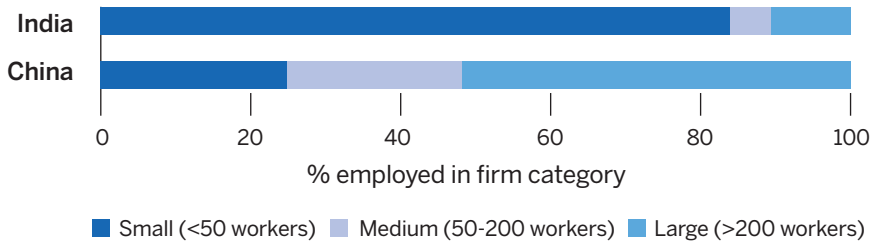
As a large, labour-abundant economy, one would expect India to have a comparative advantage in large-scale, labour-intensive manufacturing. Yet, India has not done well in this sector. Instead, successful sectors in India have been either capital- or skilled-labour-intensive and most prominently include auto, auto parts, two wheelers, automobiles, engineering goods, petroleum refining, pharmaceuticals and software. Labour-intensive products such as apparel, footwear, food processing, furniture and various other light manufactures have not flourished in India. Analysts have often pointed to regulatory burden, rigid labour laws and deficient infrastructure as possible reasons for this puzzle.

A major challenge in India has been the preponderance of employment in very small enterprises. Formal sector jobs that exhibit high productivity and pay high wages are limited. According to the latest Economic Census, conducted during 2013 and the first quarter of 2014, of 131 million workers in industry and services, 44.4% were employed in Own Account Enterprises (OAE), which are managed exclusively by their owners and do not employ a single regular worker. Establishments with five or fewer workers, including the OAE, employed 69.5% workers and those with nine or fewer workers employed 79% workers. In other words, establishments with 10 or more workers employed just 21% of the workers in industry and services.



Figure 1.1

Distribution of manufacturing workforce among small, medium and large firms in India and China

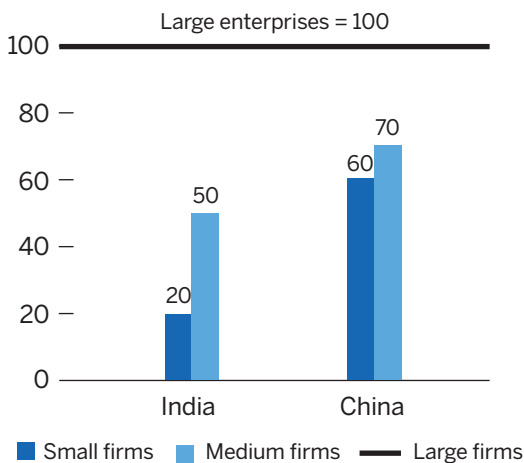


Source: Constructed using the data in Hasan and Jandoc (2013)³



Figure 1.2

Relative wages in small, medium and large firms in India and China



Source: Constructed based on data in Hasan and Jandoc (2013)

A comparison of India and China graphically illustrates how the highly skewed distribution of employment in India in favour of small firms undermines the productivity of workers. Figure 1.1 depicts the distribution of employment in manufacturing in India among small, medium and large firms. In India, small firms, defined as those with less than 50 workers, employ 84% of the workers. The corresponding proportion in China is 24.8%. Medium and large firms in China employ 75.1% of the workers compared with just 16% in India.

We turn next to relative wages by the size of enterprises. These are shown in Figure 1.2. In this figure, we set the wages in large enterprises in each country at 100 and then compare this wage to those in medium and small enterprises. In China, where large enterprises dominate, wages in medium and small enterprises are much higher than their counterparts in India. The gap between the two countries is particularly glaring in small enterprises. Whereas the wage in small enterprises in China is almost 60% of that in large enterprises, in India, it is only 20%. These figures actually underestimate the difference once we recognize that the real wages in large enterprises in China are significantly higher than those in India.

Figures 1.1 and 1.2 together imply that workers in manufacturing in India are overwhelmingly stuck in low wage jobs. Not only are the wages in small firms very low, workers are disproportionately employed in these very enterprises.

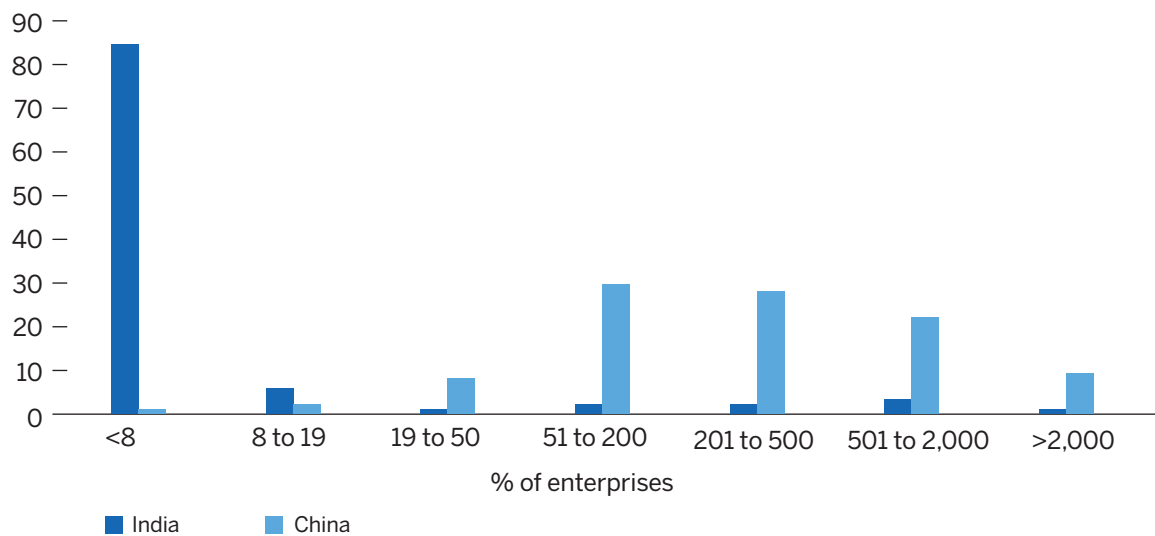
Why are the wages in small and medium enterprises in India so much lower than in China? A plausible hypothesis is that because large enterprises disproportionately participate in the highly competitive world markets, they must constantly innovate and improve efficiency to stay competitive. This makes them far more productive than small and medium enterprises. But the presence of a sizeable number of large enterprises also creates an ecosystem in which small and medium firms must compete intensely. They either become ancillaries of the demanding large enterprises or must compete against them. This helps raise their productivity as well. The end result is relatively high wages even in small and medium enterprises in the presence of large enterprises.

³ Hasan, R., & Jandoc, K. R. L. (2013). Labor Regulations and Firm Size Distribution in Indian Manufacturing. In J. Bhagwati and A. Panagariya (Eds.), *Reforms and Economic Transformation in India* (pp. 15-48), Oxford University Press: New York.



Figure 1.3

Distribution of enterprise size in apparel sector



Source: Hasan & Jandoc (2013)

The apparel sector illustrates this point forcefully. Figure 1.3 depicts the distribution of workforce across firms of different sizes in India and China in 2005. At one extreme, enterprises with less than eight workers employ more than four-fifths of the apparel workforce in India and less than 1% in China. At the other extreme, nearly 57% of the workforce in China is in enterprises larger than 200 workers but barely 5% in India. The Chinese apparel industry is highly competitive with \$187 billion in exports compared with just \$18 billion for India in 2014.

There are perhaps multiple causes of the lopsided size distribution of enterprises in India. Historically, the informal decision in the early fifties to reserve the labour-intensive light manufactures for the cottage industries and household sector, which later came to be formalised in the so-called Small Scale Industries (SSI) reservation and remained in place until at least 2000, played an important role in keeping labour-intensive enterprises small. But subsequently, near indifference of leading business houses towards these sectors and stringent labour laws have continued to hold back the emergence of large enterprises. Studies show that for labour-intensive sectors in In-

dia, more flexible labour regulations, other things being equal, result in an increase in enterprise size in terms of number of employees. This is clearly an imperative for future reform efforts. If political economy considerations make it difficult to ease labour regulations across the board, easing regulatory constraints on enterprises with the greatest potential for job creation—i.e. enterprises in labour-intensive manufacturing sectors—may be a pragmatic approach to boost job creation and give a fillip to the manufacturing sector at the same time.

If there is an important relationship between the regulatory environment and job creation, there is an equally important and crucial linkage between the doing business environment and the level of economic activity and well being of the average person. Cochrane (2016)⁴ shows that there is a tight positive correlation between business regulatory environment as measured by the World Bank EoDB “distance to frontier” (DTF) measure and the level of gross domestic product per capita, across a large dataset comprising both advanced and emerging economies (Figure 1.4). The World Bank defines an economy’s distance to frontier on a scale from 0 to 100, where

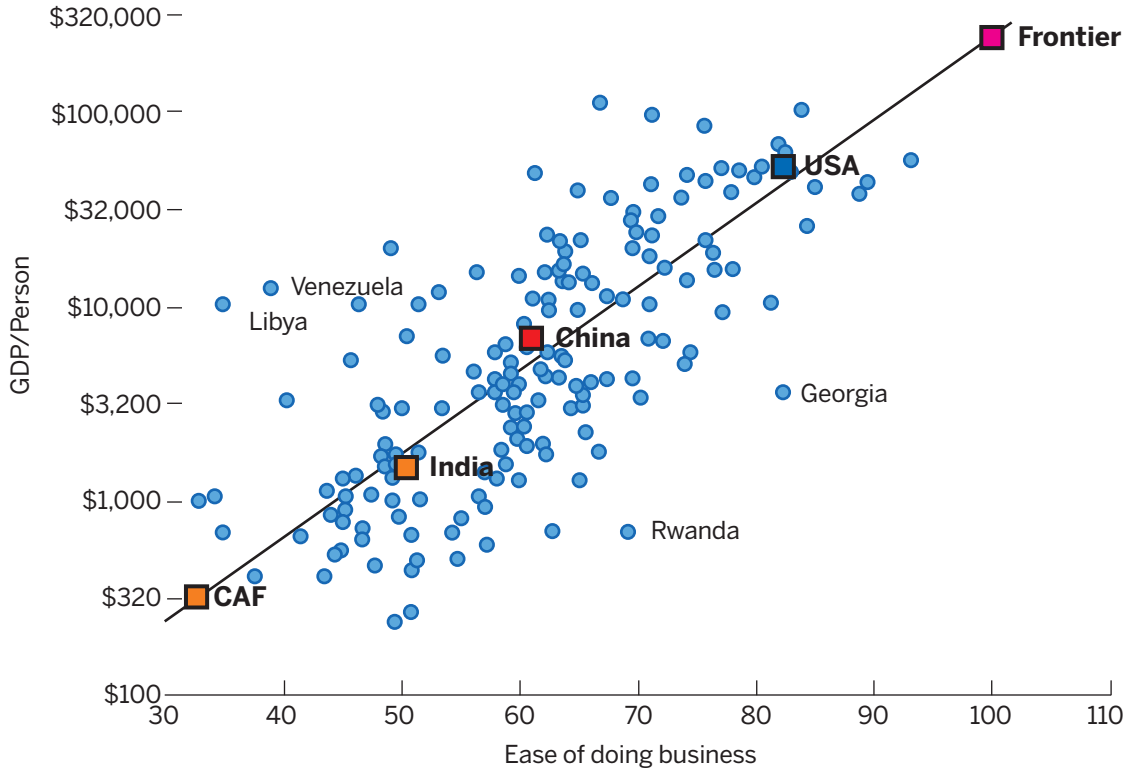
⁴ Cochrane, J. (2016). Ending America’s slow-growth Tailspin, *Wall Street Journal*. Available at: <https://www.wsj.com/articles/ending-americas-slow-growth-tailspin-1462230818?mg=id-wsj> (accessed on 17 August 2017).

⁵ GDP Data from <https://tradingeconomics.com/india/gdp> (from 2010 to 2015); <https://www.statista.com/statistics/263771/gross-domestic-product-gdp-in-india/> (for 2016-2017); DTF Data from <http://www.doingbusiness.org/data/distance-to-frontier>



Figure 1.4

Relationship between GDP per capita and World Bank's Distance to Frontier

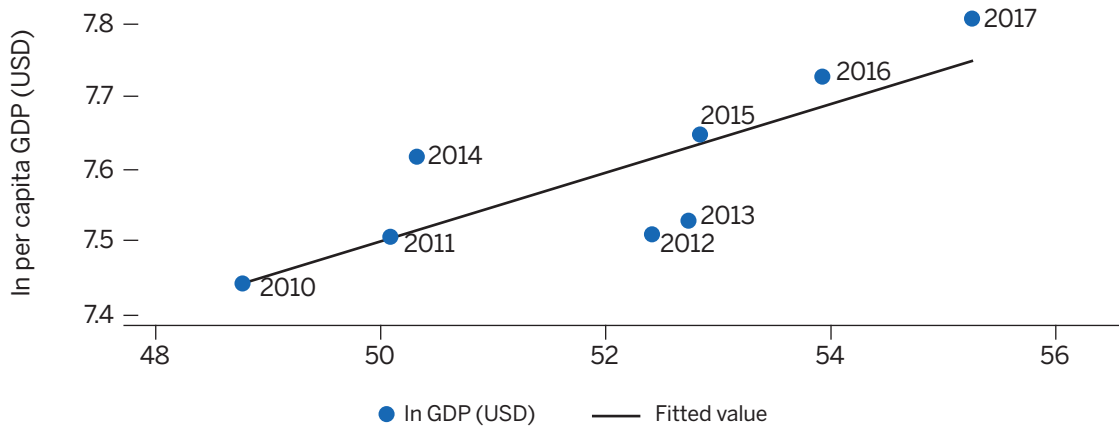


Source: Cochrane (2016)



Figure 1.5

Relationship between GDP per capita and World Bank's Distance to Frontier for India



Source: Constructed using DTF data from the World Bank and per-capita GDP from the CSO⁵

0 represents the lowest performance and 100 represents the frontier. China, which is closer to the frontier than India, has a comparably higher GDP per capita. The US has higher still DTF as well as higher GDP per capita compared to most other economies.

Data analysis for India confirms the Cochrane finding. Using a time series from 2010-17, the only years for which the World Bank computes a DTF score, Figure 1.5 (Page 13) plots the DTF and GDP per capita. The fitted line shows a clear positive slope.

Note that the scatter plot allows us to infer a tight correlation between the business regulatory environment and income per person across time and space.

Though we cannot claim a causal link between the two variables, it is entirely plausible that improving the business environment will help businesses grow and therefore raise per-capita income. Causality may run in both directions, with feedback loops that generate a virtuous circle with a better business environment leading to higher per-capita income and higher per-capita income inducing further improvements in the business environment. Clearly, the fact that India must improve its business regulatory environment to boost employment and manufacturing output is no longer disputed.

PART I

The Survey and Overview of Enterprise Responses

Chapter 2. Data and Methodology

2.1. Introduction

Several reports assess the business environment through interviews with experts or government officials. These capture the *de jure* processes of compliances and regulations. However, the *de jure* processes may differ vastly from the *de facto* reality due to issues of implementation and understanding of systems by user enterprises. Hallward-Driermeier and Pritchett (2015)⁶ compare the World Bank's Doing Business Reports and Enterprise Surveys to illustrate this fact. While the Doing Business reports interview experts on the time taken and costs involved for various business processes, the Enterprise Surveys interview enterprises about their experience and time taken in getting approvals. The study by Hallward-Driermeier and Pritchett finds that, for comparable questions such as time taken to start a business or to get construction permits, the responses from the Doing Business surveys and the Enterprise Survey are very poorly correlated. There is a large gap between the *de jure* and *de facto* situations.

Reports such as the World Bank and DIPP's "Assessment of State Implementation of Business Reforms" capture the *de jure* processes for regulatory compliance in India. This report takes stock of the *de facto* reality by asking enterprises about their experiences in *using* the processes. While the focus is on enterprises, this report also interviews industry associations and experts such as lawyers, chartered accountants, and company secretaries in the larger states. This allows us to understand if there is a gap between

enterprises' experiences and experts' knowledge.

This chapter explains the data and methodology used in the survey. Section 2.2 describes the database used for selecting respondents. Section 2.3 provides the sample size. Section 2.4 describes the process for selecting survey respondents. Section 2.5 explains how sampling weights were constructed. Finally, section 2.6 gives a flavour of the questions asked.

2.2. Database for respondents

The database used for the purpose of drawing samples for enterprises is the frame of the Annual Survey of Industries (ASI) 2014-15.⁷ The frame extends to all states and UTs of India except Arunachal Pradesh, Mizoram, and Lakshadweep. It covers establishments registered under Sections 2m(i) and 2m(ii) of the Factories Act, 1948. Figure 2.1 provides the number of enterprises in state-wise ASI frame for 2014-15.

For selecting early stage manufacturing start-ups, we used data from the Ministry of Micro, Small, and Medium Enterprises under the Udyog Aadhar scheme.⁸ However, our analysis on start-ups is based on enterprises operational during and post 2014.

The experts⁹ interviewed were selected from a list provided by the Institute of Company Secretaries of India, World Bank's Doing Business in India report and a list compiled from an online search. Industry Associations were selected from a compiled list of associations at the state and national level.

⁶ Hallward-Driermeier, M., & Pritchett, L. (2015). How business is done in the developing world: Deals versus rules, *Journal of Economic Perspectives*, 29(3), pp.121-40.

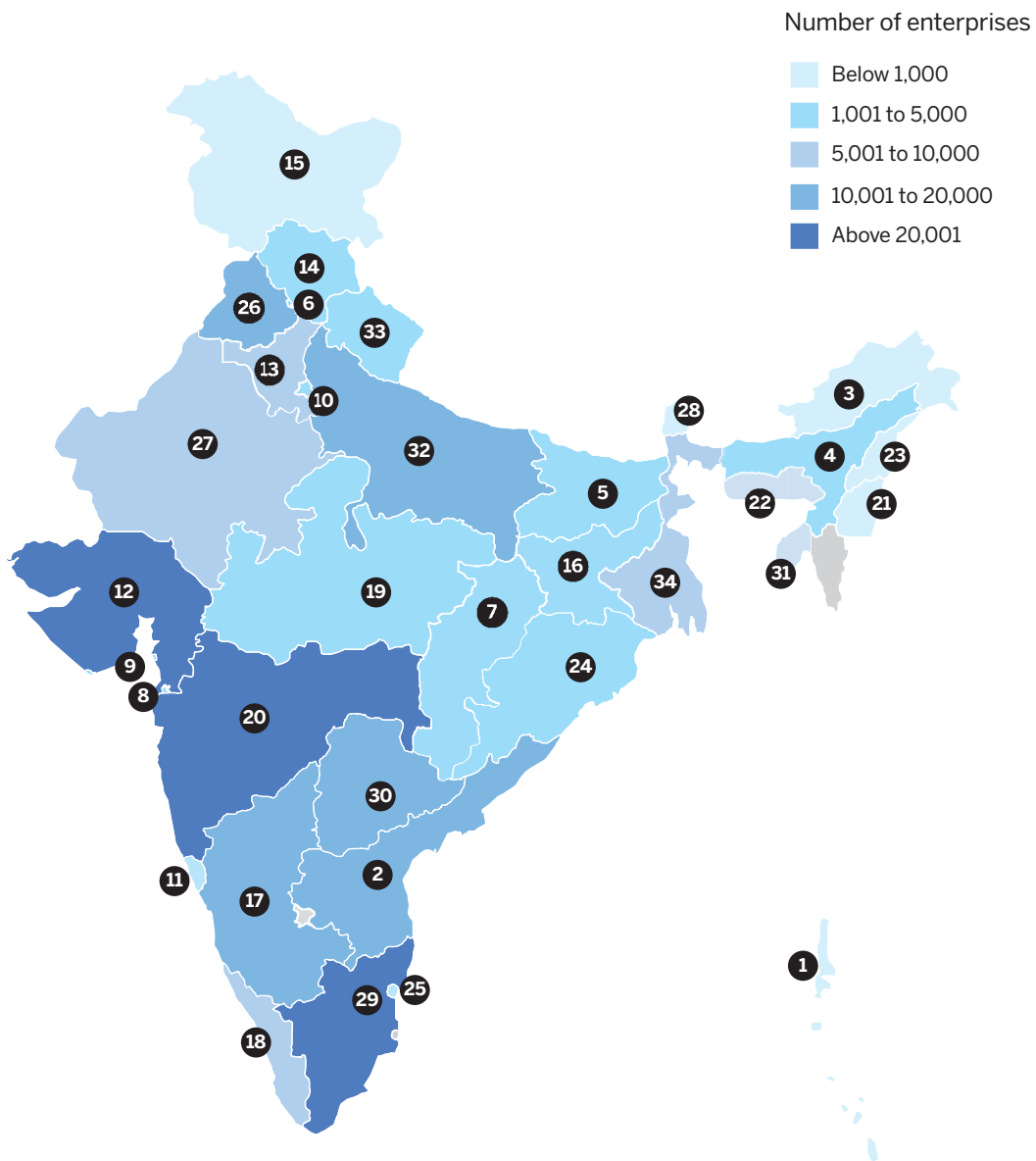
⁷ Details about the compilation and updating of the ASI frame are available at <http://www.csoisw.gov.in/cms/cms/Files/572.pdf>. The ASI frame for 2014-15 is available at http://mospi.nic.in/mospi_new/upload/asi/ASI_main.htm.

⁸ Information about the Udyog Aadhar programme and registrations of enterprises in the SME sector is available here: <http://udyogaadhaar.gov.in/UA/UdyogAadhar-New.aspx>

⁹ Experts include lawyers, chartered accountants and company secretaries



Figure 2.1
State-wise ASI frame for 2014-15



All India 231,590

1. Andaman and Nicobar Islands ...	21	13. Haryana	8,297	25. Puducherry	720
2. Andhra Pradesh	16,101	14. Himachal Pradesh	2,812	26. Punjab	12,432
3. Arunachal Pradesh	131	15. Jammu & Kashmir	977	27. Rajasthan	9,028
4. Assam	3,771	16. Jharkhand	2,769	28. Sikkim	68
5. Bihar	3,557	17. Karnataka	12,641	29. Tamil Nadu	37,959
6. Chandigarh	277	18. Kerala	7,355	30. Telangana	14,427
7. Chhattisgarh	2,823	19. Madhya Pradesh	4,307	31. Tripura	553
8. Dadra and Nagar Haveli	1,412	20. Maharashtra	28,770	32. Uttar Pradesh	14,952
9. Daman and Diu	1,875	21. Manipur	177	33. Uttarakhand	3,013
10. Delhi	3,872	22. Meghalaya	115	34. West Bengal	9,189
11. Goa	646	23. Nagaland	197		
12. Gujarat	23,506	24. Odisha	2,840		

2.3 Sample size for respondents

The sample for the survey covered all states and UTs except Arunachal Pradesh, Mizoram, Andaman and Nicobar, and Lakshadweep. The sample comprised:

- a) 3,326¹⁰ manufacturing enterprises
- b) 5 experts¹¹ each from the 15 largest states in terms of number of enterprises
- c) 25 Industry Associations from the 19 largest states in terms of number of enterprises

The analysis is based on survey responses from 3,276 enterprises out of the targeted 3,326 enterprises.

2.4. Enterprise selection

The sample for this survey was drawn in two stages. First, we selected districts and then enterprises located in those districts. The districts¹² from each state were selected using probability proportional to size (where the size is the total number of enterprises) with replacement (PPSWR). In other words, the number of districts selected from each state was based on the proportion of enterprises in that state to the total number of enterprises in the ASI frame. For example, Andhra Pradesh has 7% of the total number of enterprises in the ASI frame, and it will have 7% of the total number of districts in the sample. While drawing the sample, we ensured that there was at least one district from each state. PPSWR ensures that states with a greater proportion of enterprises were adequately represented in the sample and that the selection probability of all units is the same.¹³

Enterprises from each state were selected using Simple Random Sampling Without Replacement (SR-SWOR).¹⁴ The sample size per state was determined as follows:

Sample size for state = (Number of enterprises in state frame/Total number of enterprises in frame across all states) x Total sample size

For smaller states—Chhattisgarh, Goa, Jammu and Kashmir, Manipur, Nagaland, Mizoram, Sikkim, and Tripura—the sample was fixed at 30 enterprises to ensure statistical significance. Using the regular

procedure to select enterprises would have yielded fewer than 30 enterprises from these states. We created two samples—original and replacement—to deal with non-response. Once a district's original sample was exhausted, enterprises (belonging to the same district and industry code) from the replacement sample replaced enterprises from the original sample that didn't respond. If this was also exhausted, an additional list of enterprises was created from the district using SRSWOR.

2.5. Weights

For the enterprises, the weights used for estimating results were calculated using the formula:

$$fw = w1*w2*w3$$

where,

fw: final weights

w1: Total number of districts in state i/Total districts sampled in state i

w2: Total number of enterprises in state i/Total number of enterprises sampled in state i

w3: Total number of enterprises sampled/Total number of enterprises that responded

2.6. Survey instrument

The survey instrument covers 9 key areas of doing business. These are: Setting up a business, Land and Construction, Environment, Labour, Infrastructure related utilities, Taxes, Legal issues, Access to finance, and Exiting a business. The instrument was developed using the survey questionnaire that was administered to all state governments by DIPP for its 2015 report. Four broad categories of questions were asked. These included process-related questions, time taken, costs higher than prescribed and perceptions regarding the business environment.

2.6.1. Process-related questions

Questions in this category focused on whether enterprises used online services or facilities or if they could locate relevant information online while trying to get approvals, NOCs and licenses. These services and facilities are part of the reforms mandated by DIPP for improving the ease of doing business in states.

¹⁰ The sample used for analysis comprised of 3,276 enterprises owing to non-response

¹¹ 5 experts include 3 lawyers, 1 Chartered Accountant and 1 Company Secretary

¹² Due to considerations of funding constraints, we had to limit ourselves to 104 districts. Since the district selection procedure yielded some districts appearing multiple times, 170 districts were initially selected, from which duplicates were removed.

¹³ In India's NSS surveys, rural First Stage Units- which are areas within which the survey is conducted- are selected by PPSWR

¹⁴ In India's NSS surveys, households are selected by SRSWOR

2.6.2. Time taken

Questions on time taken asked enterprises about the number of days spent in getting approvals and compliances. Regarding infrastructure-related utilities, enterprises were asked to report the number of hours they experienced insufficient electricity and water supply.

2.6.3. Costs higher than prescribed

The survey asked enterprises whether they had to incur additional costs for getting any approvals or completing processes beyond officially prescribed fees. Among other things, these additional costs may include any illicit payments or fees charged by intermediaries facilitating approvals. Essentially, enterprises responded whether costs were higher than, same as, or less than prescribed fees. The latter situation could

arise in case enterprises were granted concessions or subsidies.

2.6.4. Perception regarding the business environment

We also asked enterprises to qualitatively rate each area in terms of how much of an obstacle was posed by regulatory processes in doing business. The World Bank's Enterprise Survey uses this method to gauge the perception of enterprises. Enterprises also provided information on changes in the business regulatory environment since April 2015 (a year before the start of the survey exercise).

In the next chapter we describe some of the characteristics of the enterprises in our sample.

Chapter 3. Enterprise Characteristics

3.1. Introduction

This chapter provides information on selected characteristics of manufacturing enterprises in the sample. It focuses on the distribution of firms by sector and firm size as measured by the number of employees and annual turnover.

3.2. Industry sector distribution

Figure 3.1 provides the number and share of enterprises belonging to different manufacturing sectors. The enterprises surveyed cover 23 manufacturing sector categories. The sectors correspond to 2 digit industrial classifications under National Industrial Classification (NIC) 2008. They include a wide range of manufacturing activity. Food products constitute the largest share of enterprises at around 10%, followed by beverages and tobacco products. Textiles, apparel and leather—all labour-intensive industries—also make up relatively high shares of the firms in the sample.

3.3. Enterprise size by turnover and number of employees

Figure 3.2 (Page 22) provides the distribution of enterprises according to turnover size class. Nearly one-third of enterprises do not report their turnover. Around 400 enterprises reported having turnover between Rs. 1,000-5,000 lakhs. A very small number of enterprises reported having turnover below Rs. 1 Lakh. Of the enterprises that reported turnover, most were between Rs. 50 lakh and Rs. 5,000 lakh.

Around 9% of total enterprises surveyed do not provide information on the number of employees. Only above 7% of the enterprises employ 200 or more workers. 44% of enterprises report employing between 10 and 49 workers each. As Figure 3.3 highlights, the proportion of enterprises hiring between 50 and 99 employees is markedly smaller than those hiring between 10 and 49 employees. Nearly 24% of enterprises are tiny, with less than 10 employees. The fact that most enterprises are small in terms of number of employees is a cause for concern as it suggests that enterprises face challenges in scaling up.

Looking at firm size both by employees and turnover, we find that firms that are large in terms of number of employees are also large in terms of turnover and the same is true of smaller firms.

Similarly, if we look at firm turnover and age, we find that the distribution is similar for young and old enterprises for most size classes. However, the share of young enterprises is higher till Rs. 50 lakhs, beyond which the share of old enterprises is higher.

3.4 Employee size and sector

Across all manufacturing sectors, most enterprises in our sample belong to the 0-9 and 10-49 size classes. This is also true for labour-intensive sectors such as wearing apparel and leather. The largest enterprises—employing more than 200 people—are mostly concentrated in industries like manufacturing of motor vehicles, trailers, transport equipment, pharmaceuticals and textiles.



Figure 3.1

Number and share of enterprises by manufacturing sector

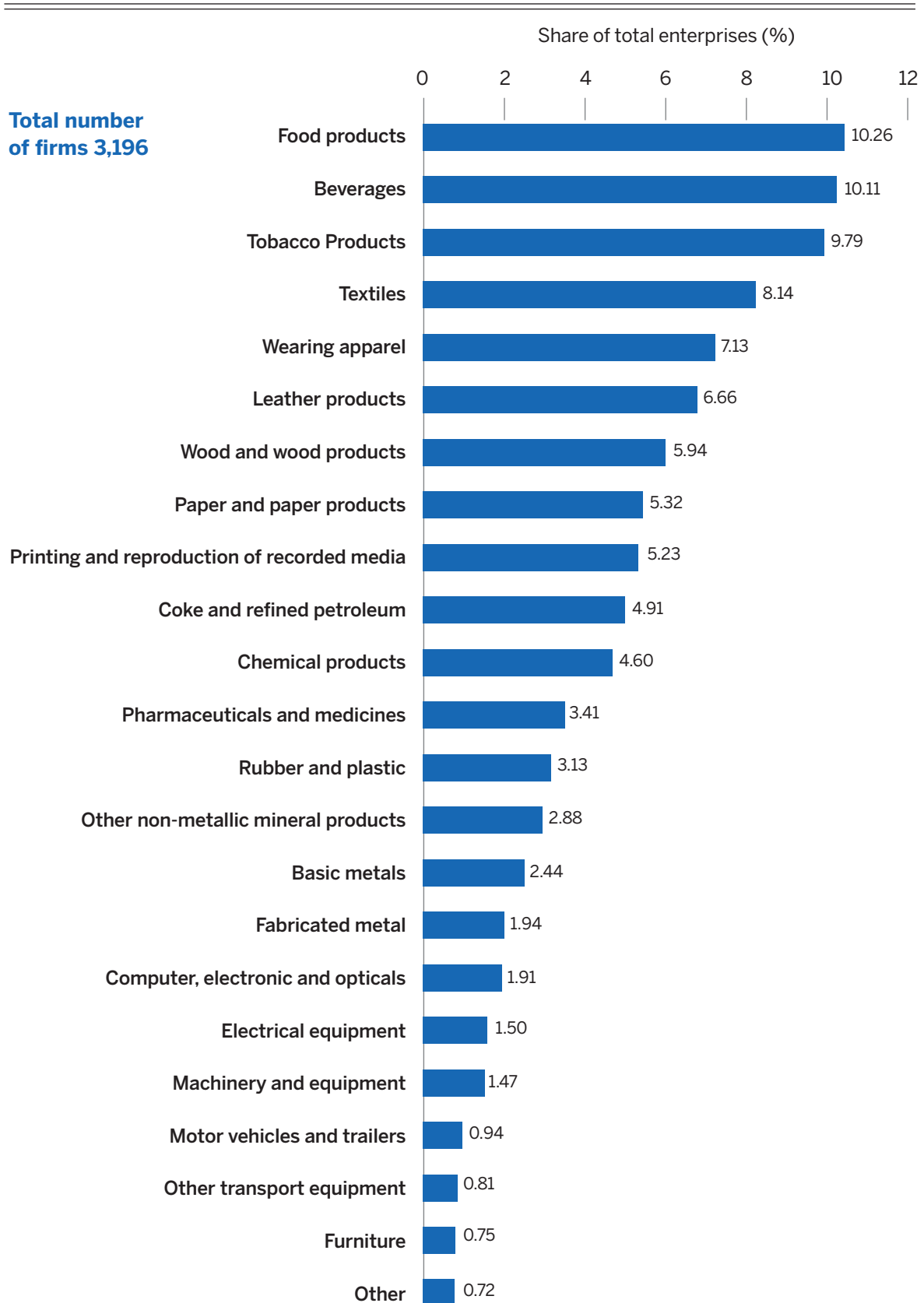
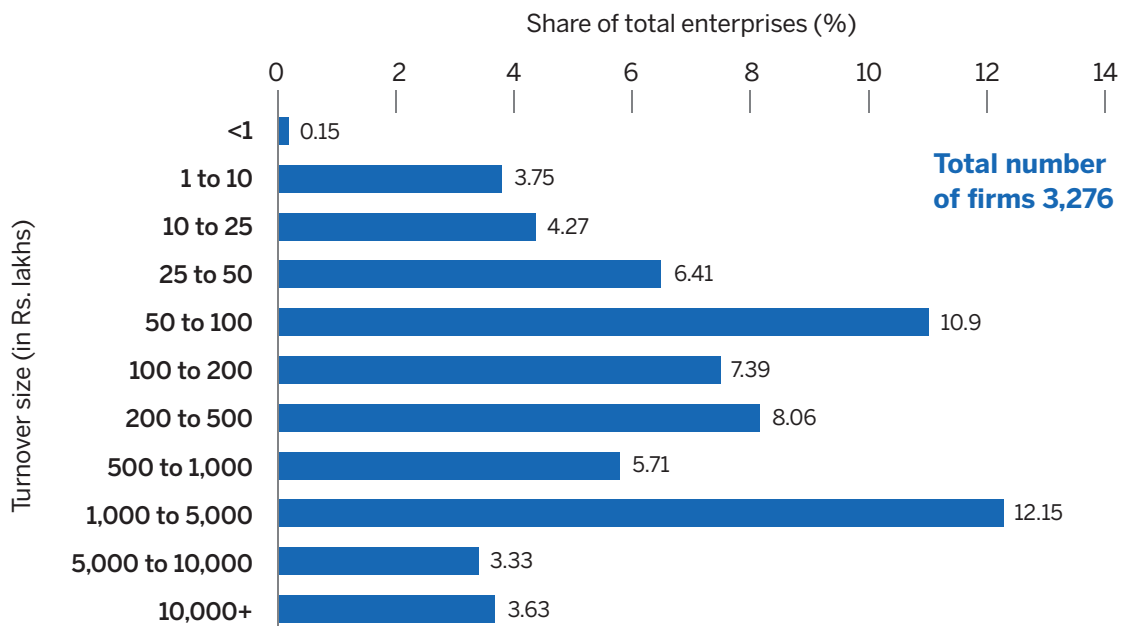




Figure 3.2

Number and share of enterprises by turnover size

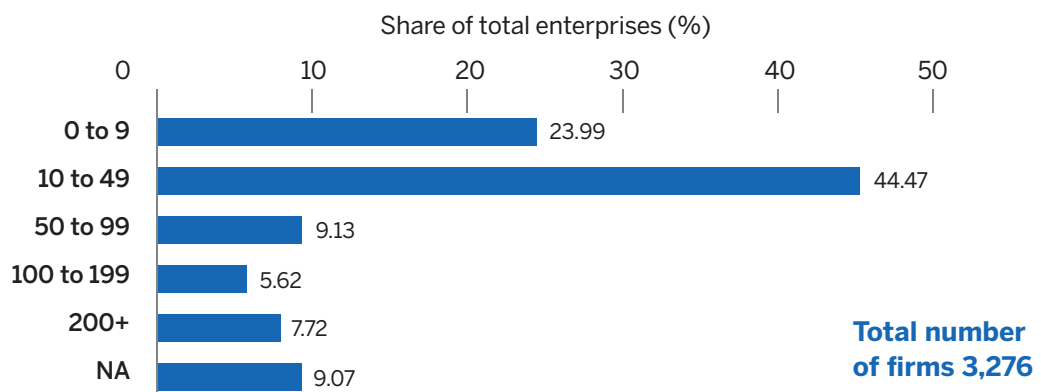


Note: Turnover size of 34.25% of firms was unavailable



Figure 3.3

Number and share of enterprises by employee class size



3.5 Average age of enterprises by manufacturing sector

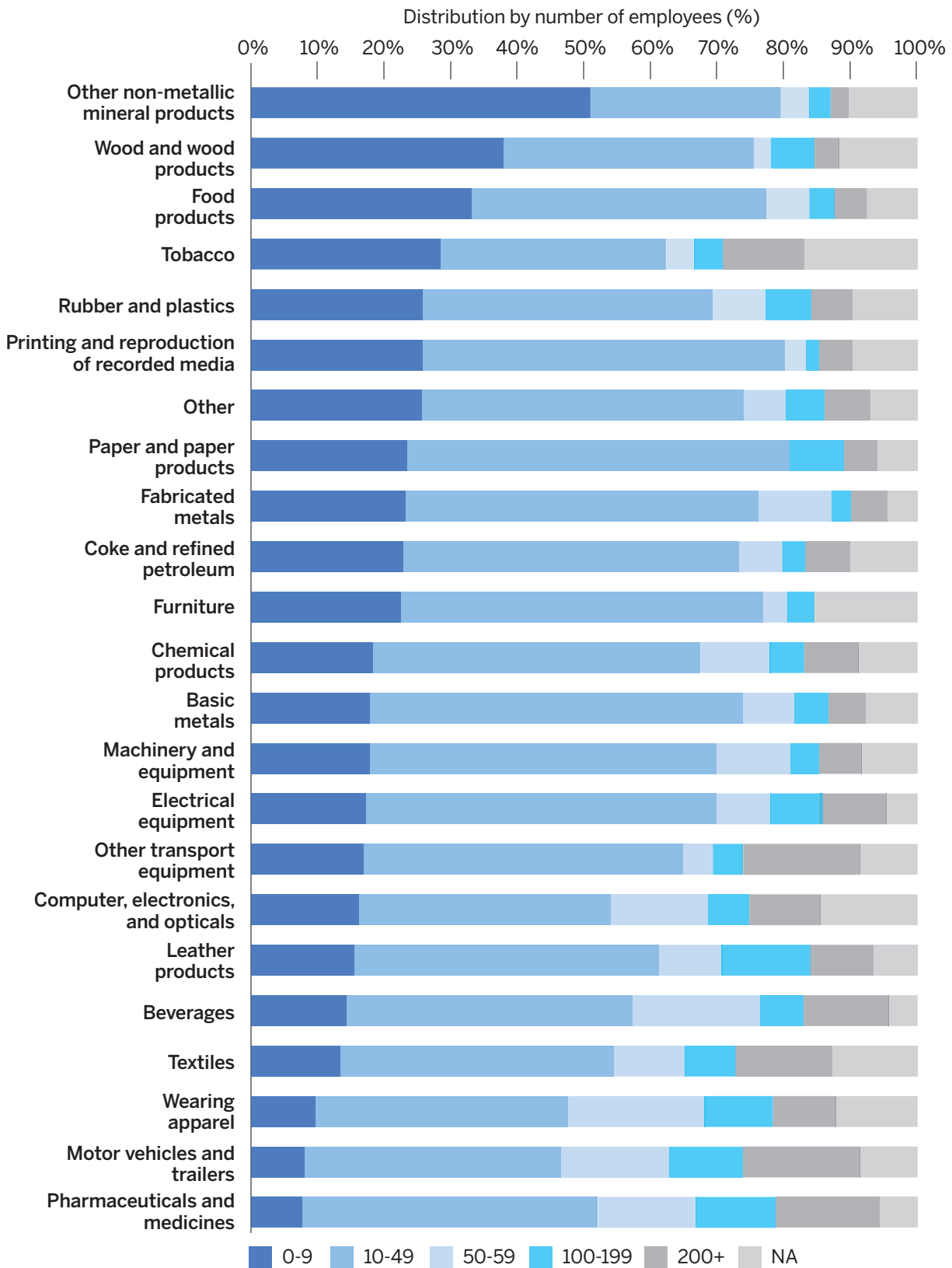
Comparing the average age of enterprises across manufacturing sectors, we find that the average age ranges from 16 to 33 years. Sectors such as non-metallic mineral products, computers and electron-

ics have the lowest average age at around 16 years. Traditional sectors such as wood products, furniture, printing and reproduction of recorded media, other transport equipment and tobacco products have the oldest enterprises and the average age of enterprises is above 25 years.



Figure 3.4

Breakdown of enterprises by manufacturing sector and employee size



Sectors arranged in descending order of share of 0-9 employees

Chapter 4. Awareness of Single Window Facility, Access to Finance, Time Taken in Clearances, Resolution of Disputes and Perceptions of Obstacles to Exit

This chapter presents the key results from our analysis at the all-India (national) level. At a broad level, we consider the time and costs incurred by firms in meeting a set of regulatory requirements. The time taken is for getting various approvals for all areas of doing business. The analysis of costs is based on a comparison of actual costs with the officially prescribed fees. Finally, we have also collected information on subjective perceptions of enterprises with respect to whether and how much regulatory processes impede their businesses.

4.1. Using a single window clearance for setting up a business

Single window systems have been introduced in many states in recent years. This system was part of the checklist of 98 reforms agreed upon by state governments under the “Make in India” initiative in 2014. This process mandates that all approvals required by an enterprise to set up a business be routed under one common application window.

Enterprises that began business prior to 2014 would not be in a position to provide information on processes put in place in or after 2014. To ensure that we focus on the responses of enterprises likely to have set up businesses concurrently with or after the single window processes were put in place, we consider responses of enterprises that were set up during or after 2014 in this sub-section. Figure 4.1 and Figure 4.2 (using appropriate weights associated with enterprises) summarise the responses with respect to the use and knowledge of single window systems among enterprises and experts, respectively.

Only 20% of enterprises that started operations during or after 2014 said that they had used a single window system to set-up their business. 41% of the experts interviewed in the survey said they were aware of this process. Despite being an agreed upon process implemented by many states, awareness among the enterprises was low, pointing to either incomplete implementation or insufficient awareness of the process among the population. Some states have implemented single window systems better than others. For instance, 41% enterprises in Andhra Pradesh, 33% in Rajasthan, and 32% in Gujarat said



Figure 4.1
Knowledge of Single Window System (enterprises)

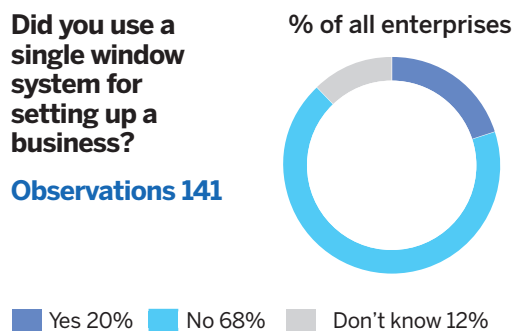


Figure 4.2
Knowledge of Single Window System (experts)

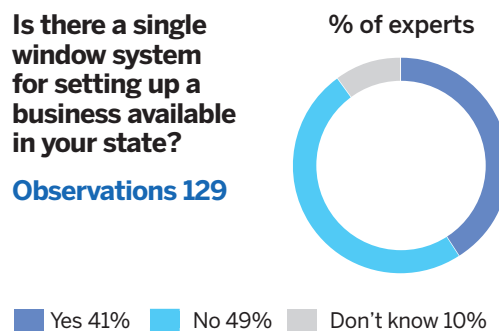


Figure 4.3
Knowledge of Environment Categories (enterprises)

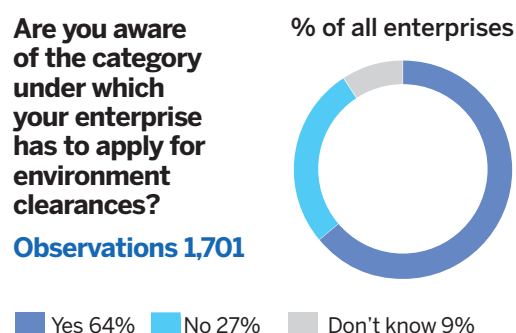
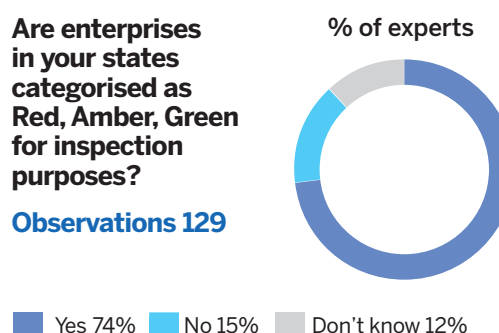


Figure 4.4
Knowledge of Environment Categories (experts)



Note: Percentages in Figures 4.1 and 4.2 and throughout this report are calculated using appropriate weights associated with enterprises.

they had used this process. In contrast, only 9% in Maharashtra said they had used it. Despite being an agreed upon process, experience across the country remains highly divergent.

4.2. Awareness of industry categorisation for environment clearances

Industries are categorised as red, amber and green¹⁵ based on the extent of environmental damage caused by them. For doing business, each enterprise needs

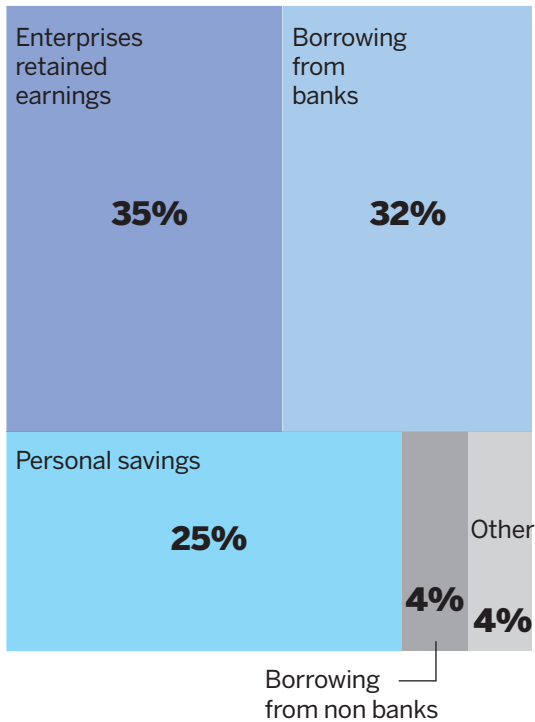
to follow a set of guidelines, determined by the category to which it belongs. In order to keep violations under check, routine inspections are mandated. Each enterprise is expected to know the category to which it belongs so that it can follow the rules prescribed for its category.

Figure 4.3 and Figure 4.4 report knowledge of environment categories among enterprises and experts. The survey asked enterprises whether they were aware of the category to which their enterprise belonged in order to measure awareness and implementation on ground.

¹⁵ Red category industries cause most harm to the environment and green, the least.



Figure 4.5
Sources of finance for enterprises



64% of the enterprises replied in positive while 74% of experts said they knew about the different environment categories. Awareness across majority of the states is high but some inter-state differences may be noted. Among high-awareness states, 89% enterprises in Kerala, 86% in Sikkim, and 85% in Andhra Pradesh said they were aware of these categories. The states with lowest proportion of enterprises having knowledge of their environment category were Bihar (33%), Odisha (22%), and Manipur (4%). None of the enterprises in Nagaland were aware of their category.

4.3. Access to finance

Access to finance remains a crucial area for creation of a business friendly environment. According to the survey, about 54% firms had taken a loan from a financial institution. Around 23% enterprises said that they had approached a government institution for finance. There appears to be scope for increasing the share of financial institutions in finance.

A breakup of the share of different sources of finance in the total finance obtained by the enterprises is presented in Figure 4.5. Each firm was asked to report the share of each of the following sources of finance for financing its business: personal savings, retained earnings, borrowings from banks, borrowings from non-banks, and any other. The average share of banks in the total borrowings was less than 1/3rd of the total. The retained earnings and personal savings formed the majority of source of finances (about 59%) for the surveyed enterprises.

We also surveyed the enterprises on their perception on getting access to finance. The results appear to be mixed: 46% enterprises have reported that access to finance was not an obstacle or a minor obstacle, 24% reported that they were a moderate obstacle, and 30% reported that they were a major or severe obstacle.

Once again, however, there is considerable variation across states. 53% of firms in Gujarat, 48% firms in Telangana, and 42% firms in Maharashtra felt that regulations pertaining to getting access to finance were not an obstacle for doing business. On the other hand, 74% firms in Bihar reported that the regulations constituted a very severe obstacle. 38% firms in Jharkhand and 36% firms in Chhattisgarh reported this to be a major obstacle. Given that the regulations relating to finance are mostly national in nature and therefore uniform across states, these variations likely reflect the differences in implementation among states.

Firms were also asked to report whether they felt that the situation with respect to getting access to finance had improved over the last one year. Overall, 43% of enterprises believed that the situation pertaining to access to finance had remained the same, 30% enterprises believed there had been an improvement and 18% found the situation to be worsening.

4.4. Dealing with legal issues

The survey asked enterprises about their experience in dealing with legal issues that were taken to the civil court and administrative tribunals including the time taken by enterprises to resolve those issues.

Figure 4.6 and Figure 4.7 report proportion of enterprises having legal disputes in civil courts or administrative tribunals, and average time taken for pending and resolved legal cases respectively.

Of the enterprises surveyed, 8% and 5% said they had legal disputes that were taken to the civil court and administrative tribunal, respectively. In some states like Delhi, Haryana, Kerala, and Rajasthan, over 20% of the enterprises reported having legal disputes. In Bihar, Meghalaya, Nagaland, and Uttarakhand none

of the enterprises reported having any legal disputes. For pending legal disputes, enterprises reported an average duration of four years since the matter was taken to court. On average, it took enterprises two years to resolve a legal dispute. There is a wide disparity across states in case of pending legal disputes.



Figure 4.6

Proportion of enterprises having legal disputes in civil courts and administrative tribunals

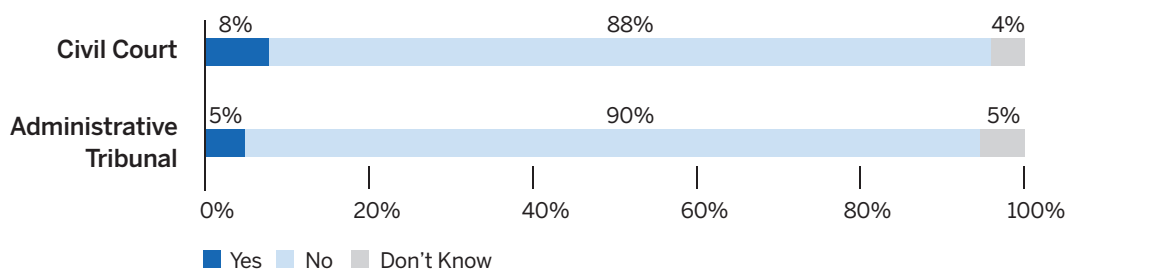
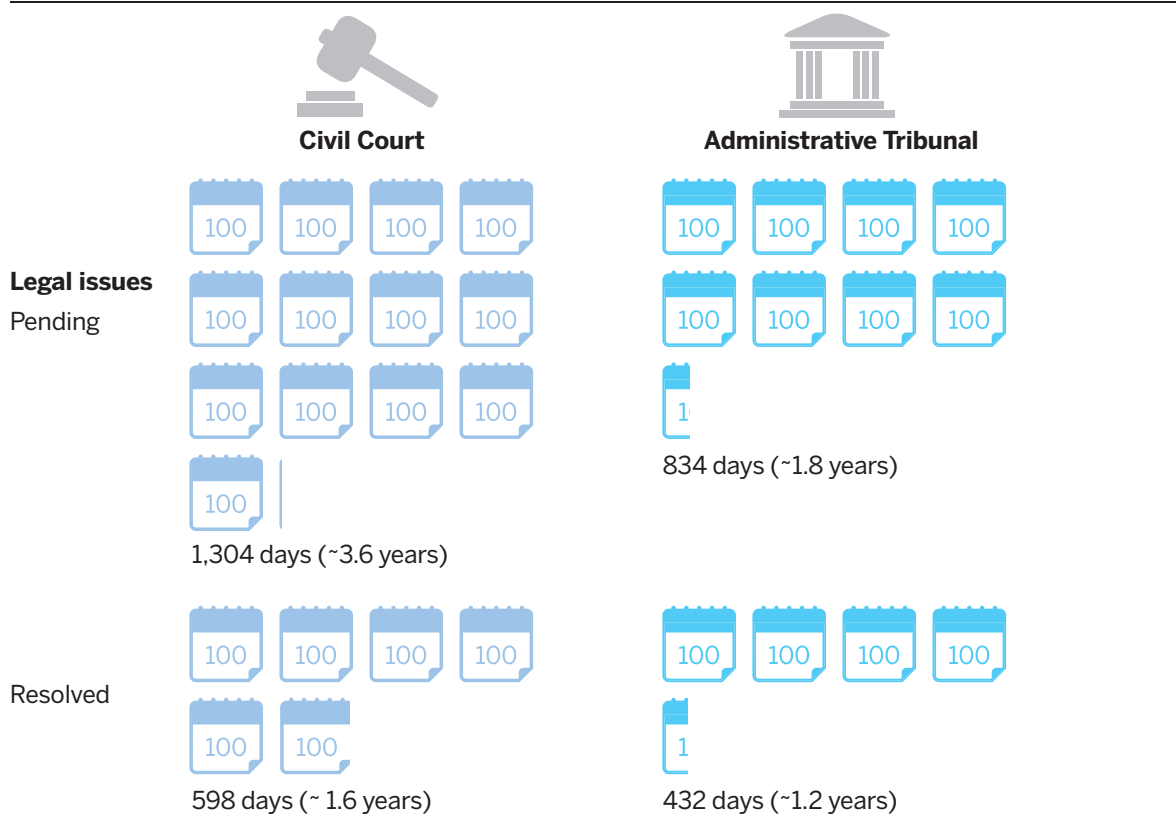


Figure 4.7

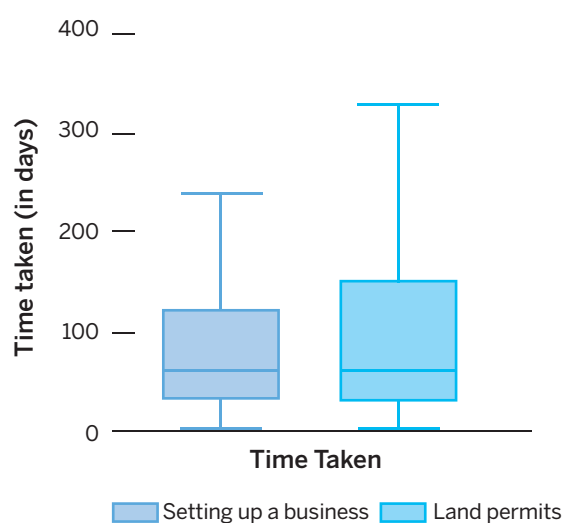
Average time - pending legal cases and resolved legal cases



Reading box and whisker plots

The distribution of time taken for getting approvals across all areas of doing business is shown using box and whisker plots. The whiskers (vertical thin lines) show the distribution of time taken by the top 25% and bottom 25% enterprises and the box shows the distribution of time taken by enterprises lying between the 25th and 75th percentile. The horizontal line going through the box represents the time taken by the median firm. The box plots do not include outlier values.¹⁶

Figure 4.8a
Time taken for setting up a business and getting land allotment



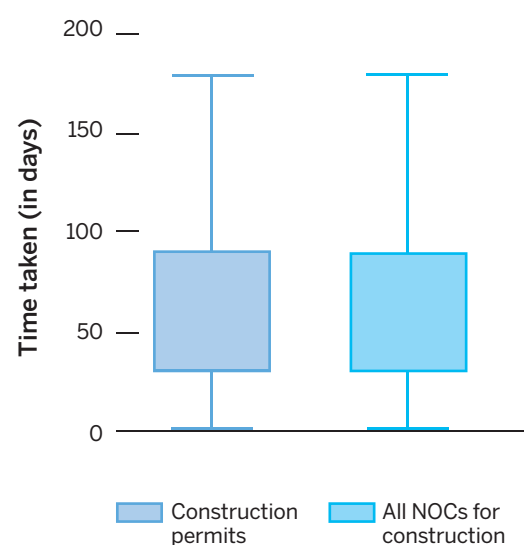
Excludes outside values

The time varies from less than one year to 13 years. It is important to be mindful of this disparity while looking at the average figures.

4.5. Time taken to get approvals across each area of doing business

Figures 4.8a to 4.8e show the distribution of time taken for getting approvals across all areas of doing business. As can be seen in Figure 4.8a, the middle 50% of enterprises (25th to 75th percentile) took between 20 to 120 days to set up a business. At the upper end, some enterprises reported taking close to 240 days. The average (i.e., mean) time taken to set up a business in India was 118 days, with a wide variation across states. It took, on average, 63 days to set up a business in Tamil Nadu and 67 days in Andhra

Figure 4.8b
Time taken for obtaining construction permits



Excludes outside values

Pradesh whereas for Kerala and Assam, firms took 214 days and 248 days respectively.

The top 25% of all firms according to time taken for land allotment reported that it took them between 150 to 320 days for getting land allotted from the government. The average time taken was 156 days. Firms in Himachal Pradesh reported the least average number of days for land allotment (28 days). In Punjab, the average time taken was 242 days and in Chhattisgarh it was 213 days.

Bulk of the enterprises (middle 50%) took 35 to 90 days to obtain a construction permit and all other NOCs related to it. The last quartile spreads over a wide range, from 90 to 180 days—exhibiting a slight skew in the distribution of the data (Figure 4.8b).

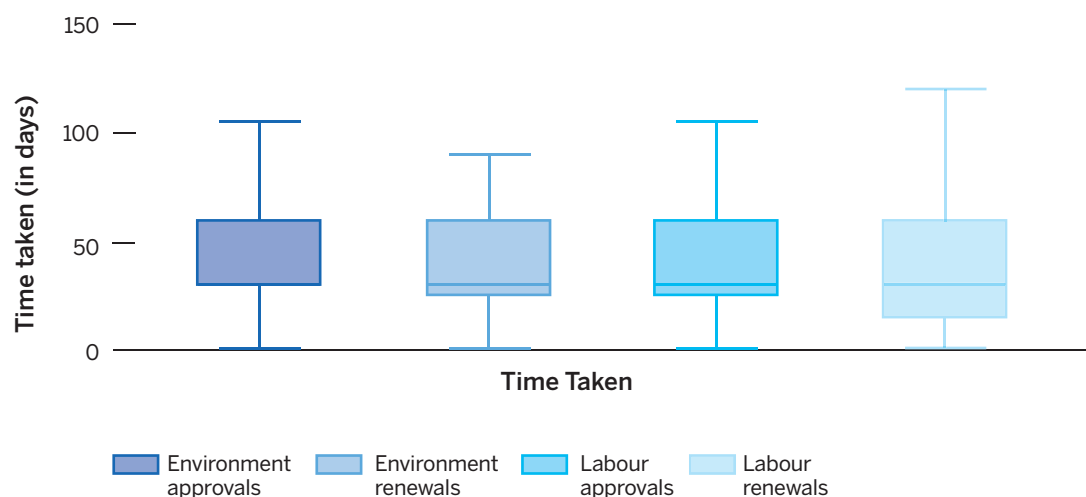
The average number of days for getting construction

¹⁶ The rule applied for identifying the range of the box and whisker plot is: lower quartile - 1.5 IQR and upper quartile + 1.5 IQR, where IQR is Inter Quartile Range (Q3-Q1). Values lying outside these boxes are known as "outside values" and for neatness of presentation have been excluded from the box plots.



Figure 4.8c

Time taken for environment and labour related approvals and renewals



Excludes outside values

permit was 112 days. According to the World Bank's 2017 Doing Business report, the time taken for getting construction permits was 190 days. India is ranked poorly (185 out of 187 countries) in this area of doing business by the Doing Business report. Thus, it appears that the actual experience of enterprises is better than the survey results of the World Bank. Looking at the state-level variation, we find that it takes around 41 days in Madhya Pradesh and 43 days in Bihar on one hand, and 270 days in Assam and 117 days in Kerala on the other to get construction permits.

Next, we examine the situation for getting all approvals and NOCs pertaining to construction. The number of NOCs and approvals needed and the process vary considerably from state to state. The average time taken to get all construction related approvals was around 75 days. Firms reported longest time taken in Karnataka (140 days), Uttarakhand (136 days), and Kerala (135 days) and the shortest time taken in Himachal Pradesh (8 days).

This is an area that requires considerable reform. The steps undertaken by states in this regard should be welcomed but it is also crucial to communicate these reforms and existence of facilities to improve the regulatory environment to firms on ground.

Time for environment related approvals and renewals ranges, respectively, from zero to a little over 100

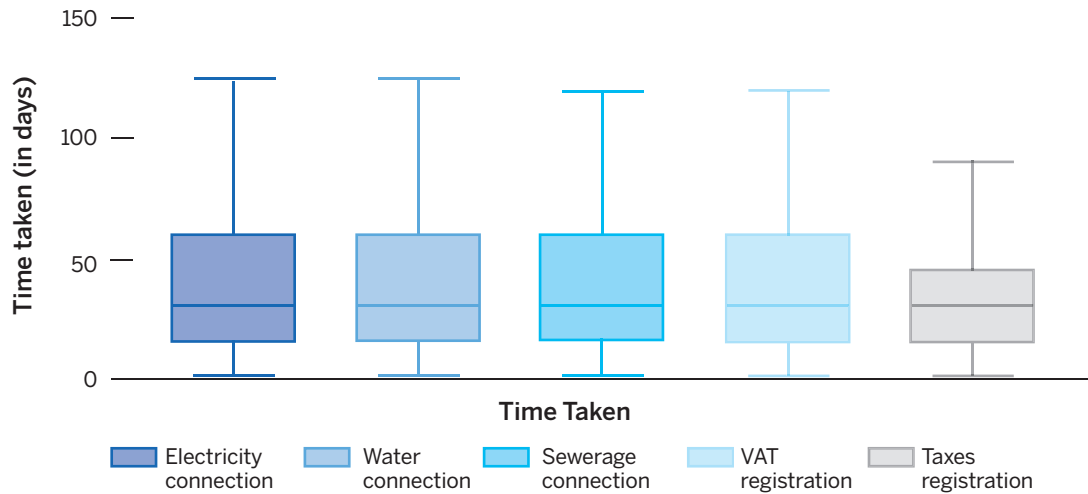
days and zero to 90 days (Figure 4.8c). The distribution of the data shows a skew in the last quartile (top 25% of the time taken). It takes on average 91 days for getting environmental clearances and on average 71 days for renewing these clearances. The states show varying performance in this regard. In Uttar Pradesh and Kerala, on average it took firms 121 days for getting environmental approvals whereas in Chhattisgarh it took firms 25 days on average.

Time taken for labour approvals and renewals ranges, respectively, from zero to a little over 100 days and zero to around 120 days. The average number of days for completing all labour related compliances is 74. It takes on average 103 days in Assam and Goa to get all labour related permits but only 20 days in Himachal Pradesh and 28 days in Chhattisgarh. For renewing various approvals, the time taken on average is 62 days. In Gujarat, firms reported taking 28 days on average to get approvals renewed whereas in Uttar Pradesh they reported taking 60 days on average.

The middle 50% of the enterprises took 20 to 60 days to obtain infrastructure (water, electricity and sewage) connections (Figure 4.8d, Page 30). On average they reported taking 52 days, 61 days, and 76 days for getting electricity, water, and sewerage connections respectively. The World Bank 2017 Doing Business report ranks India 25 for getting electricity connection and it is estimated that getting the connection takes about 46 days. It takes on average 31 days to get an



Figure 4.8d
Time taken for infrastructure and taxes



Excludes outside values

electricity connection in Karnataka, 32 days in Gujarat and around 95 days in Odisha. It takes 19 days on average to get a water connection in Chhattisgarh and Haryana but around 75 days in Tamil Nadu.

The median time taken for VAT registration is around 40 days, which is similar for registration for all other applicable taxes. The average time taken for completing processes pertaining to VAT registration is 55 days while the average time taken for completing processes for registering for all taxes is 65 days.

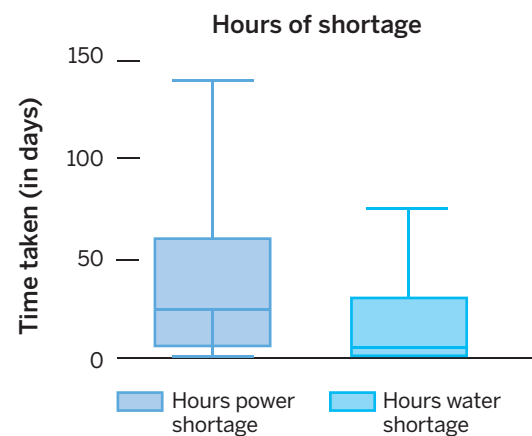
The reported hours of power shortage per month faced by enterprises are distributed over a wide range—from zero to 145 (Figure 4.8e). On average firms face around 46 hours of power shortage in a typical month. In Assam, the average duration of power shortage in a month was 156 hours, and in Bihar it was 139 hours. Firms in West Bengal faced the least power shortage at 11 hours, followed by Delhi at 13 hours.

4.6. Obstacles faced in exiting a business

For fostering an environment that makes it easy to do business, regulations pertaining to exiting a business



Figure 4.8e
Hours of power and water shortage



Excludes outside values

require as much attention as those pertaining to setting up a business.

Around 5% of the respondents interviewed said that they had previously closed a business and less

than 1% said that they tried closing a business. The experience of enterprises that exited or tried to exit a business has overall been positive.¹⁷ When asked whether regulatory processes such as the insolvency procedure or labour related matters posed obstacles, those that had closed a business before replied in the negative. Nearly 26% respondents who had tried to exit a business said that the insolvency processes constituted a major obstacle.

4.7. Relationship between obstacles, time taken, and costs higher than prescribed fees

Enterprises were asked whether regulations and compliances in various areas of doing business were no obstacle, minor obstacle, moderate obstacle, a major obstacle, or a very severe obstacle to doing business. We examine whether the positive responses regarding regulations and compliances being a major or very severe obstacle are correlated with i) time taken and ii) costs incurred in regulatory compliance being higher than prescribed for each area of doing business. In other words, we test whether firms that reported facing major or severe obstacles took more days for getting necessary approvals and whether they had to pay higher costs. This exercise provides a check on the consistency of the responses of the firms. Tables A1 to A7 in Appendix report the results of our findings. We find significant correlations in the following:

i. Enterprises reporting that they faced major or very severe obstacles for setting up a business:

- Report taking 14 more days on average for starting a business compared to the rest of the enterprises
- Are 17% more likely to report paying higher costs compared to officially prescribed fees for setting up a business.

ii. Enterprises reporting that they faced major or very severe obstacles for getting land and construction permits report taking 86 more days on average for getting land allotment compared to the rest of the enterprises.

iii. Enterprises reporting that they faced major or very

severe obstacles for environmental compliances are 64% more likely to report paying higher costs compared to officially prescribed fees.

iv. Enterprises reporting that they faced major or very severe obstacles for labour compliances are 47% more likely to report paying higher costs compared to officially prescribed fees.

v. Enterprises stating that they faced major or very severe obstacles for getting electricity:

- Report taking 20 more days on average for getting electricity connection
- Report facing 25 more hours on average of power shortage in a typical month
- Are 26% more likely to report paying higher costs compared to officially prescribed fees.

vi. Enterprises stating that they faced major or very severe obstacles for getting water connection:

- Report taking 9 more days on average for getting water connection
- Report facing 28 more hours on average of water shortage in a typical month
- Are 42% more likely to report paying higher costs compared to officially prescribed fees.

These results indicate that the responses of the firms are broadly consistent with the objective measures. They also highlight the need to undertake reforms that target the overall ecosystem in each regulatory area affecting doing business.

4.8. Perceptions about the regulatory environment

In order to gauge enterprise sentiment, we asked enterprises whether, in their opinion, the regulatory environment for doing business in India had improved, worsened or stayed the same in the last one year. This question was asked for each area of doing business covered in the survey. The results are shown in Figure 4.9 (Page 32).

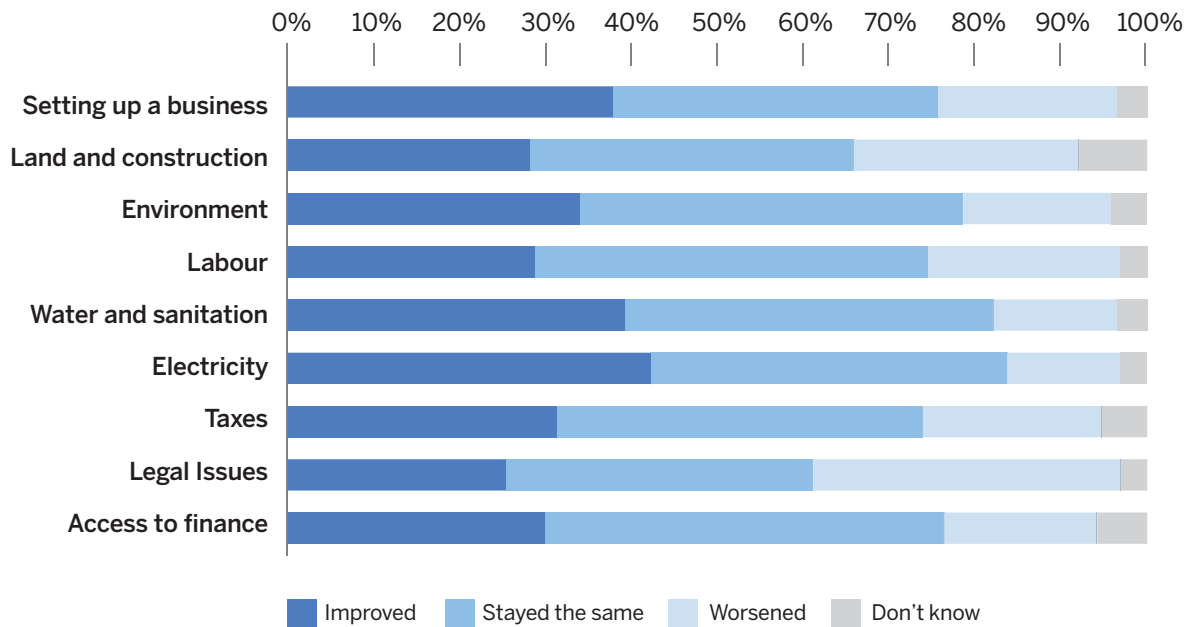
- 38% of the enterprises said that the regulatory environment for setting up a business had improved. Another 38% said it had stayed the same while 21% said it had worsened.
- A large proportion (44%) of the enterprises said

¹⁷ A caveat to note here is that this is based on a very small sample size and therefore may not be representative of the experience of exiting a business.



Figure 4.9

Perceptions about change in regulatory environment



that the regulatory framework for getting environment clearances had stayed the same while only 17% said it had worsened.

- 36% of the enterprises said that legal processes for resolving disputes had worsened. In comparison, 25% said they had improved.
- Enterprises had generally positive views about in-

frastructure related processes. Only 12%-14% of the enterprises said that the regulatory environment related to infrastructure (water, electricity and sewage) had worsened. 42% even said that it had improved, in the case of electricity.

- 46% of enterprises said that access to finance had stayed the same while 36% said it had improved.

PART II

Enterprise Responses and Characteristics of Enterprises, Sectors and States

Chapter 5. Responses of Start-ups: Evaluating the Impact of Recent Reforms in Ease of Doing Business

This chapter focuses on manufacturing enterprises that started operations during or after 2014. It highlights these firms' experience in terms of time taken to get approvals, costs incurred and perceptions surrounding the ease of doing business. These manufacturing start-ups were at most two years old at the time of the survey. Given India's recent policy initiatives for start-ups and their potential for creating jobs and driving growth, this is an important group of firms to analyse. The age cut-off of 2014 is also relevant because of the structural break provided by the 2014 general elections.

Young manufacturing firms are concentrated in a few states. Around 63% of manufacturing start-ups are located in Maharashtra, Telangana, and Gujarat. Maharashtra alone hosts about 32 of the 141 young manufacturing firms in our sample. In contrast, Goa, Haryana, Nagaland, Tripura, and Uttar Pradesh account for only one manufacturing start-up each in this sample.

5.1. Time taken for manufacturing start-ups

For this chapter and the remaining chapters, we use a trimmed distribution to eliminate outliers. Figure 5.1 shows average time taken for different types of approvals for all manufacturing start-ups in the sample. The average time taken for starting a business is 87 days for manufacturing start-ups relative to 101 days for manufacturing firms other than start-ups. Between 2016 and 2017, the government had reduced

the number of procedures required to start a business from 12 to five in several regions including Delhi and Mumbai.¹⁸ This may partially explain the shorter time taken by younger firms to start a business.

A large share of start-ups in the sample belongs to states with high per capita incomes and greater ease of doing business such as Maharashtra, Gujarat, Telangana, and Andhra Pradesh. Therefore, it is possible that the shorter duration reported by start-ups is because the regulatory environment in these states is better than the rest of the country. To account for this, we compare the time taken for getting different approvals for start-ups and other firms for these four states. For this subset, too, we find that the time taken for starting a business was much lower for start-ups (85 days) compared to the rest of the firms (113 days). This is true for getting most of the approvals. The hypothesis that the time taken for getting necessary approvals to start a business has seen a sharp decline in recent two or three years is thus supported.

Figures 5.2a to 5.2c show the distribution of time taken for getting various approvals. Figure 5.2d shows the distribution of hours of power and water shortages reported by start-ups.

For start-ups, the time taken for setting up a business is distributed over a wide-range, from zero to around 180 days (Figure 5.2a, Page 36). The spread of the distribution is less in case of time taken for getting all NOCs for construction.

¹⁸ Department of Industrial Policy and Promotion, Ministry of Commerce, Government of India. Available at: http://dipp.nic.in/sites/default/files/Starting_Business_Reform_13June2017.pdf (accessed on 17 August 2017).



Figure 5.1
Average time taken for all approvals

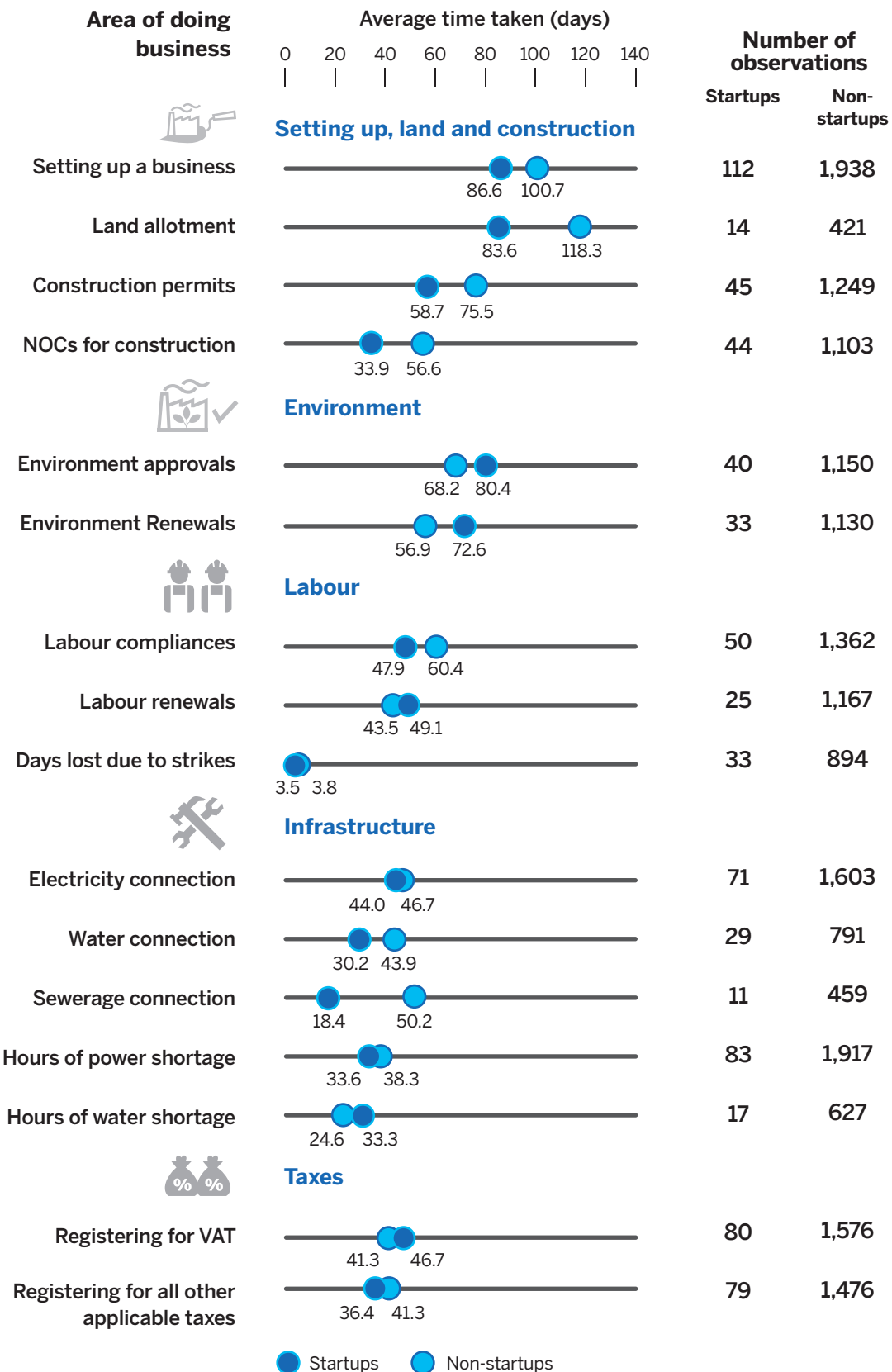
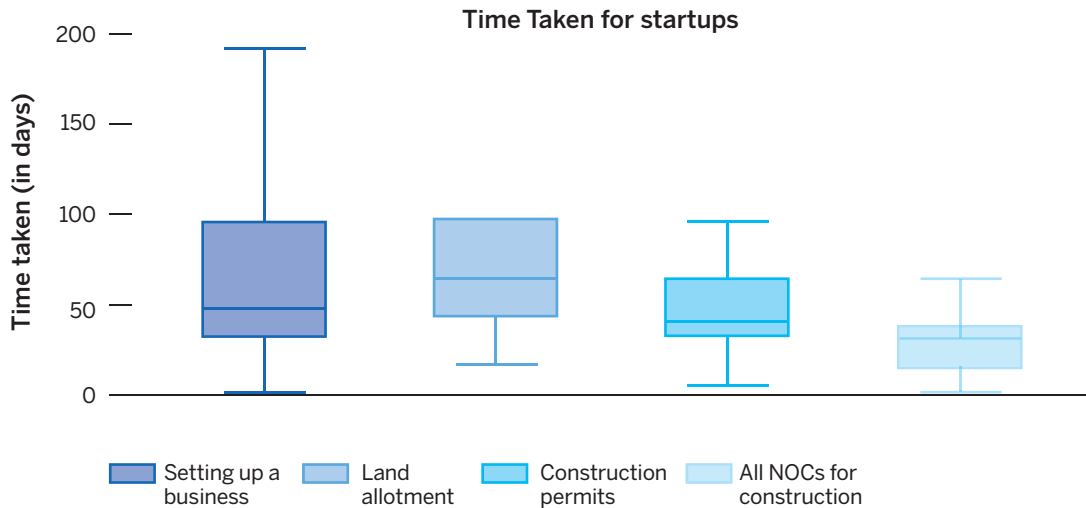




Figure 5.2a

Time taken for setting up a business and getting land allotment and construction permits

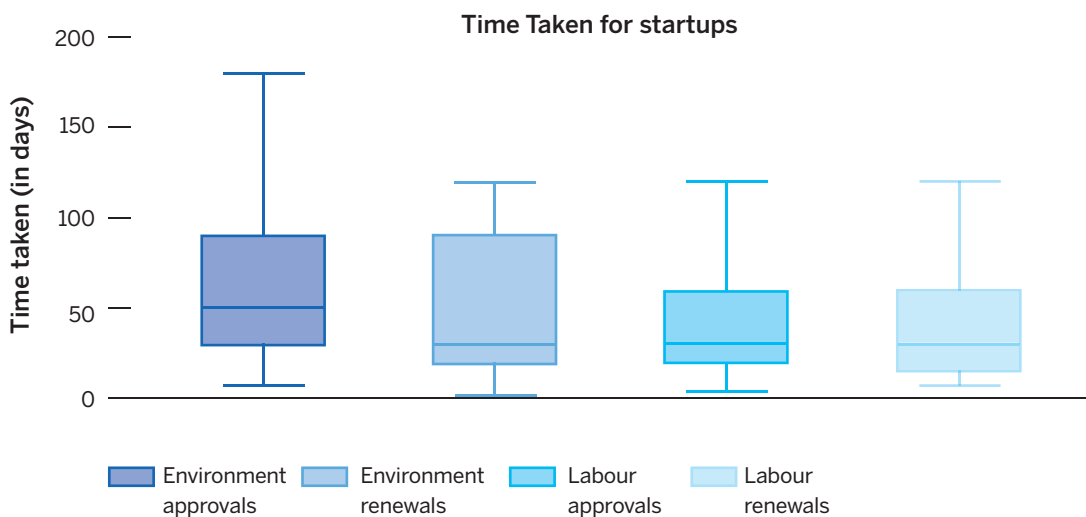


Excludes outside values



Figure 5.2b

Time taken for environment and labour



Excludes outside values

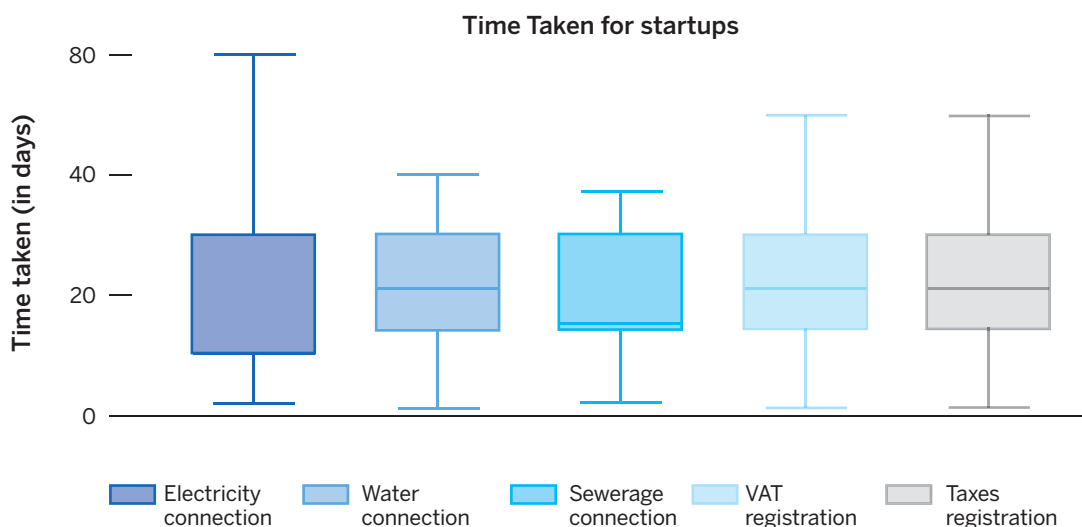
The time taken for getting environmental approvals is distributed over a wide range from around five to around 180 days (Figure 5.2b). The slowest 25% of enterprises took between 55 to around 125 days for getting labour approvals.

For start-ups, the duration for getting electricity connection ranged from around five to 80 days. The median time taken for registering for taxes was around 22 days (Figure 5.2c).



Figure 5.2c

Time taken for infrastructure and taxes

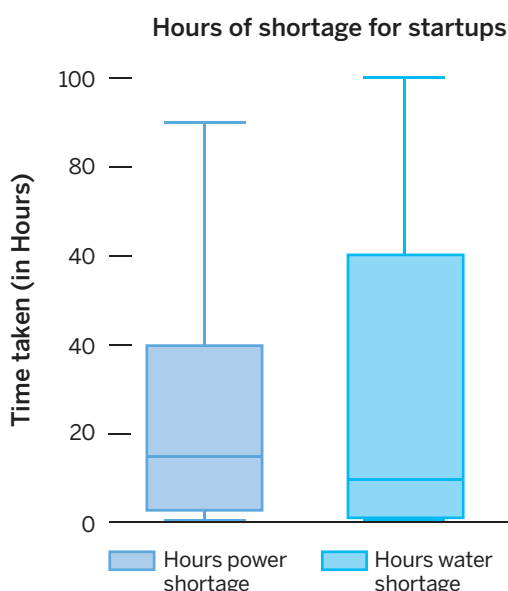


Excludes outside values



Figure 5.2d

Hours of power and water shortage



Excludes outside values

The top 25% of start-ups reported facing between 40 to 90 hours of power shortages and between 60 to 100 hours of water shortages in a “typical” month (Figure 5.2d).

5.2. Higher than prescribed costs

Do younger manufacturing firms pay higher than prescribed costs for getting various approvals? Figure 5.3 (Page 38) shows share of start-ups reporting whether costs were larger than, smaller than or the same as fees prescribed.

Across all areas of doing business, most start-ups reported that the cost they incurred in meeting various compliances was the same as the prescribed fees. For setting up a business, around 24% of enterprises reported facing higher costs than what was prescribed. Comparing the situation for start-ups and older manufacturing firms, the share of start-ups reporting that they incurred higher than prescribed costs was much lower than the share of non start-ups for getting land and construction permits, environmental approvals, labour compliances, infrastructure related utilities, and tax related compliances.

Considering only the four states of Andhra Pradesh, Telangana, Maharashtra, and Kerala, we find that share of start-ups reporting that they incurred higher than prescribed costs was much lower than the share of other manufacturing firms for getting land and construction permits, environmental approvals, and labour compliances.



Figure 5.3

Share of start-ups reporting whether costs were higher, lesser or same as prescribed fees

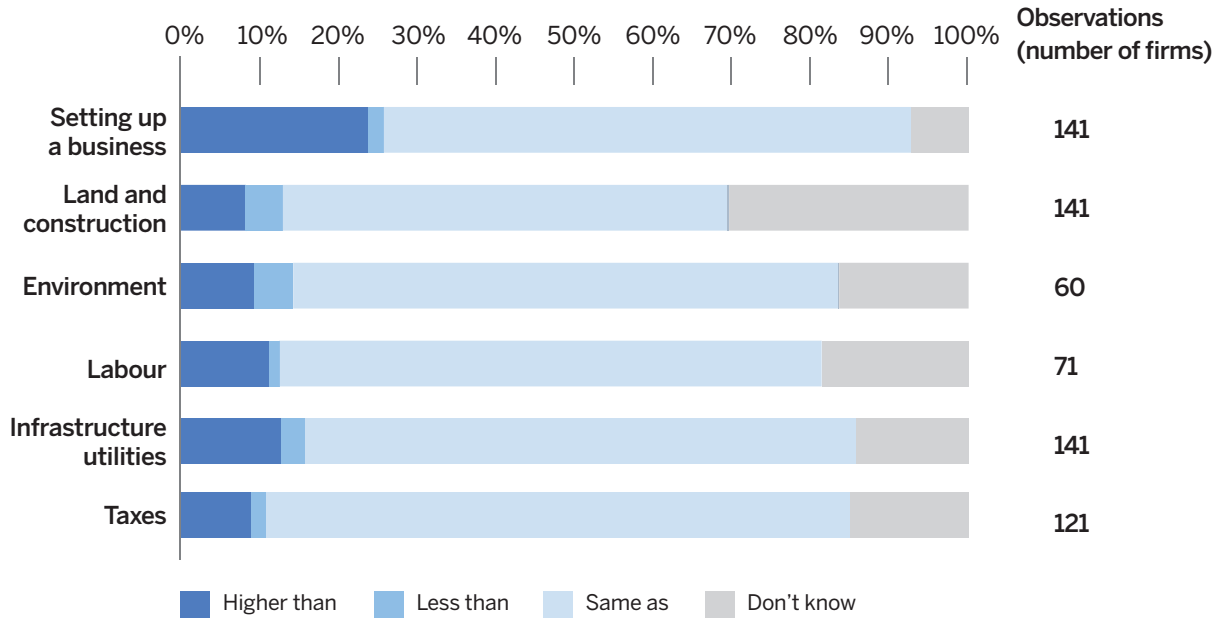
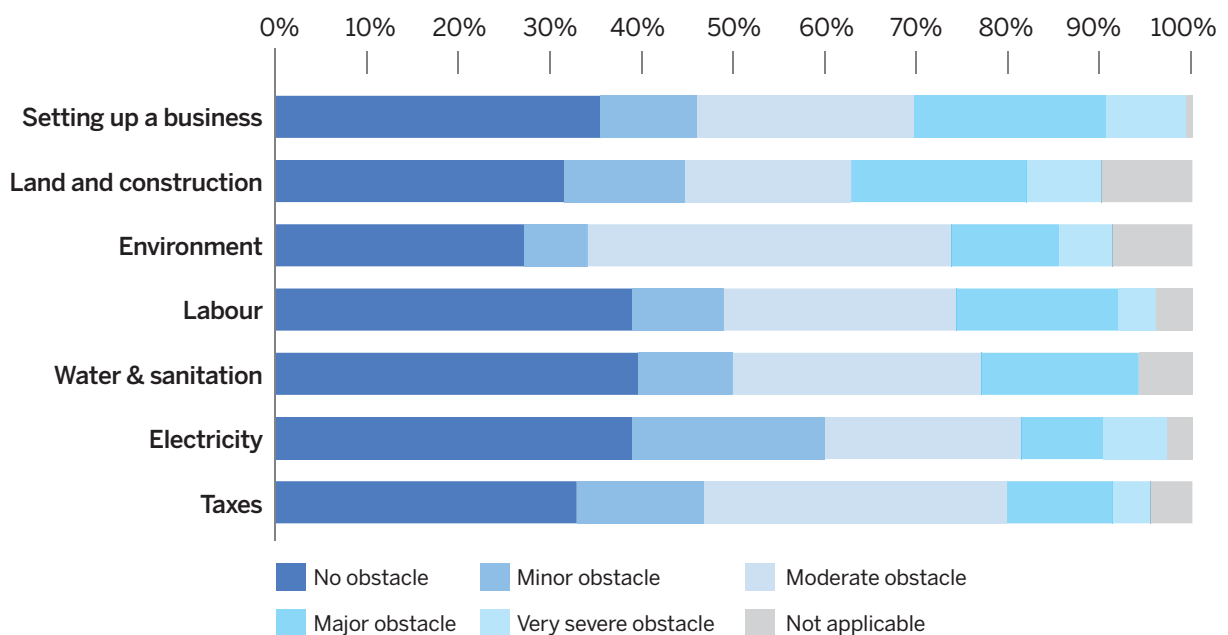


Figure 5.4

Share of enterprises rating the process for getting necessary approvals



5.3. Obstacles in doing business

Figure 5.4 shows how much of an obstacle enterprises faced in getting various regulatory compliances across different areas of doing business.

Across all areas, the majority of enterprises reported that regulations were either not an obstacle or a minor obstacle. 36% of start-ups reported facing no obstacles for starting a business and 9% reported facing very severe obstacles. In contrast, 30% of older firms reported facing no obstacles while 14% reported facing very severe obstacles. Similarly, the share of enterprises reporting that they faced no obstacles for getting land and construction permits, for labour

related compliances, getting infrastructure utilities, and tax compliances and procedures was higher among start-ups than among older firms. At the other extreme, the share of enterprises stating that they faced very severe obstacles in all areas of doing business was much lower among start-ups than among older manufacturing firms.

Somewhat anomalously, however, the situation is reversed when we consider the four states of Andhra Pradesh, Telangana, Maharashtra, and Gujarat. A higher share of older manufacturing firms than start-ups reported that they did not face any obstacles in starting a business, getting land and construction related permits, for environmental approvals, and for tax compliances.

Chapter 6. Responses of Young versus Old Enterprises

The previous chapter compared the experience of manufacturing “start-ups”, which started operation in or after 2014 with older manufacturing firms that started operations before 2014 in the area of ease of starting a business. In this chapter, we focus on indicators other than those relating to starting a business. For this purpose, we choose a different definition of young and old. Accordingly, in this chapter, we classify an enterprise as old if it has existed for longer than ten years and young otherwise. As per this definition, of the total enterprises surveyed, 799 are classified as young and 2,477 as old.

Figure 6.1 provides the state-wise distribution of young and old enterprises. It is important to note that we did not stratify our sample based on age, so that the results should be viewed as simple averages from a random sample of firms across the states of India. Overall, three-quarters of all firms are older than ten years while only a quarter are younger, i.e., ten years or less.

As a proportion of firms in the states, Bihar, Uttarakhand, Punjab, and Sikkim in that order have the maximum young firms. Specifically, 80% of all firms in Bihar and 73% in Uttarakhand are ten years old or younger. These percentages are indicative of accelerated manufacturing activity in recent years relative to that prior to ten years ago in these states. Very likely, the high percentages have also resulted from a low initial manufacturing base. Our data show, however,

that in absolute terms, most young enterprises are concentrated in Maharashtra, Gujarat, Tamil Nadu, Andhra Pradesh, and Telangana.

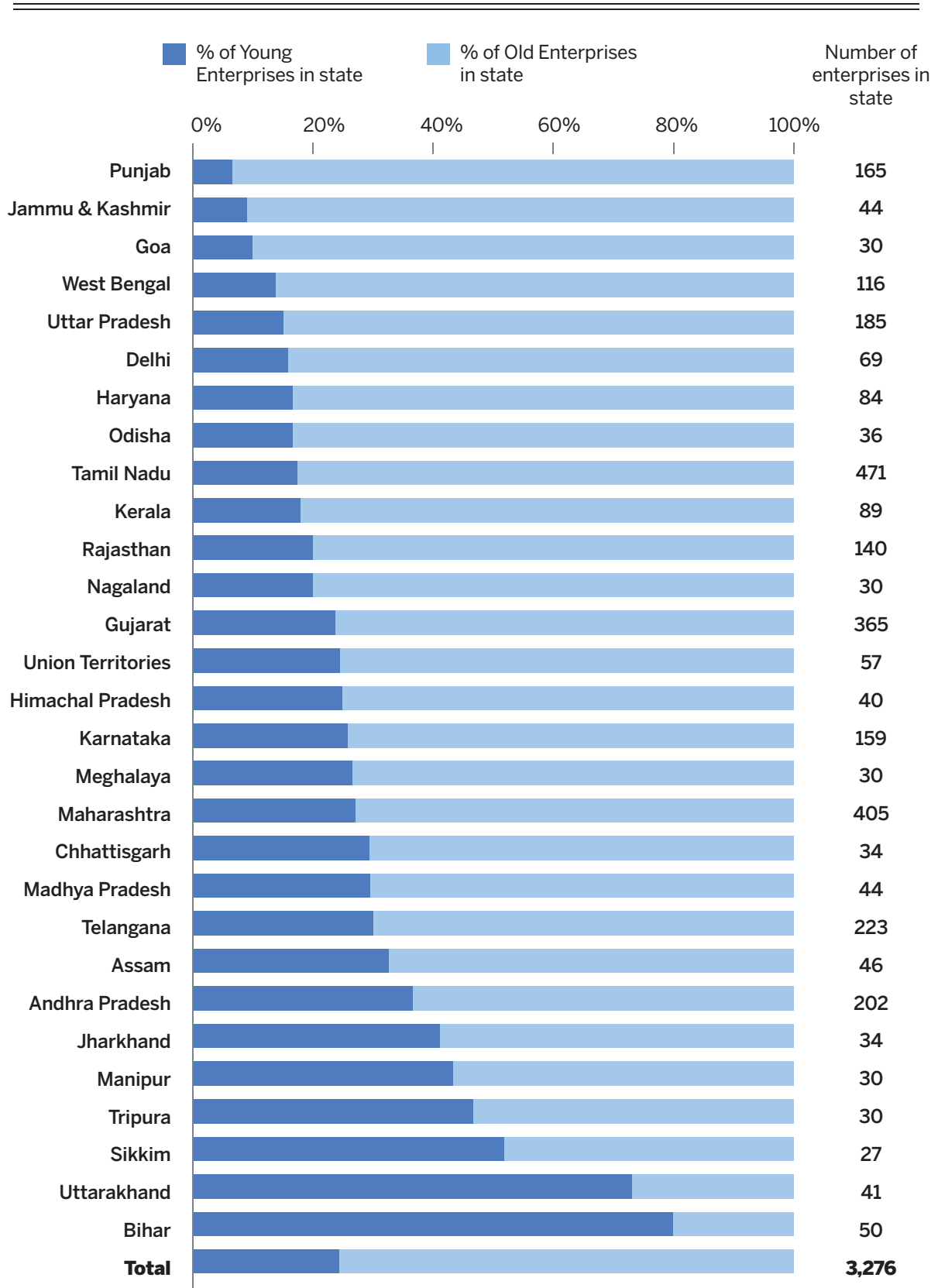
Figure 6.2 (Page 42) illustrates the distribution of young and old enterprises in different sectors. Young enterprises make up 38% of all enterprises surveyed in other non-metallic mineral products, 33% of pharmaceutical firms, 31% of firms manufacturing furniture, and 30% of firms in manufacture of coke and refined petroleum. In aggregate, the largest share of young enterprises is in other non-metallic mineral products (15%), food (12%), and textiles (10%). The fact that these are relatively labour-intensive sectors is a welcome development. At the same time, we note that sectors such as apparel and electrical equipment, which have high potential for exports and good jobs, have the least number of young firms. The relative size of these sectors is large as is reflected in the total number of older firms in them.

The data highlight that most young enterprises are small in size: 32% and 43% of all young enterprises are in the 0-9 and 10-49 size classes, respectively. The same is also true of the old firms: 22% of them belong to size class 0-9 and 45% to size class 10-49. The challenge is to create an enabling environment for the young as well as old firms to grow larger. Small size has been a key weakness of Indian firms. It is perhaps also the case that Indian firms do not grow in size as elsewhere. As a result we have too many firms that are born small and remain smaller.



Figure 6.1

State-wise distribution of young and old enterprises

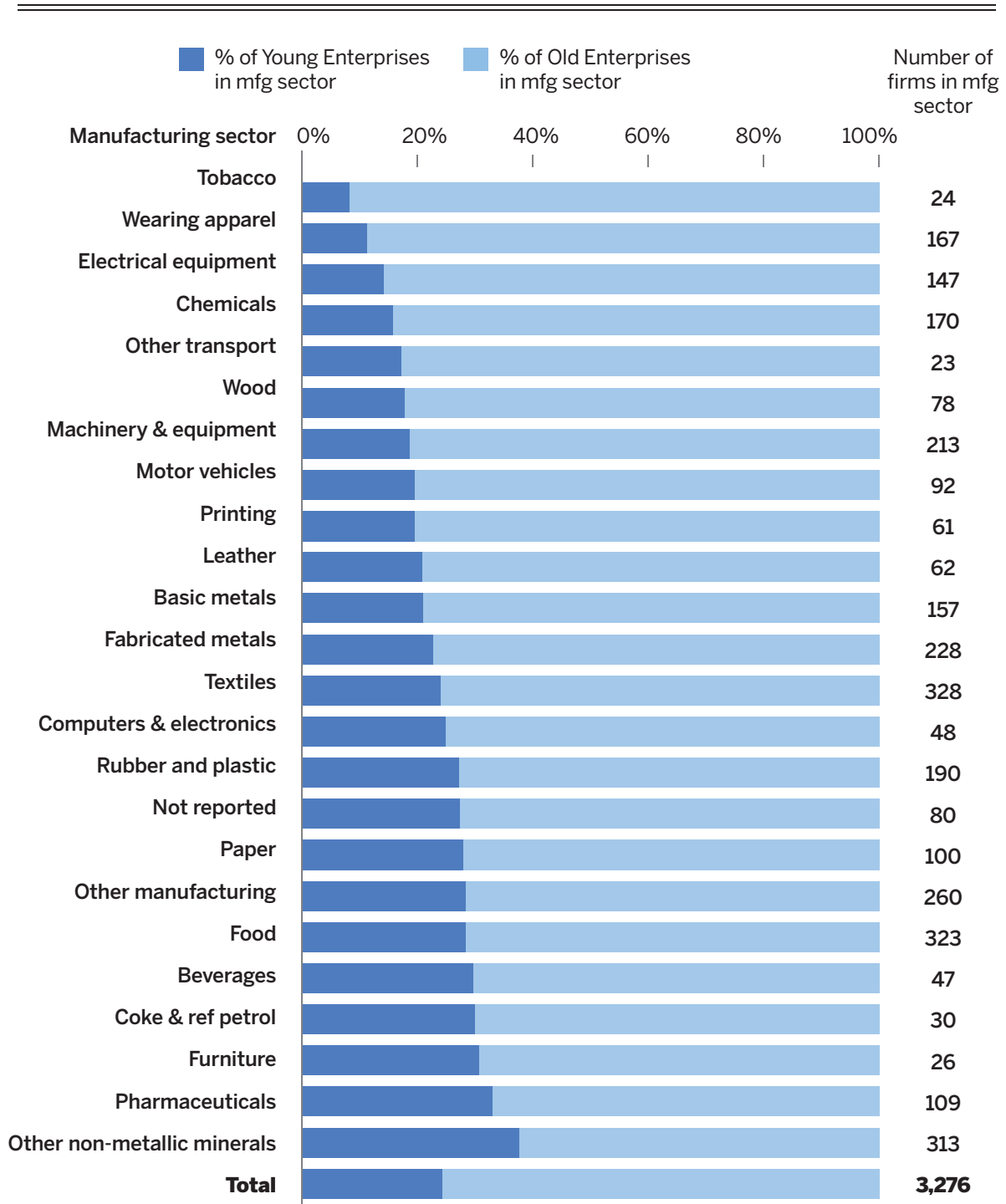


States arranged in increasing order of % of Young Enterprises in state



Figure 6.2

Sectoral distribution of young enterprises and old enterprises



States arranged in increasing order of % of Young Enterprises in sector

6.1. Time taken

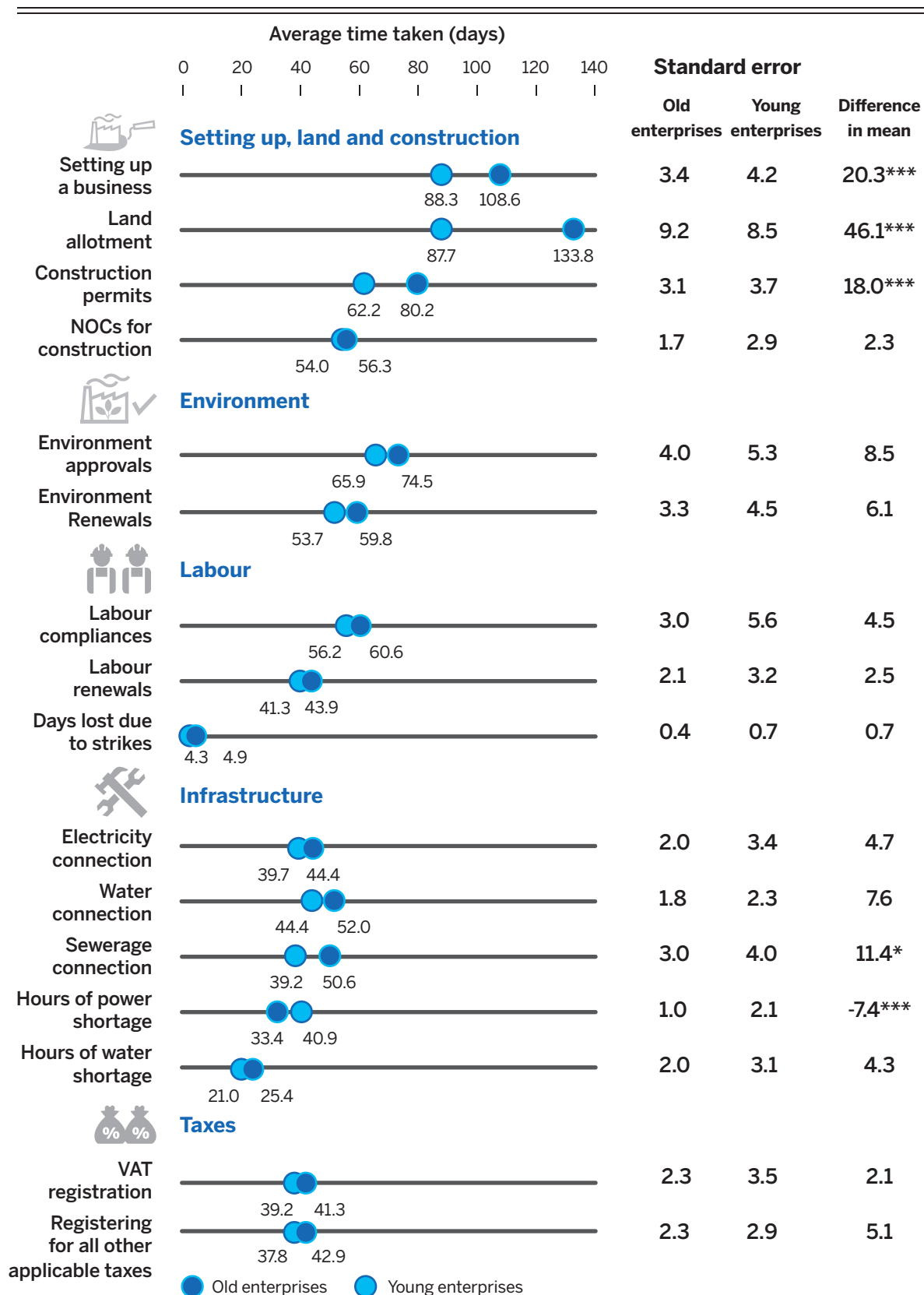
Figure 6.3 presents the average time taken in obtaining various approvals and permits for old and young enterprises across all areas of doing business. The

figure also reports the differences in the mean scores of the two groups. Older enterprises took significantly longer for getting necessary approvals to start a business, for land allotment, for getting construction permits and for getting sewerage connection. How-



Figure 6.3

Average time taken for old enterprises and young enterprises in getting approvals



*** p<0.01, ** p<0.05, * p<0.1



Figure 6.4a

Time taken for setting up a business and getting land allotment and construction permits



Excludes outside values

ever, they reported fewer hours of power shortage. These findings broadly reinforce those of the previous chapter and indicate improved business environment in recent years.

Figures 6.4a to 6.4d show the distribution of the time taken for young enterprises and old enterprises for getting different permits and approvals and differences in power shortages they experienced. Some salient features that emerge from these figures are below:

Though differences between the bottom 25% of young and old firms were minimal, the same was not true of the remaining firms. The top quarter of old enterprises reported taking particularly longer than their young counterparts in starting a business, getting land allotment acquiring construction permits and obtaining construction related no objection certificates.

The top 25% of old enterprises also reported taking much longer in getting environmental approvals and labour renewals (Figure 6.4b) compared to the top 25% of young enterprises. Differences in other environmental and labour indicators were not as pronounced, however.

In a similar vein, the top 25% of old enterprises reported taking much longer time for getting water connection and for registering for all applicable taxes, including VAT (Figure 6.4c).

In power shortage, the performance ranking reverses. The top half of old enterprises reported fewer hours of power shortage compared to top half of young enterprises (Figure 6.4d, Page 46).

Overall, we find that young enterprises:

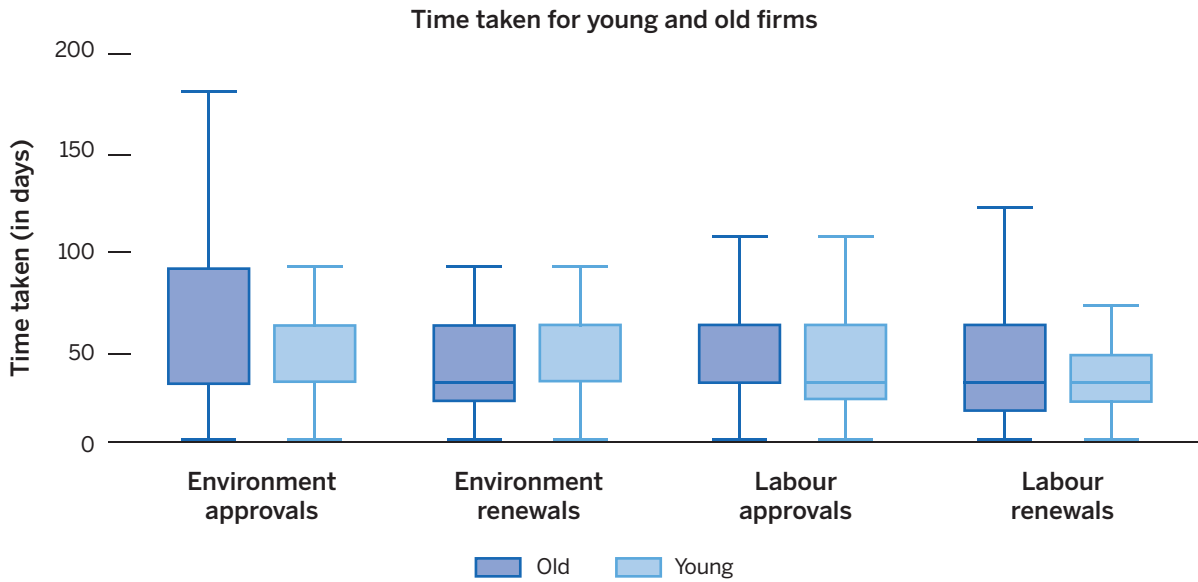
- Took 20 fewer days for setting up a business compared to old enterprises
- Took 46 fewer days for land allotment
- Took 18 fewer days for getting construction permits
- Took 7 fewer days for getting electricity connection
- Took 11 fewer days for getting sewerage connection
- However, reported facing 7 more hours of power shortage than old enterprises.

Table A8 in Appendix reports this comparison between all young enterprises and old enterprises.



Figure 6.4b

Time taken for environment and labour approvals

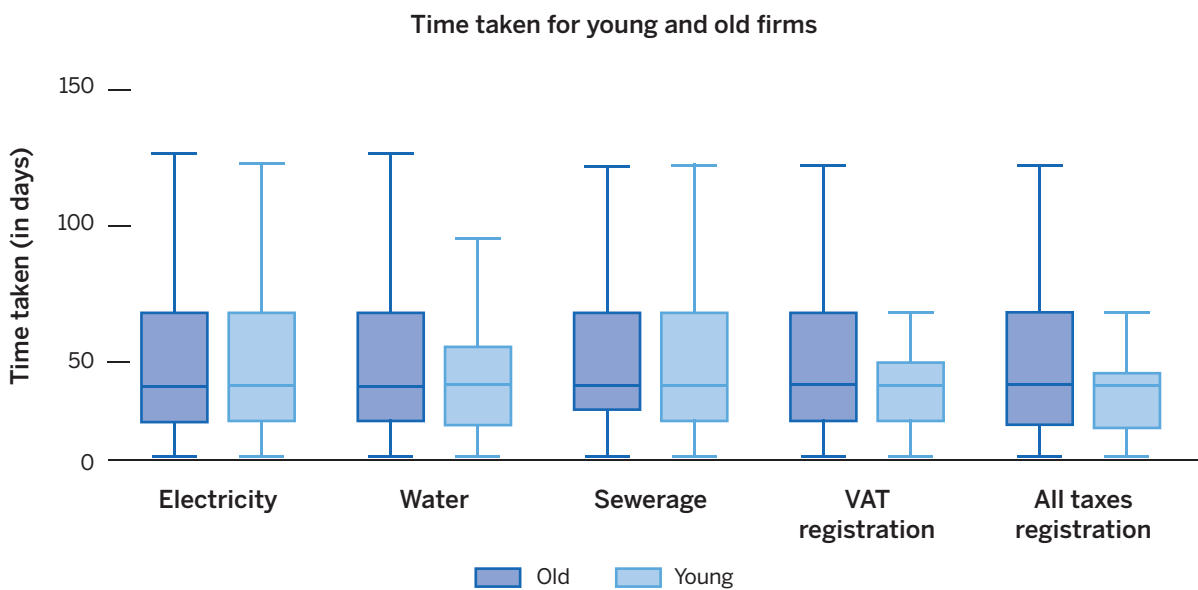


Excludes outside values



Figure 6.4c

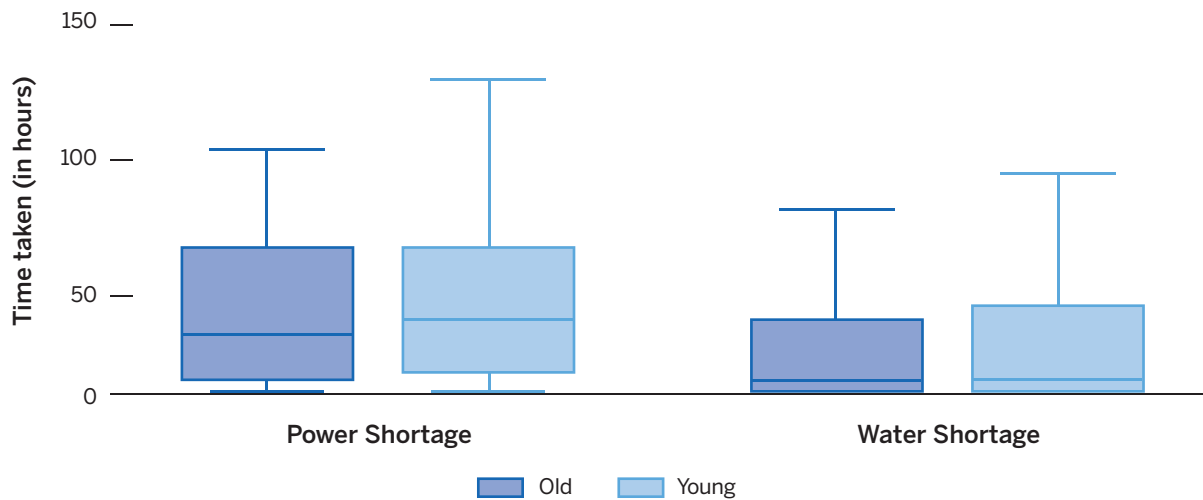
Time taken for infrastructure and taxes



Excludes outside values



Figure 6.4d
Hours of power and water shortage



Excludes outside values

6.2. Obstacles

In this section, we compare the situation of young firms and old firms in terms of the severity of obstacles they faced while getting necessary approvals. Figure 6.5 provides the share of young firms and old firms reporting different degrees of obstacles that they faced.

In all areas of doing business, the share of young firms reporting that they faced no obstacles for getting approvals is nearly the same as the share of old firms reporting that they faced no obstacles. The share of firms reporting that they faced very severe obstacles in getting approvals was the lowest for both young and old firms.

Overall, young enterprises are less likely than their older counterparts to cite most issues as being major or very severe barriers. Environment is the exception. In particular, young enterprises are:

- 15.6% less likely to report setting up a business to be a major or very severe obstacle compared to old enterprises
- 21% less likely to report land and construction to be a major or very severe obstacle compared to old enterprises

- 14% less likely to report labour to be a major or very severe obstacle compared to old enterprises
- 29% less likely to report water and sanitation as being a major or very severe obstacle and 8.5% less likely to report electricity being a major or very obstacle compared to old enterprises
- 21% less likely to report taxes as being a major or very obstacle compared to old enterprises
- 7.22% more likely to report environment to be a major or very severe obstacle compared to old enterprises.

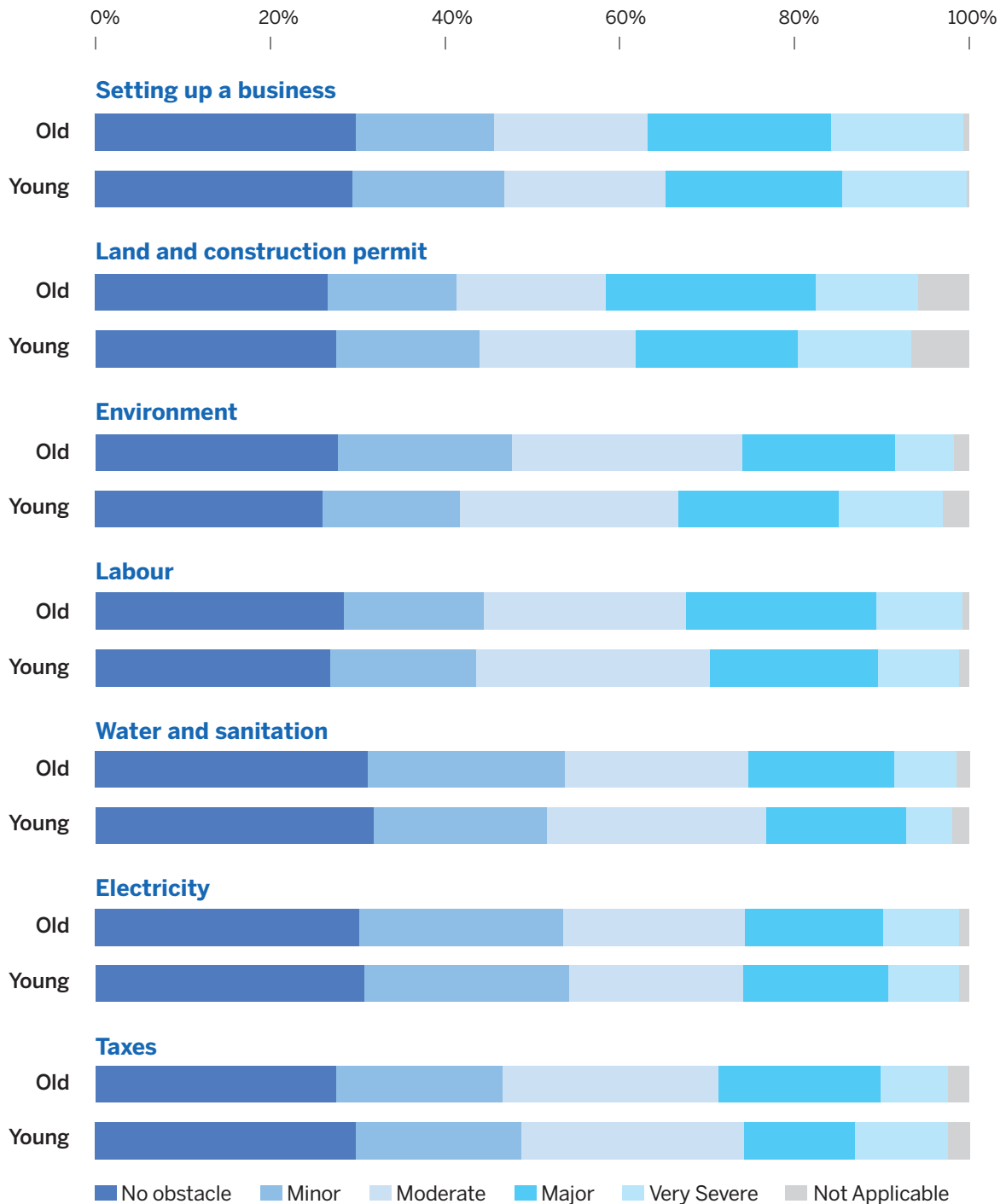
Table A9 in Appendix compares young and old enterprises in areas of doing business to be a major or very severe obstacle.

The young firms in this study are largely concentrated in five states of Andhra Pradesh, Telangana, Maharashtra, Tamil Nadu, and Gujarat. Very few young firms belong to high-value manufacturing sectors or high-skill high technology sectors (with the exception of pharmaceuticals). Many are small in size. Young firms paint a more favourable picture of the business regulatory environment than older ones. This suggests improvement over time.



Figure 6.5

Share of young firms and old firms reporting obstacles for all areas of doing business



Chapter 7. Responses in Labour- versus Capital-Intensive and More versus Less Power-Intensive Sectors

This chapter compares the business regulatory environment that enterprises in labour-intensive and power-intensive sectors respectively face as against capital-intensive and non-power-intensive sectors, respectively. The motivation for the analysis is the hypothesis whereby labour regulations impact labour- and capital-intensive sectors asymmetrically. In a similar vein, it is hypothesised that regulations relating to the availability of power impact more and less power-intensive sectors asymmetrically. Regulations and cost and quality of power are important factors affecting manufacturing productivity in India.

In addition, in view of the importance of job creation, there is significant policy interest in understanding the overall regulatory environment faced by labour-intensive firms. One of the key policy objectives of the country is to create greater formal sector jobs for its growing working population. However, the labour-intensive manufacturing sectors have not performed to their full potential compared with their capital-intensive counterparts in India. The analysis below will indicate what regulatory outcomes could potentially be affecting the growth of labour-intensive sectors specifically.

7.1. Identifying labour- versus capital-intensive sectors

Das et al. (2009)¹⁹ and Gupta et al. (2007)²⁰ identify labour-intensive industries at 4 digit and 3 digit NIC 1998 sector classification codes, respectively.²¹ Das et al. identify labour-intensive industries as follows: “The average labour-intensity (L/K) [labour-to-capital] ratio for all industries taken together was found to be 0.26. All the industries with average labour-intensity ratio greater than 0.26 were considered as labour-intensive industries and all those industries with a ratio less than 0.26 were labelled capital intensive.” Gupta et al. do not specify the identification criteria for classifying labour-intensive industries. Using 2-digit NIC 2008 classification codes, we identify as labour-intensive those industries that are common to the lists identified by Das et al. and Gupta et al.²²

Figure 7.1 provides the list of labour-intensive manufacturing sectors along with the number of enterprises belonging to these sectors. A total of 12 manufacturing sectors consisting of 1,846 enterprises in our sample are identified as labour-intensive while the remaining are classified as capital-intensive. Among the capital-intensive sectors we include manufacture

¹⁹ Das, D.K., Wadhwa, D., & Kalitha, G. (2009). The Employment Potential of Labor Intensive Industries in India's Organized Manufacturing. Working Paper No. 236, *Indian Council for Research on International Economic Relations*. Available at: <http://icrier.org/pdf/WorkingPaper236.pdf> (accessed on 17 August 2017)

²⁰ Gupta, G., Hasan, R., & Kumar, U. (2007). What Constrains Indian Manufacturing?. Mimeo. Available at: http://www.isid.ac.in/~planning/seminar/papers/13_12_2007.pdf (accessed on 17 August 2017)

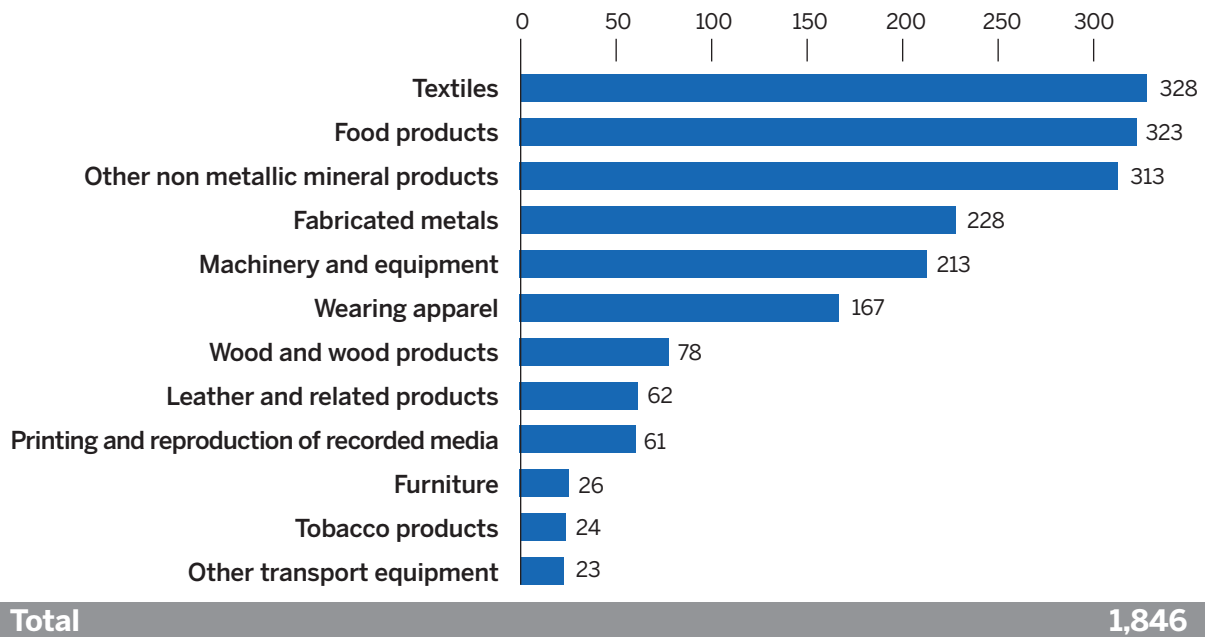
²¹ The corresponding NIC 2 digit classification to which the 4 digit and 3 digit NIC classifications belong have been identified as labour-intensive industry sectors.

²² There are 14 labour-intensive sectors based on 2 digit NIC codes identified by both Das et al. and Gupta et al. Of these, only 12 are common to both, that is, 2 industry sectors are classified as labour-intensive in one study but not the other. Manufacture of rubber and paper products are labour-intensive according to Das et al. but not according to Gupta et al. Manufacture of electrical equipment and medical precision and optical instruments are labour-intensive according to Gupta et al. but not according to Das et al.



Figure 7.1

Labour-intensive sectors



of basic metals, beverages, chemicals, coke and refined petroleum, computers and electronics, electrical equipment, motor vehicles, other manufacturing, paper, pharmaceuticals, and rubber and plastic. In all, there are 1,430 capital-intensive enterprises in our sample.

Tables A10 and A11 in Appendix further provide breakdown of the distribution of the labour-intensive enterprises by location and age. Most labour-intensive enterprises are concentrated in Tamil Nadu, Gujarat, Maharashtra, and Andhra Pradesh. The states of Bihar, Tamil Nadu, Punjab, Chhattisgarh, Andhra Pradesh, Haryana, Kerala, Gujarat, and North Eastern states tend to have the highest share of enterprises belonging to labour-intensive sectors. This is broadly along expected lines since these states have the largest manufacturing bases.

The distribution of enterprises by age shows that around 24% of labour-intensive enterprises are ten years old or younger.

We analyse the situation for doing business specifically for labour related approvals for enterprises in labour-intensive industries and compare it with enterprises in capital-intensive industries. We compare time taken and obstacles faced for getting various

approvals for labour-intensive sectors with other industry sectors.

7.1.1. Labour related approvals

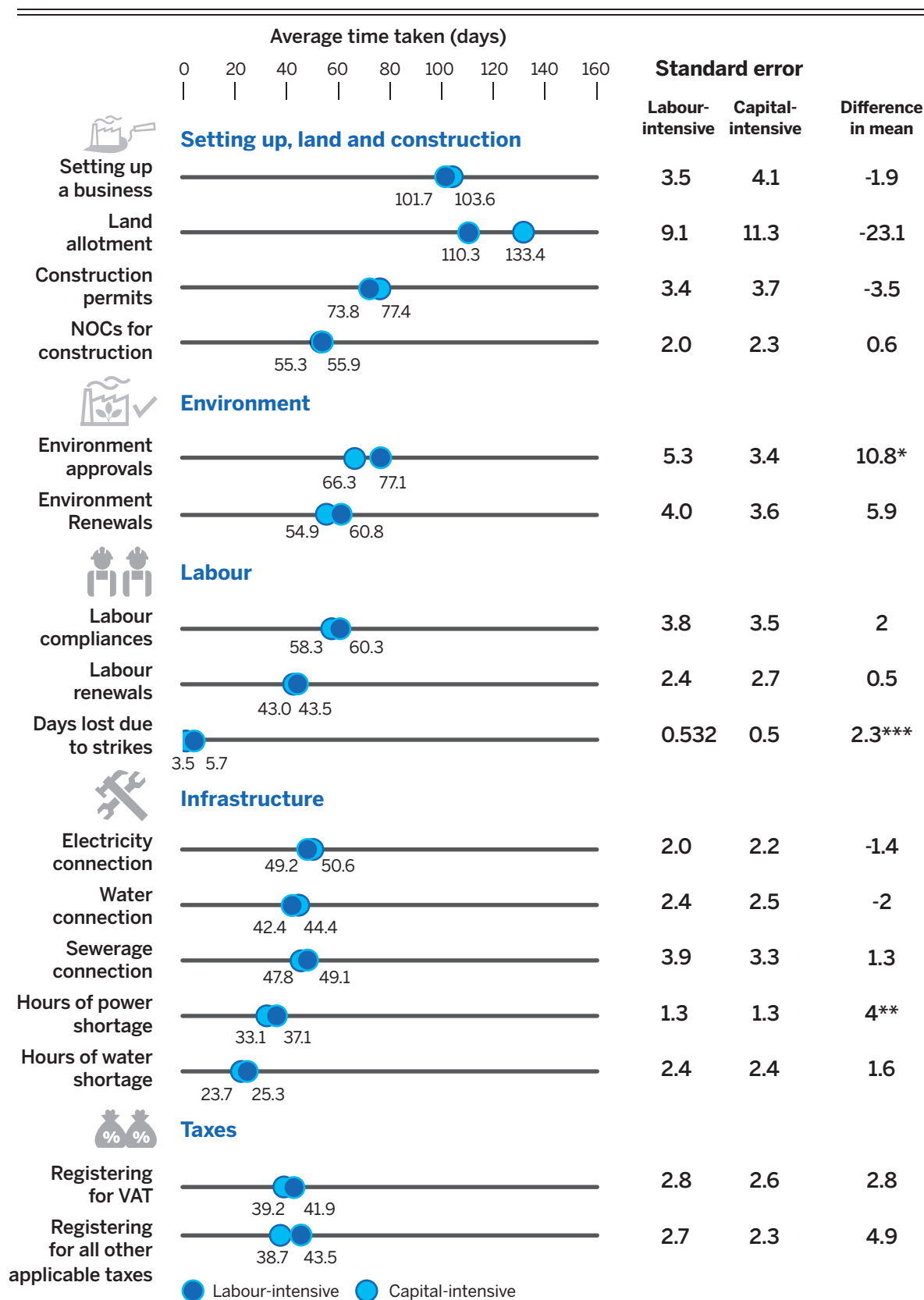
In order to simplify regulatory processes for getting approvals under various labour laws, state governments have implemented certain reforms, including introducing online processes and self-certification under different Acts. Labour-intensive firms would benefit from using these facilities in states where they have been implemented. For the various online processes related to labour approvals, we compare the situation of enterprises in labour-intensive sectors with capital-intensive sectors. In general, the share of labour-intensive firms reporting that they made use of online facilities for labour approvals was lower than the share of capital-intensive firms. At the same time, the constraints related to labour for enterprises in labour-intensive sectors are higher. Tables A12 and A13 in Appendix provide the results of these findings. In summary, enterprises in labour-intensive sectors are:

- 13.6% less likely to use self-certification under the Minimum Wages Act
- 12% less likely to use self-certification under the Payment of Wages Act
- 19% more likely to report that finding skilled work-



Figure 7.2

Time taken on average by enterprises in labour-intensive and capital-intensive sectors

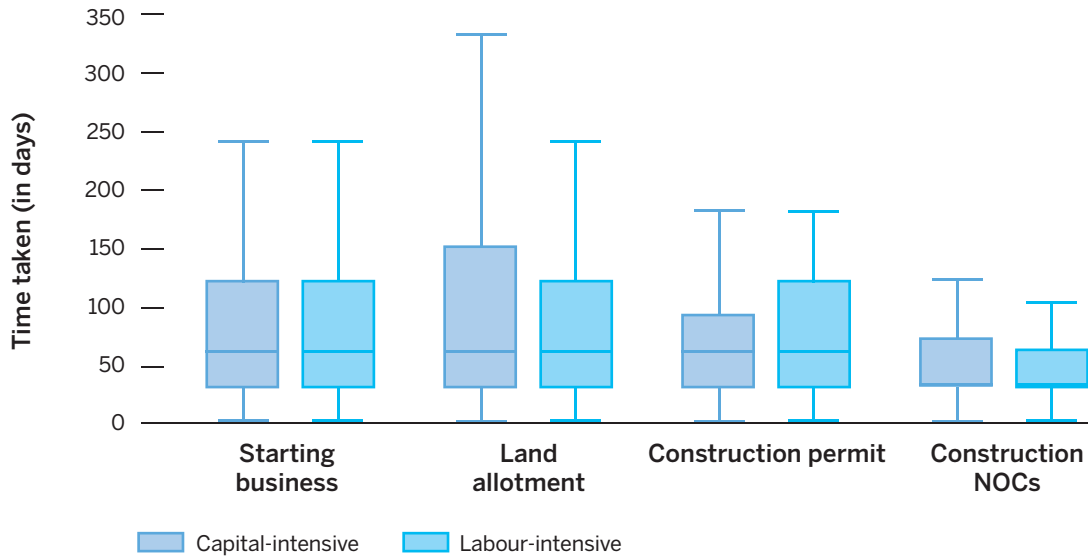


*** p<0.01, ** p<0.05, * p<0.1



Figure 7.3a

Time taken for setting up a business and getting land allotment and construction permits



Excludes outside values

force is a major or very severe obstacle to doing business

- 33% more likely to report that hiring contract labour is a major or very severe obstacle compared to enterprises in capital-intensive industries
- 14% more likely to report that terminating employees is a major or very severe obstacle as compared to enterprises in capital-intensive sectors.

7.1.2. Time taken for all approvals ²³

We compare the time taken to get necessary approvals and permits for enterprises in labour-intensive sectors with enterprises in capital-intensive sectors in all areas of doing business.

Figure 7.2 provides the average time taken for all approvals and the difference in the averages for enterprises in labour-intensive and capital-intensive sectors. The average number of days lost due to strikes is significantly higher for enterprises in labour-intensive sectors as compared to enterprises in capital-intensive sectors. Further, the time taken for getting environment related approvals and average number of

hours of power shortage in a typical month is significantly higher for labour-intensive enterprises compared to enterprises in capital-intensive sectors. For other regulatory processes, the difference between time taken in labour-intensive sectors and capital-intensive sectors is not significantly large.

Figures 7.3a to 7.3c show the distribution of the time taken for enterprises in labour-intensive and capital-intensive industries for getting different permits and approvals. Figure 7.3d shows the distribution of power shortage and water shortage for enterprises in labour- and capital-intensive sectors.

The distribution of time taken for starting a business and getting construction permits is similar for firms in labour-intensive and capital-intensive sectors (Figure 7.3a). The top 25% of all enterprises in capital-intensive sectors reported a higher time taken for getting land allotments and for getting all NOCs related to construction.

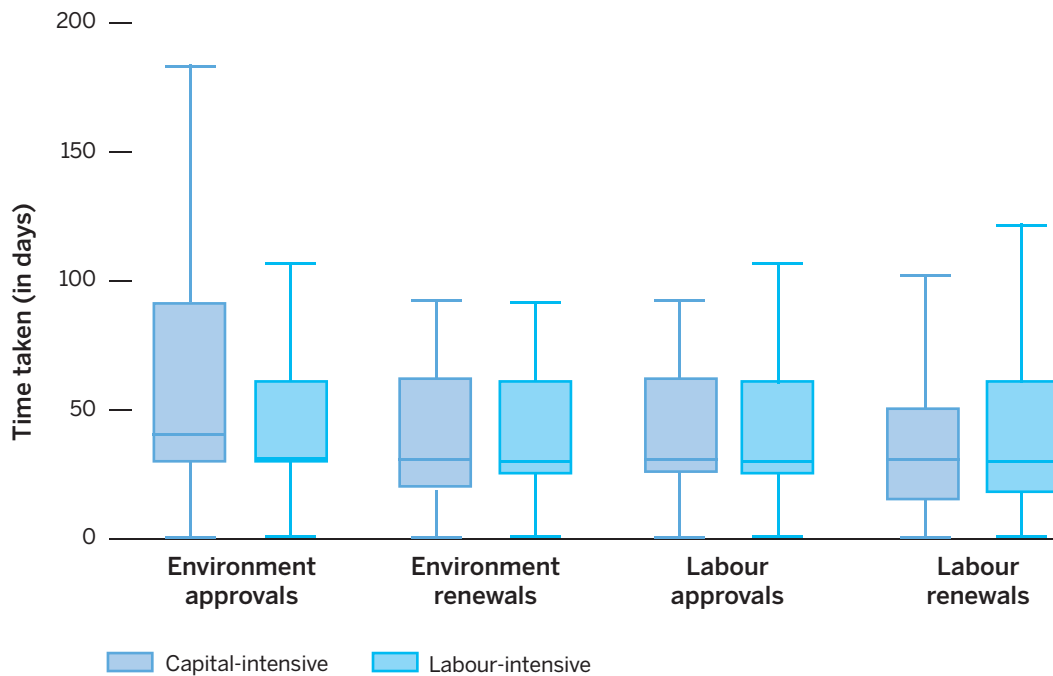
The top 25% of all enterprises in capital-intensive sectors reported a higher time taken for getting en-

²³ We use a trimmed distribution in order to eliminate outliers from the analysis. For this purpose, we consider all observations that lie outside 3 standard deviations to be outliers.



Figure 7.3b

Time taken for environment and labour



Excludes outside values

Environmental approvals compared to top 25% of all enterprises in labour-intensive sectors (Figure 7.3b).

The average time taken in Figure 7.2 was higher for labour-intensive enterprises compared to the others. However, the distribution indicates that a significant proportion of enterprises in capital-intensive enterprises took longer for these clearances.

The top 25% of all enterprises in labour-intensive sectors reported a higher time taken for getting labour approvals and renewals compared to top 25% of all enterprises in capital-intensive sectors.

The distribution of the time taken to get electricity, water, and sewerage connection is similar for labour-intensive and capital-intensive firms (Figure 7.3c). The top 25% of all enterprises in labour-intensive sectors reported a higher time taken for registering for paying VAT compared to top 25% of all enterprises in capital-intensive sectors

The distribution in terms of hours of power and water shortage is similar for enterprises in labour-intensive

and capital-intensive industries (Figure 7.3d).

7.1.3. Obstacles

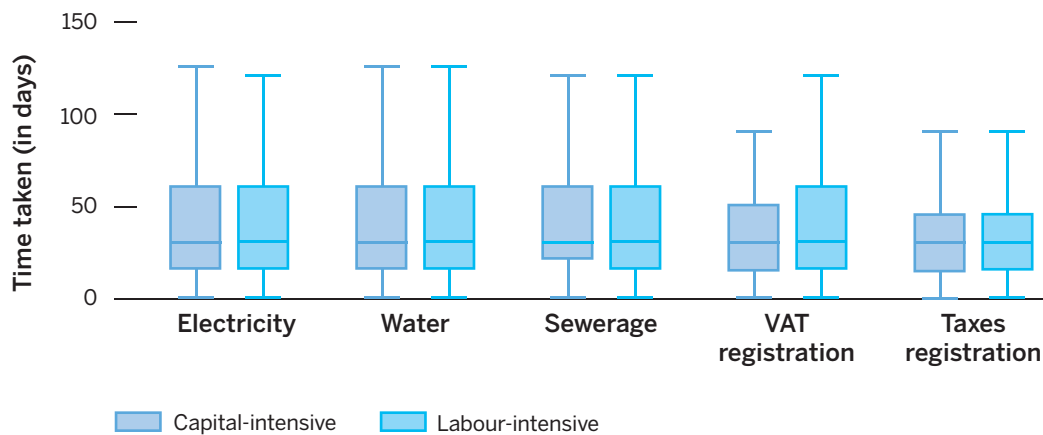
We examine whether the share of firms in labour-intensive sectors reporting that they faced major or very severe obstacles in getting different approvals was different to the corresponding share of firms in capital-intensive sectors.

In general across all categories, labour-intensive sector enterprises report relatively greater obstacles in comparison to the capital-intensive sector enterprises, except for water & sanitation and electricity related issues. As shown in Table A14, we find that enterprises in labour-intensive sectors are:

- 16% more likely to report that setting up a business is a major or very severe obstacle compared to other enterprises
- 12% more likely to report that land and construction related permits are a major or very severe obstacle compared to other enterprises



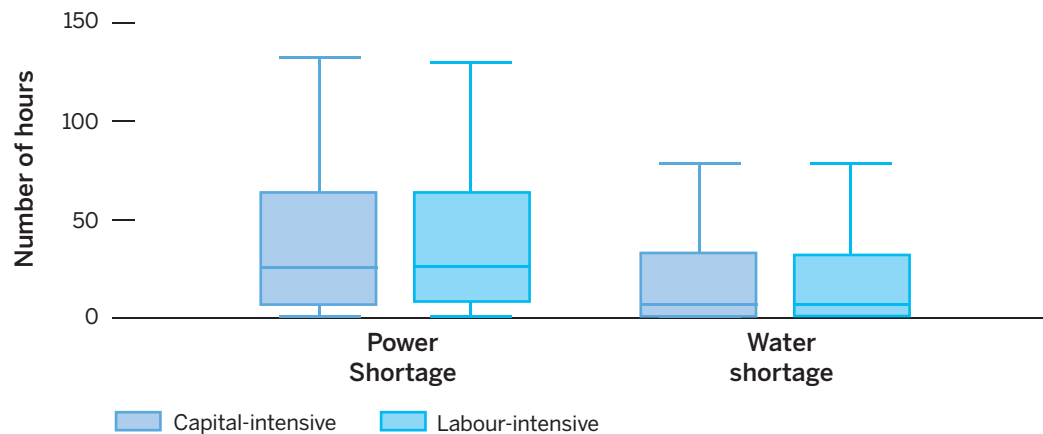
Figure 7.3c
Time taken for infrastructure and taxes



Excludes outside values



Figure 7.3d
Hours of power and water shortage



Excludes outside values

- 15% more likely to report that labour compliances are a major or very severe obstacle compared to other enterprises
- 12% more likely to report that tax related compliances are a major or very severe obstacle compared to other enterprises.

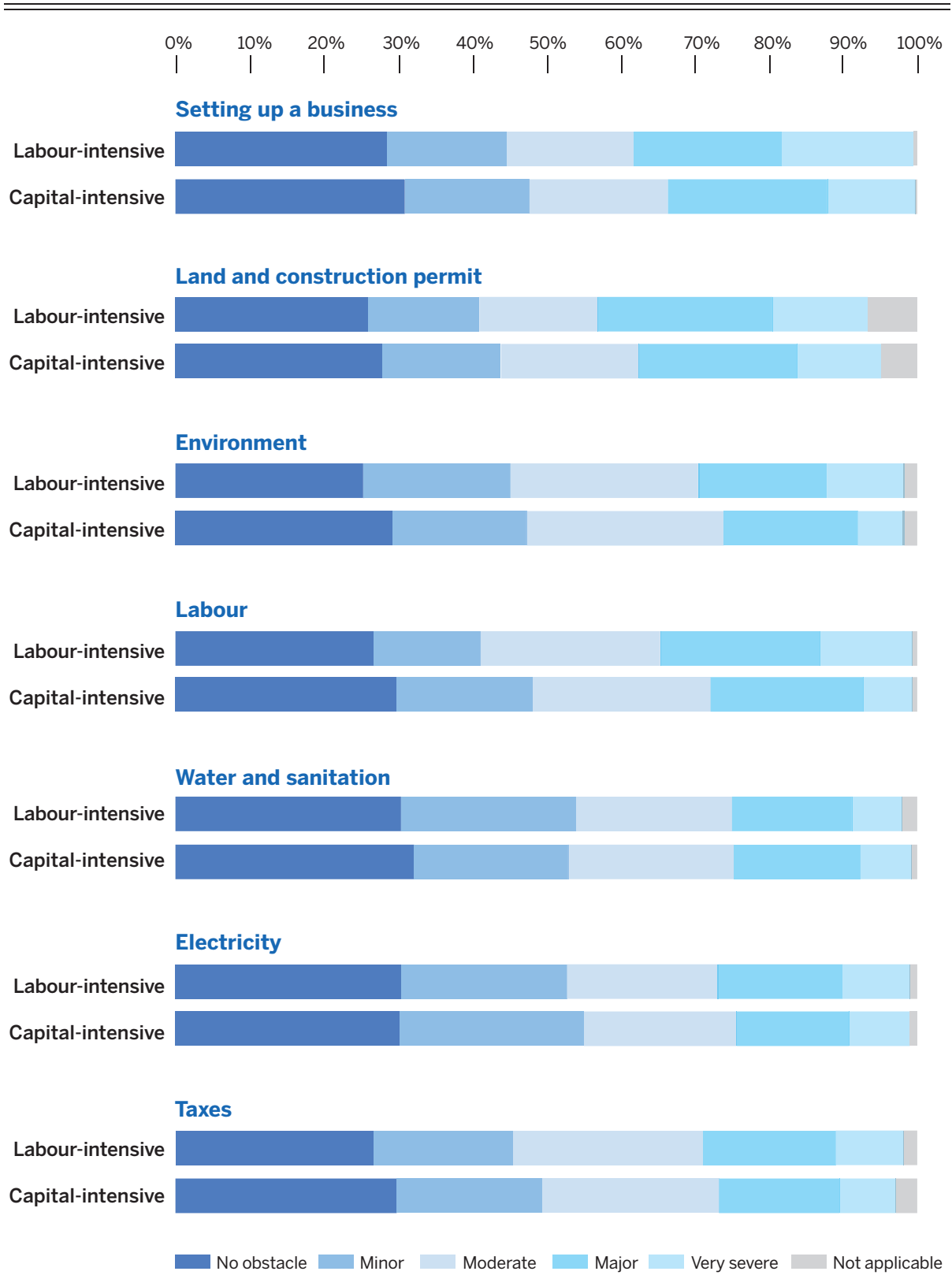
Considering the uptake of online processes, time taken to get various approvals, and obstacles faced together we can infer that labour-intensive firms are

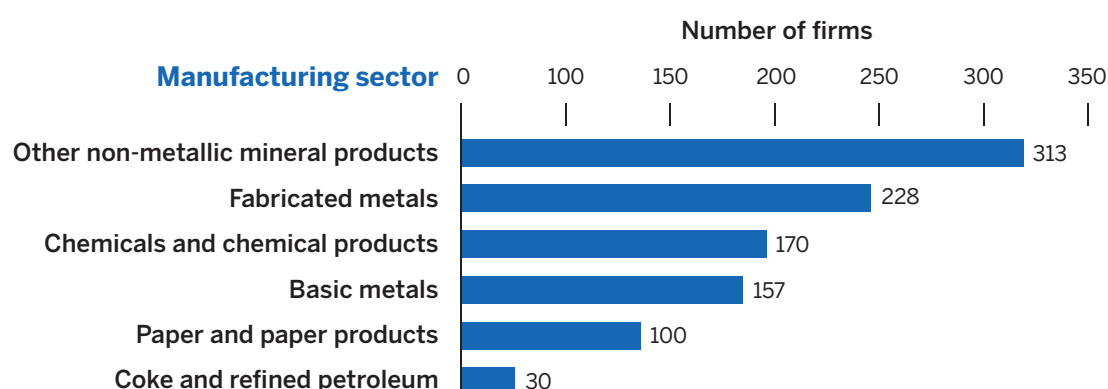
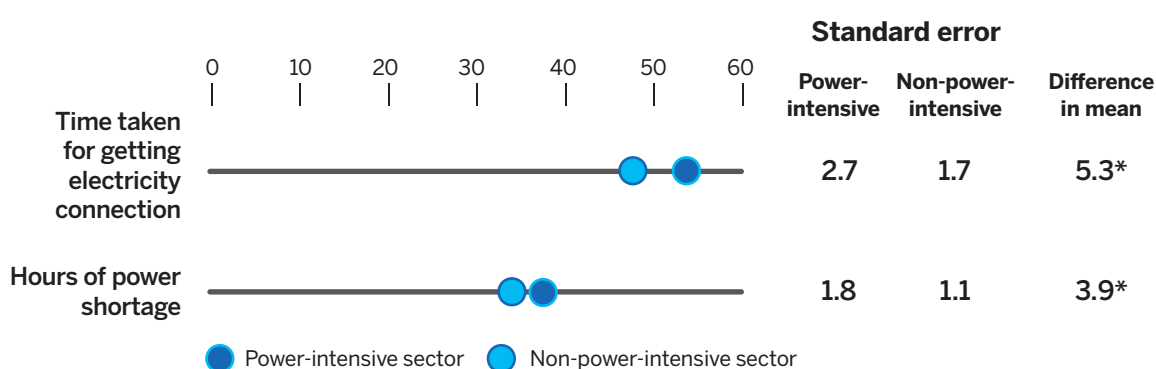
likely to experience a relatively unfavourable business regulatory environment, more particularly in specific relation to labour related regulatory issues. This will likely affect their productivity and may also preclude entry of new firms in labour-intensive manufacturing sectors. This also shows that improving outcomes on ease of doing business is likely to create a greater impact on the labour-intensive sectors that are likely to generate the maximum jobs in the country.



Figure 7.4

Share of firms reporting obstacles for all areas of doing business for firms in labour-intensive sectors and capital-intensive sectors



**Figure 7.5****List of power-intensive manufacturing sectors****Figure 7.6****Time taken for getting electricity and hours of power shortage per month**

* p<0.1

7.2. Comparing the situation for power-intensive and non-power-intensive sectors

A 2009 World Bank study²⁴ and a report by Sathaye et al (2010)²⁵ provide the classification of industries into power- and non-power-intensive industries. Figure 7.5 provides the list of manufacturing sectors that these studies identified as being power-intensive. There are 6 manufacturing sectors that classify as power-intensive comprising of 998 enterprises in our sample. The number of firms belonging to non-pow-

er-intensive sectors is 2,278.

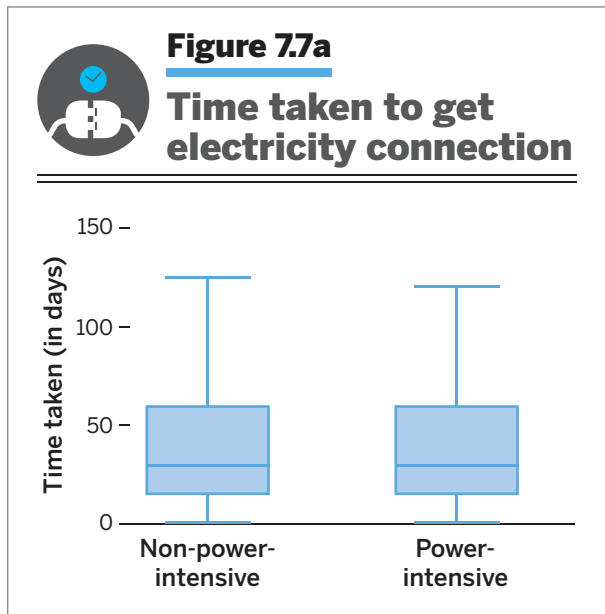
In the following section we compare the time taken for getting electricity connection, and hours power shortages faced by firms in power-intensive and non-power-intensive sectors.

7.2.1. Time taken for electricity connection and power shortages

Figure 7.6 provides the average time taken for getting electricity connection and hours of power shortage and the differences for enterprises in power-intensive

²⁴ World Bank (2009). India: Options for Low Carbon Development, Synopsis of a Study by the World Bank for Government of India.

²⁵ Sathaye, J., Rue du Can, S., Iyer, M., McNeil, M., Kramer, K. J., Roy, J., Roy, M., & Roy Chowdhury, S. (2010). Strategies for Low Carbon Growth In India: Industry and Non Residential Sectors, Ernest Orlando Lawrence Berkeley National Laboratory.

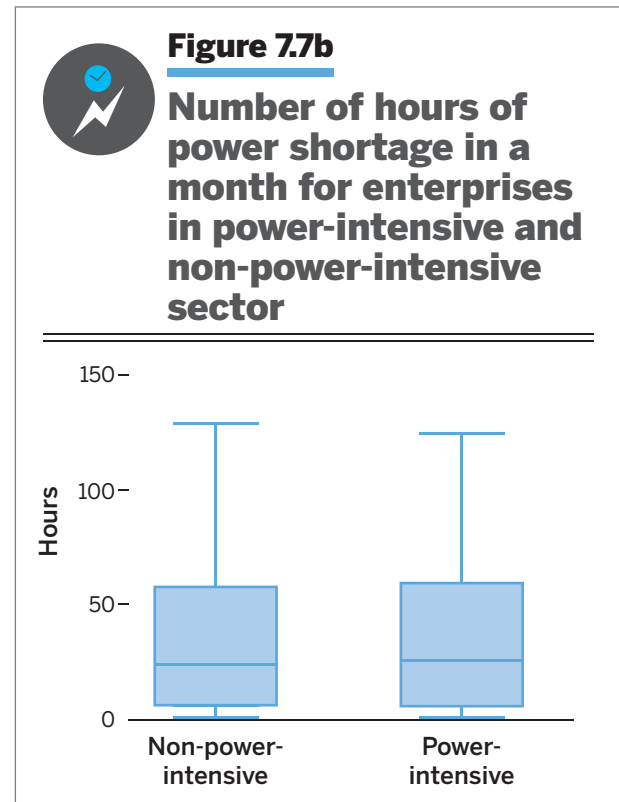


Excludes outside values

and non-power-intensive sectors. The average time taken for getting electricity connection is higher for enterprises in power-intensive sectors by an average of over five days and the hours of power shortage faced is significantly higher by an average of around four hours per month for enterprises in power-intensive industries.

Despite the above results, we do not find a large difference in the distribution of time taken and power shortages across power- and non-power-intensive sectors as shown in Figure 7.7a and Figure 7.7b.

We also do not find a large difference in enterprises



Excludes outside values

in power-intensive and non-power-intensive sectors reporting major or very severe obstacles for getting electricity. While 29% firms in power-intensive sectors reported not facing any obstacles for getting electricity, the share of firms in non-power-intensive sectors reporting the same was only marginally higher (31%).

Chapter 8. Responses in High-Growth versus Low-Growth States

This chapter investigates the link between the differences in business regulatory environments across states with the economic growth experienced by them in recent past. This is an important exercise since the states have been putting intense efforts into improving their business regulatory environment in the hope that the latter is associated with faster economic growth.

We divide our sample into enterprises operating in 'high-growth' states and 'low-growth' states. We find that the enterprises in high-growth states report fewer regulatory hurdles. This establishes an empirical link between superior regulatory environment and better economic performance. While our analysis is insufficient to establish a causal link flowing from better doing-business climate to higher growth, it does suggest the presence of a virtuous cycle with greater ease of doing business leading to higher growth and vice versa.

The classification of states is based on the following approach. We compute the average annual real growth rate for states using State GDP from 2004-05 to 2013-14. This is shown in Table A15 in Appendix. We then calculate the median average annual growth rate, which turns out to be 8.14%. The states that experienced annual average growth rate equal to or above the median are classified as high-growth states and those that have an annual growth rate below the

median are low-growth states.²⁶

The choice of the period for developing the classification of states into high- and low-growth states has been motivated by the assumption that it should be sufficiently long to ensure sustainability. We chose a ten-year period ending in 2013-14 since the uniform continuous GDP series ended with the latter year. An alternative scenario for classification based on the growth rates in 2012-13 and 2013-14 only is considered in Annexure 1.

A total of 2,066 enterprises are classified to be operating in high-growth states and Union Territories, and 1,210 enterprises in the sample were in low-growth states. Figure 8.1 (Page 58) shows the high and low-growth states along with the number of enterprises sampled in each state.

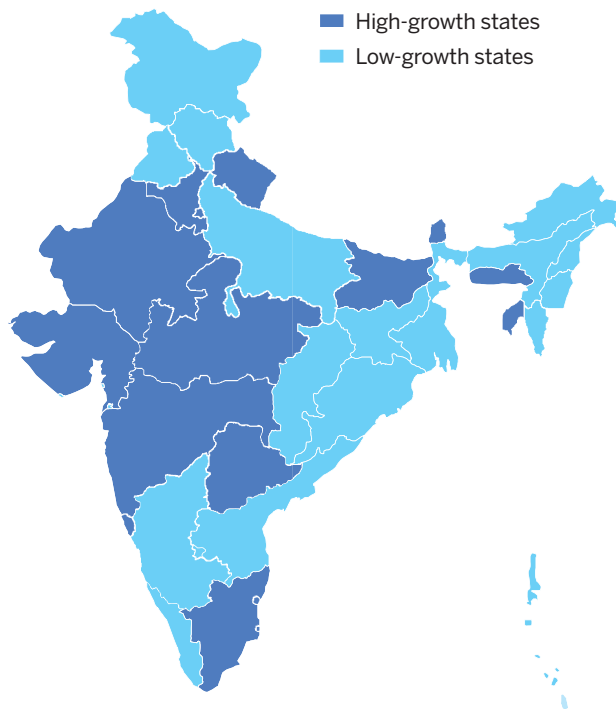
Tables A16 to A18 provide a breakdown of enterprises in high- and low-growth states by sector, age and class size. We observe that the enterprises in the high-growth states are fairly evenly distributed across all sectors so that there is no single dominant sector. The highest-share enterprises in high-growth states are in textiles (11%), food products (9%), other manufacturing, and other non-metallic minerals (both around 8%). While labour-intensive manufacturing is spread more or less evenly across high-growth and low-growth states, some skill- and technology-intensive sectors as well as high-value manufactur-

²⁶ Applying the 8.14% cut off, Bihar, Delhi, Goa, Gujarat, Haryana, Madhya Pradesh, Maharashtra, Meghalaya, Sikkim, Tamil Nadu, Telangana, Tripura, Uttarakhand and Union Territories are high-growth states. We take the average for Puducherry and Chandigarh to compute the growth rate for Union Territories.



Figure 8.1

High-growth and low-growth states



High-Growth states (2,066 enterprises)

State Name	Number of Enterprises in State	% of Enterprises in High-Growth States
Bihar	50	2.42
Delhi	69	3.34
Goa	30	1.45
Gujarat	365	17.67
Haryana	84	4.54
Madhya Pradesh	44	2.13
Maharashtra	405	19.6
Meghalaya	30	1.45
Rajasthan	140	6.78
Sikkim	27	1.31
Tamil Nadu	471	22.80
Telangana	223	10.79
Tripura	30	1.45
Union Territories	57	2.76
Uttarakhand	41	1.98
Total	2066	100

Low-Growth states (1,210 enterprises)

Andhra Pradesh (202)
Assam (46)
Chhattisgarh (34)
Himachal Pradesh (40)

Jammu and Kashmir (44)
Jharkhand (34)
Karnataka (159)
Kerala (89)

Manipur (30)
Nagaland (30)
Odisha (36)
Punjab (165)

Uttar Pradesh (185)
West Bengal (116)

ing sectors such as chemicals and pharmaceuticals are located more heavily in the high-growth states.²⁷ High-growth states account for 76% of all enterprises surveyed in leather industry, 75% of all enterprises in chemicals and computers and electronics, 73% of all enterprises in the manufacturing of pharmaceuticals, 72% of all enterprises surveyed in printing, and 70% of all enterprises in textiles and pharmaceuticals.

While it is difficult to establish a causal link between state specific policies and growth, high-growth enterprises have traditionally gained from favourable local policy environment. The distributions of enterprises described in the previous paragraph are important because there is a systematic difference in the nature of industries that are doing business in high-growth

versus low-growth states. Among the high-growth states, there is a significantly higher presence of computers, electronics and pharmaceuticals, which are high-growth sectors.

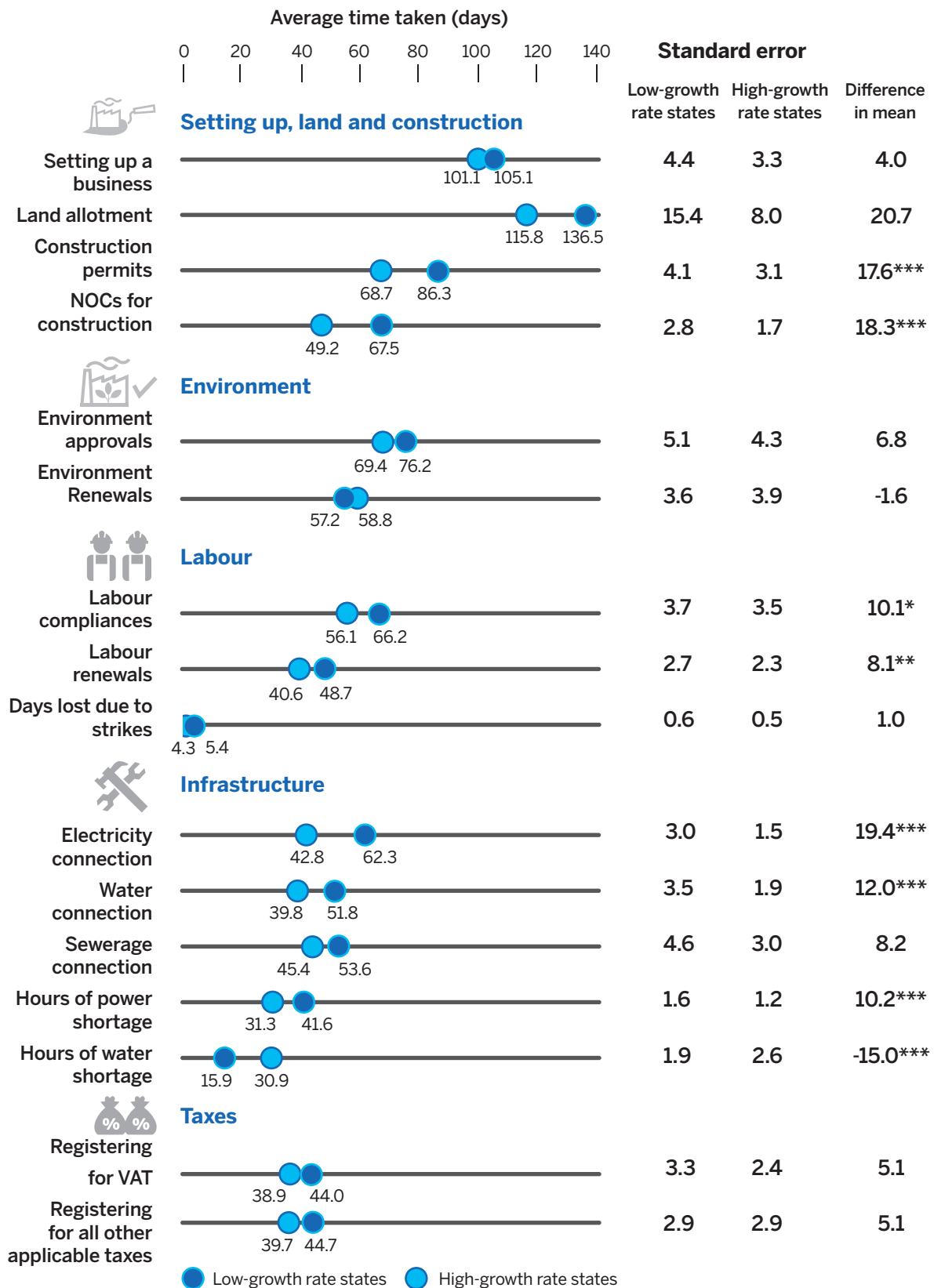
The age distribution of high-growth and low-growth enterprises shows that in general, the share of young enterprises is higher in the high-growth states than in the low-growth states. For instance, 26% of all enterprises in high-growth states are below the age of ten whereas 22% of all enterprises in low-growth states are below this age. While the share of enterprises in high-growth states in the overall sample is 59%, among enterprises less than two years and those between ages two and five years, the share is 77% and 69%, respectively. The preponderance of younger

²⁷ Kathuria et al. (2014) identify manufacture pharmaceuticals, chemicals, and plastic as "High Skill High Technology" and textiles, wearing apparel, pharmaceuticals, automotive components as High Value Manufacturing. (http://icrier.org/pdf/Working_Paper_285.pdf)



Figure 8.2

Average time taken for enterprises in high-growth and low-growth states

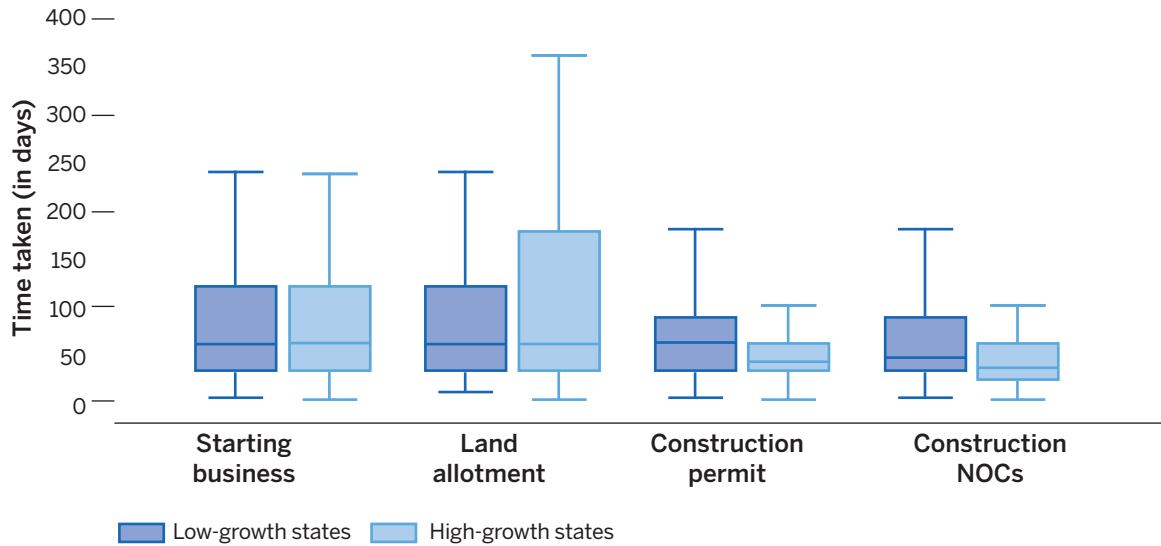


*** p<0.01, ** p<0.05, * p<0.1



Figure 8.3a

Time taken for setting up a business and getting land allotment and construction permits



Excludes outside values

firms in high-growth states could be due to regulations and processes being relatively easier in recent years for starting a business in these states.

Finally, we do not observe a large variation in the distribution of enterprises in both high-growth and low-growth states based on the number of employees. It is however noted that a majority of enterprises tend to have less than 49 employees regardless of whether they are located in a high- or low-growth state. This may be of interest with regards to the impact of India’s labour laws on the enterprise sizes in India. Only few laws are applicable to enterprises of all sizes such as the Minimum Wages Act of 1948. As far as legal registration of manufacturing firms is concerned, the employment threshold of ten is a major marking point in the sense that all those employing ten or more workers and using electric power (20 or more if power is not used) are required to register under the Factories Act of 1948.

We now compare the indicators for doing business environment for enterprises in high-growth versus low-growth states.

8.1. Time taken

Table A19 and Figure 8.2 (Page 59) shows the average time taken (days) for enterprises in low-growth states

and high-growth states for getting all approvals and the differences in their means. There are interesting patterns that reflect the differences in the environment of doing business in high-growth states versus low-growth states. Enterprises in high-growth states reported lower time taken on average for nearly all areas of doing business. The high-growth states:

- Took 18 fewer days on average to get construction permit compared to low-growth states
- Took 18 fewer days on average for getting all NOCs for construction
- Took 10 fewer days on average for getting labour approvals
- Took 8 fewer days on average for getting labour renewals
- Took 20 fewer days on average for getting electricity connection and 12 fewer days on average for getting water connection
- Reported 10 fewer hours of power shortage in a typical month compared with enterprises in low-growth states.

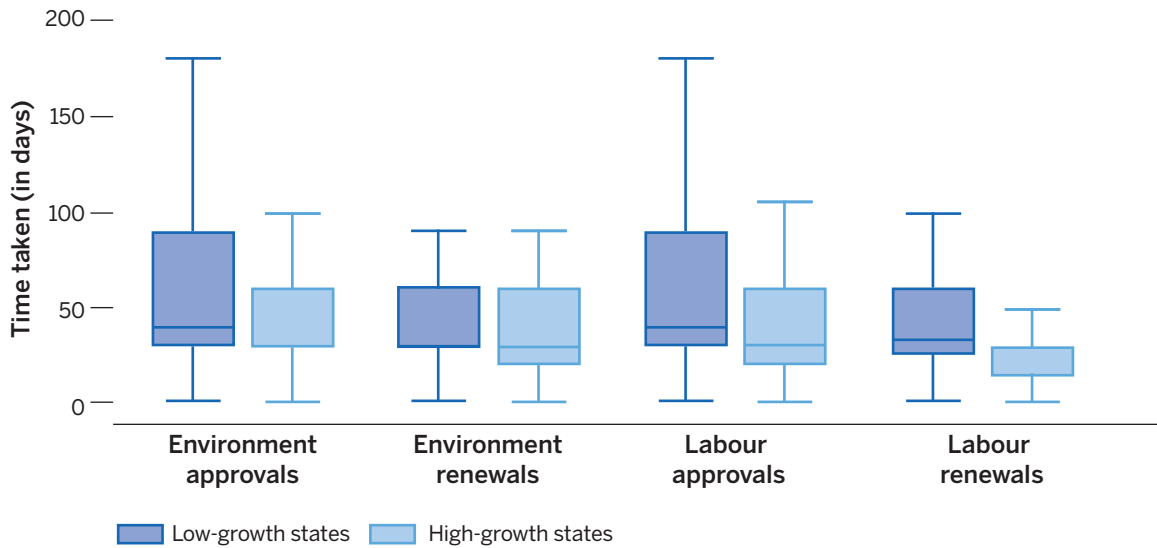
Only in one area do high-growth states perform worse: they are subject to 15 more hours of water shortage than low-growth states.

Figures 8.3a to 8.3c show the distribution of time taken for enterprises in low-growth and high-growth



Figure 8.3b

Time taken for environment and labour

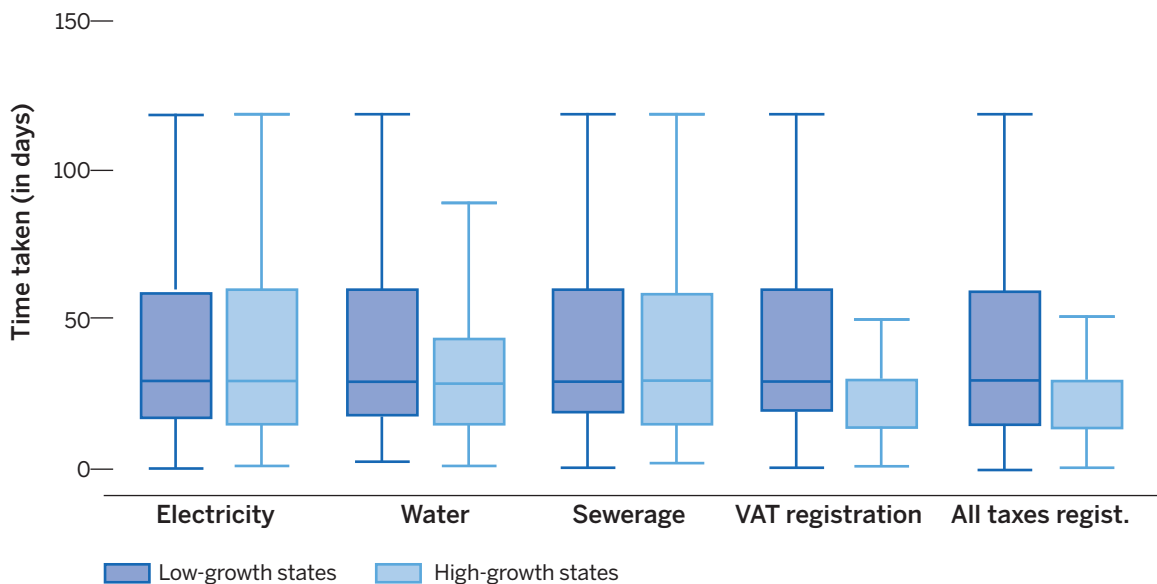


Excludes outside values



Figure 8.3c

Time taken for infrastructure and taxes



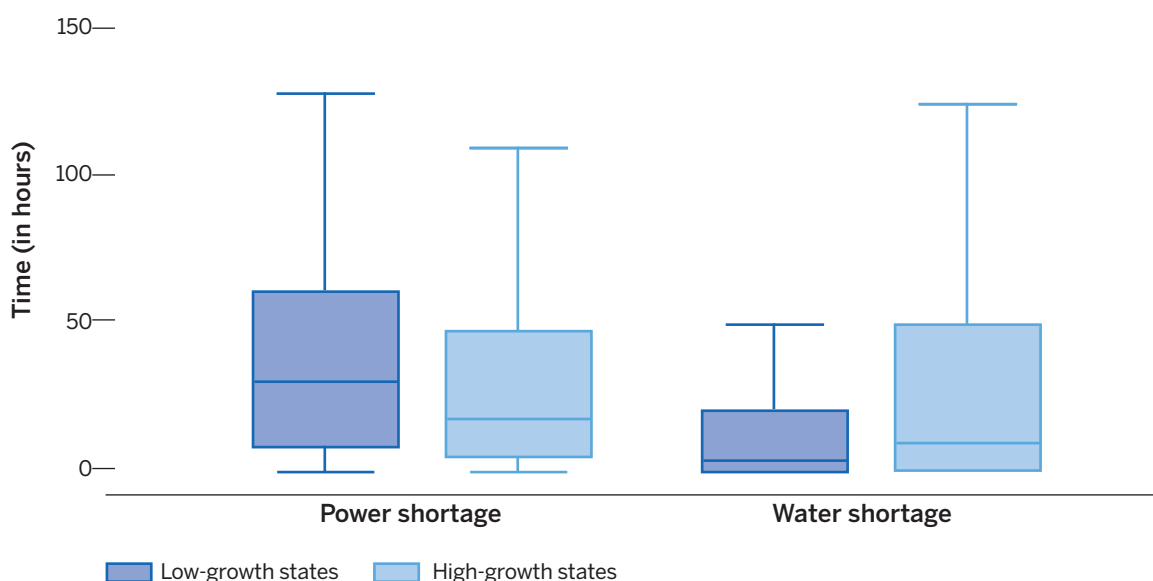
Excludes outside values

states for getting different permits and approvals. Figure 8.3d shows the distribution of power shortage and water shortage in hours for enterprises in labour- and capital-intensive sectors.

Although the distribution of enterprises in low-growth and high-growth states have similar medians for time taken to start a business and getting land allotment, the top 25% of enterprises in high-growth states



Figure 8.3d
Hours of power and water shortage



Excludes outside values

reported a much lower time taken in both activities than the top 25% of enterprises in low-growth states (Figure 8.3a, Page 60). For construction permits and all construction related approvals, the median time taken was lower for high-growth states and the top 25% of enterprises in low-growth states also reported a higher time taken compared to top 25% of enterprises in high-growth states.

The top 25% enterprises in low-growth states reported a much higher time taken for environmental approvals and labour approvals and renewals compared to top 25% of enterprises in high-growth states (Figure 8.3b, Page 61).

The distribution is similar for low-growth and high-growth states for time taken to get electricity and sewerage connection but for getting water connection, although both have a similar median, the top 25% of enterprises in low-growth states report a higher time taken compared to the top 25% of enterprises in high-growth states (Figure 8.3c, Page 61).

In case of time taken for registering for VAT and all other applicable taxes, we see that the distribution is very different for low-growth and high-growth states with top 25% of enterprises in the former reporting a much higher time taken compared to the top 25% of

enterprises in the latter.

The distributions of hours of power shortage for enterprises in low-growth and high-growth states show that the former has a higher median and top 25% of enterprises report a higher number of hours of shortage compared to the latter. However, the pattern is reversed in case of hours of water shortage (Figure 8.3d).

8.2. Costs higher than prescribed fees

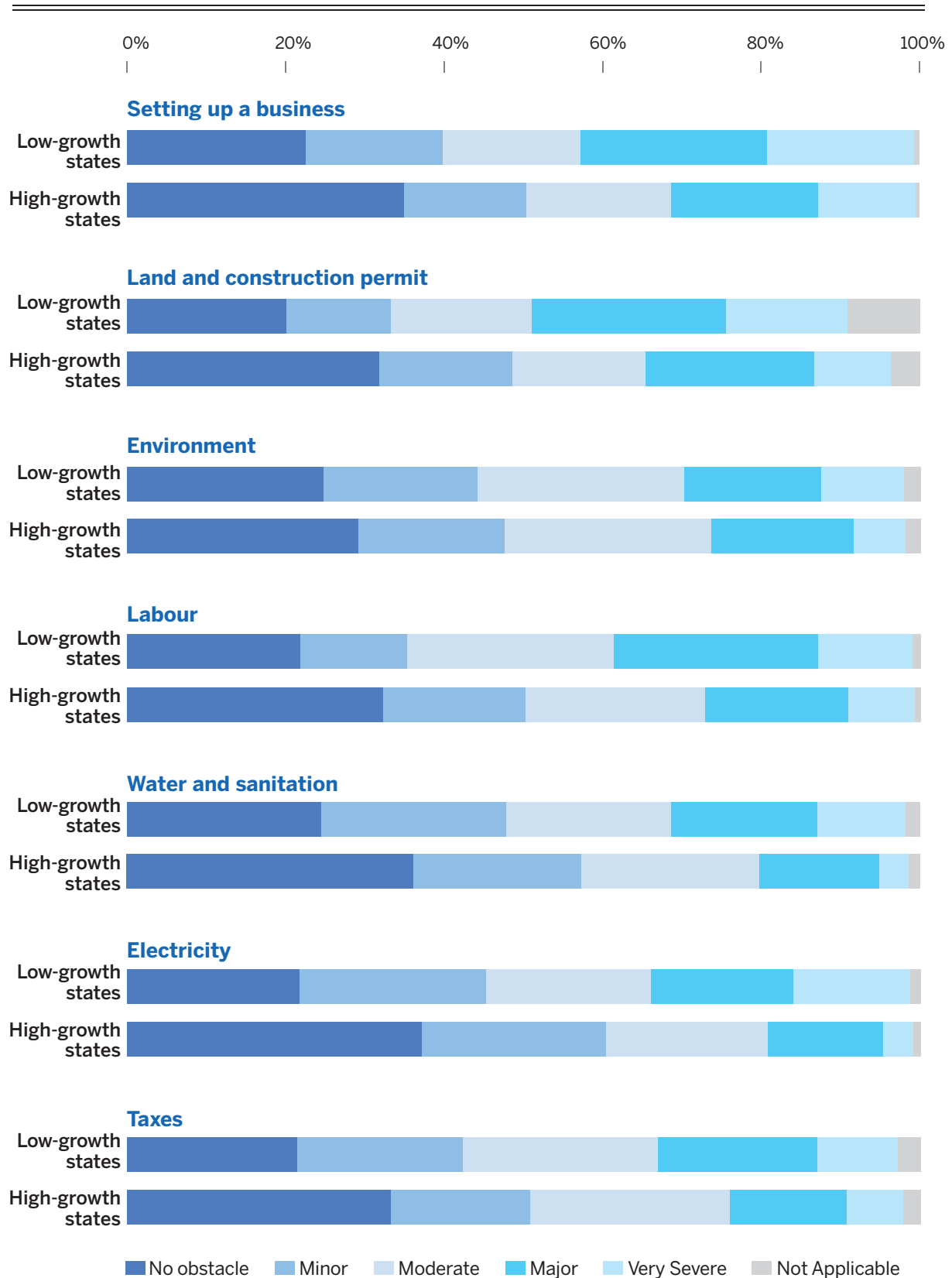
Table A20 reports the difference in enterprises reporting that the costs they incurred for getting approvals and compliances were higher than the fees prescribed for different areas of doing business for high-growth and low-growth states.

The results show that there is not a large difference in costs paid by enterprises in low- and high-growth states for most regulatory areas. In fact, for environment approvals and labour approvals, the enterprises in high-growth states are more likely to pay above the prescribed fees. We find that enterprises in high-growth states are:



Figure 8.4

Enterprises reporting obstacles for all areas of doing business for high- and low-growth states



- 15% more likely to report that the costs incurred were higher than prescribed fees for environment approvals as compared to enterprises in low-growth states
- 29% more likely to report that costs incurred were higher than prescribed fees for labour related approvals.

8.3. Obstacles in different areas of doing business

In this section, we report the severity of different obstacles faced by firms while getting the necessary approvals for low-growth and high-growth states. The results show unambiguously that the enterprises in high-growth states perceive fewer obstacles in all areas of doing business as compared to the low-growth states. The difference between the two categories is also very large. Figure 8.4 (Page 63) provides the share of firms in low-growth states and high-growth states reporting different degrees of obstacles that they faced, in each area of concern.

It is evident from the figure that the share of firms reporting that they did not face any obstacles for starting a business, getting land and construction permits, environmental approvals, labour related approvals, infrastructure, and for tax related processes was much higher in high-growth states compared to low-growth states. Also, the share of firms reporting that they faced major or very severe obstacles was higher in low-growth states compared to high-growth states.

From the data shown in Table A21, we find that high-growth states are:

- 31% less likely to report that setting up a business is a major or very severe obstacle compared to those in low-growth states.
- 24% less likely to report that land and construction related approvals are a major or very severe obstacle.
- 17% less likely to report that environmental approvals are a major or very severe obstacle compared to enterprises in low-growth states.
- 14% less likely to report that labour approvals are a major or very severe obstacle compared to enterprises in low-growth states.
- 30% less likely to report that water and sanitation are a major or very severe obstacle and nearly 61% less likely to report that electricity is a major or very severe obstacle compared to enterprises in low-growth states.
- 21% less likely to report taxes to be a major or very severe obstacle compared to those in low-growth states.

Looking at the duration of getting approvals and the experience and perceptions of firms in tandem, we can infer that those in high-growth states face a friendlier regulatory environment for doing business compared to those in low-growth states. This is along expected lines. It also means low-growth states need to make additional efforts to break out of the vicious cycle of low-growth and a less friendly regulatory environment for manufacturing firms. While the nature of data in our study does not allow us to connect the outcomes to specific state-level policy instruments, taken as a whole, the growth-business-environment link suggests significant gains from improving the ease of doing business.

Chapter 9. Enterprise Response and Employee Size Class

As noted in Chapter 1, Indian manufacturing is dominated by very small enterprises. Medium and large enterprises are relatively few. This has significant policy implications such as low average productivity and wages in the manufacturing sector.

The skewed distribution of enterprise size in the manufacturing sector could be linked to the differences in business regulatory environment faced by large and small enterprises. There is rich literature on Indian manufacturing that argues that regulatory hurdles have kept Indian firms artificially small. If large enterprises face an excessively harsh regulatory environment, then it creates an incentive for small enterprises to remain small.²⁸ It also deters entry of new large enterprises leaving a preponderance of small enterprises.

This reasoning suggests that larger enterprises would report facing more regulatory constraints in doing business compared to smaller enterprises. Some specific regulations could also be targeting larger enterprises disproportionately. Many labour regulations are only applicable to enterprises that have reached a certain threshold in terms of size. There is some evidence that such laws influence the enterprise size in the manufacturing sector. For instance, a study shows that states with flexible labour regulations in India had larger enterprises in labour-intensive sectors compared to states with

inflexible regulations.²⁹

Accordingly, in this Chapter, we investigate whether smaller enterprises have a different experience and perception of doing business compared to larger enterprises.

9.1. Time taken

In this sub-section, we report the time taken for getting various approvals and compliances for different areas of doing business based on the employee size class.

Table 9.1 (Page 66) shows the average time taken for getting various approvals for enterprises belonging to different employee size classes.

- Enterprises having more than 100 employees report the longest duration for setting up a business.
- The smallest enterprises in terms of number of employees reported taking on average the least amount of time for getting construction permits, and the largest enterprises reported the highest average time taken for getting land allotment.
- For environment related approvals and renewals, the time taken was the shortest for the enterprises belonging to the smallest size class whereas it was the longest for the enterprises having 100-199 employees.
- The average time taken for all labour related

²⁸ See Besley, T., & Burgess, R. (2004). Can labor regulation hinder economic performance? Evidence from India, *The Quarterly Journal of Economics*, 119(1), pp. 91-134; Hasan, R., & Jandoc, K. R. L. (2013). Labor Regulations and Firm Size Distribution in Indian Manufacturing. In J. Bhagwati and A. Panagariya (Eds.), *Reforms and Economic Transformation in India* (pp. 15-48), Oxford University Press: New York.

²⁹ Hasan, R., & Jandoc, K. R. L. (2013). Labor Regulations and Firm Size Distribution in Indian Manufacturing. In J. Bhagwati and A. Panagariya (Eds.), *Reforms and Economic Transformation in India* (pp. 15-48), Oxford University Press: New York.



Table 9.1

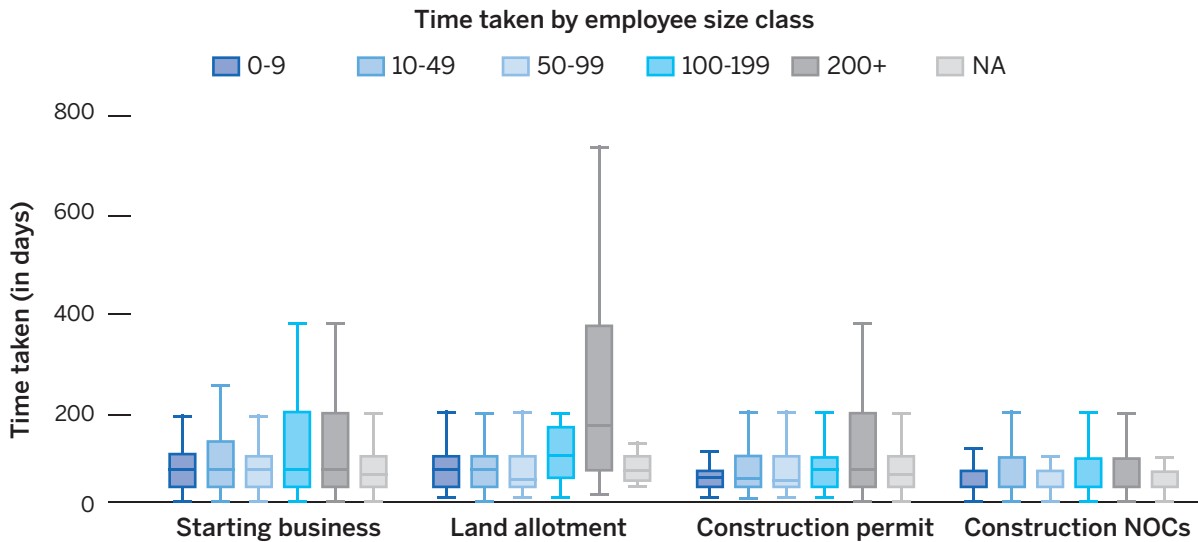
Average time taken for enterprises across employee size classes

	Average time taken (days)				
	0-9 employees	10 to 49 employees	50 to 99 employees	100 to 199 employees	200+ employees
Setting up, land and construction					
Setting up a business	84.8	103.6	83.3	138.4	125.9
Land allotment	108.5	107.0	81.1	115.4	209.6
Construction permits	68.3	75.0	82.5	92.3	72.2
NOCs for construction	50.2	58.5	53.6	57.5	58.7
Environment					
Environment approvals	63.9	69.3	64.4	99.6	58.8
Environment Renewals	45.0	59.0	55.8	76.6	58.4
Labour					
Labour compliances	46.9	59.1	61.9	100.7	66.3
Labour renewals	38.0	42.1	45.5	59.2	46.7
Days lost due to strikes	4.2	3.6	5.0	2.7	3.1
Infrastructure					
Electricity connection	46.0	45.4	52.8	50.5	49.1
Water connection	43.0	44.6	39.8	45.7	38.7
Sewerage connection	41.5	48.1	54.3	68.6	49.1
Hours of power shortage	40.3	38.8	37.5	37.9	29.1
Hours of water shortage	18.7	25.8	22.7	35.7	24.7
Taxes					
VAT registration	34.8	41.3	47.8	51.8	47.8
Registration for other applicable taxes	34.2	38.4	39.0	54.1	61.0
Standard error					
Setting up a business	4.7	4.1	6.4	15.7	14.3
Land allotment	23.6	12.5	12.6	18.9	29.7
Construction permits	5.0	3.9	10.4	12.9	7.5
NOCs for construction	2.9	2.5	5.5	5.6	6.3
Environment approvals	5.8	4.4	7.9	14.8	7.1
Environment Renewals	3.9	4.2	8.7	10.4	7.5
Labour compliances	4.3	3.6	7.0	19.8	8.8
Labour renewals	4.0	2.2	5.7	11.4	5.5
Days lost due to strikes	0.8	0.3	1.2	0.9	1.1
Electricity connection	2.9	2.0	3.6	5.4	5.7
Water connection	4.7	2.6	3.3	8.6	4.4
Sewerage connection	4.9	4.3	6.2	12.1	8.7
Hours of power shortage	2.8	1.5	3.0	3.8	2.9
Hours of water shortage	4.1	2.8	5.7	6.3	5.6
VAT registration	2.3	2.3	5.7	7.3	10.2
Registration for other applicable taxes	3.2	2.0	4.1	6.7	12.8



Figure 9.1a

Time taken for setting up a business and getting land allotment and construction permits



Excludes outside values



Figure 9.1b

Time taken for environment and labour approvals



Excludes outside values

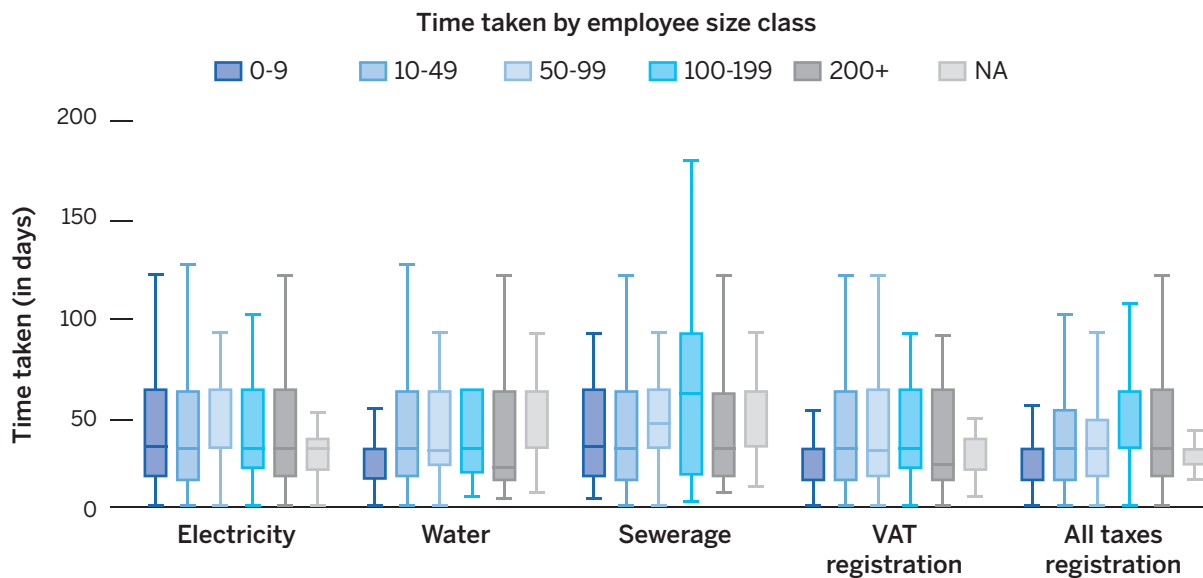
renewals and approvals was the shortest for the smallest enterprises at 47 days and 38 days respectively. Enterprises belonging to 100-199 size class reported the highest time taken for approvals and renewals.

- The average time taken for getting electricity connection did not vary much across size classes. With regard to the quality of infrastructure, the largest enterprises reported the lowest number of hours of power shortage whereas the smallest



Figure 9.1c

Time taken for infrastructure and taxes



Excludes outside values

enterprises reported the highest number of hours of power shortage.

- The time taken on average for registration of all other applicable taxes was the highest for enterprises with more than 200 employees. Enterprises belonging to 0-9 size class reported the shortest time taken.

Figures 9.1a to 9.1c show the distribution of the time taken for enterprises in different size classes for getting different permits and approvals. Figure 9.1d shows the distribution of hours of power shortage and water shortage for enterprises in different size classes.

Top 25% of enterprises having more than 100 employees reported a much higher time taken for setting up a business compared to top 25% of enterprises in smaller size classes.

Top 25% of enterprises having more than 200 employees report a much higher time taken for land allotment compared to top 25% of enterprises in other classes.

Top 25% of small and medium size enterprises (that is enterprises having 10 to 199 employees) report

taking more time for getting construction permits than top 25% of enterprises in other size classes.

For environment approvals, renewals and labour approvals, the top 25% of enterprises having 100-199 employees reported a significantly higher time taken than the top 25% of enterprises belonging to other size classes.

For getting electricity, top 25% of enterprises belonging to 0-9, 10-49, and 200+ size classes reported similar time taken.

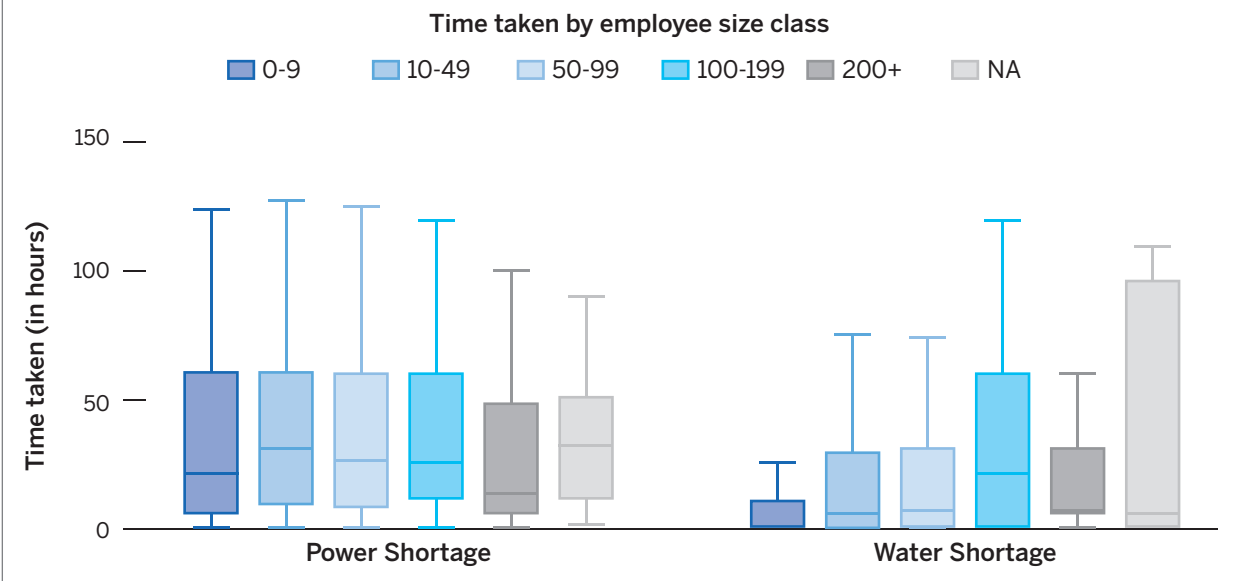
The distribution of enterprises reporting hours of power shortage was similar for enterprises across different size classes.

Overall, no definitive pattern emerges with respect to the relationship between enterprise size on the one hand and time taken in getting different permits and approvals and the length of power shortages on the other. It is somewhat surprising that even enterprises with 10-49 workers do not systematically report receiving faster approvals in areas such as environment and labour than their larger counterparts. On average, it is the enterprises between 100 to 199 workers that experience greatest delays in approvals and clearances.



Figure 9.1d

Hours of power and water shortage



Excludes outside values

9.2. Obstacles

In this section, we provide estimates regarding perceptions on how much of an impediment regulations pose while doing business based on employee size class. The results are not always uniform but there is indication that on average enterprises with greater employee size tend to perceive greater instances of hurdles in many regulatory areas. Figures 9.2a to 9.2g show the share of enterprises reporting whether different areas of doing business were not an obstacle, were a minor obstacle, moderate obstacle, major obstacle, or very severe obstacle. In addition, we report in Table A22 the difference in the likelihood of enterprises having 10 or more employees of reporting major or very severe obstacles to doing business compared to enterprises hiring less than 10 employees.

Regarding regulatory processes involving setting up a business, around 37% enterprises belonging to the smallest size category felt that these were not an obstacle, as compared to 21% in 50-99 category and 30% enterprises in the 200+ category (Figure 9.2a, Page 70). Around 31% enterprises in the largest size class stated that the regulatory processes constituted a major obstacle, as compared to only 16% enterprises in the 0-9 workers category. Table A22 in

the Appendix shows that as compared to enterprises having less than 10 employees, enterprises having 50-99 employees are 19% more likely to report that starting a business is a major or very severe obstacle, enterprises having 100-199 employees are 25.8% more likely to report that starting a business is a major or very severe obstacle, and enterprises having more than 200 employees are 37.6% more likely to report that setting up a business is a major or very severe obstacle.

Size class exhibits some link to perception with respect to land and construction approvals (Figure 9.2b, Page 70). Progressively larger firms are more likely to report major or very severe obstacles. While enterprises with less than 49 employees were most likely to perceive no obstacles pertaining to land and construction permits, enterprises with more than 50 employees were most likely to find it a major obstacle. Compared to enterprises having less than 10 employees, enterprises having 50-99 employees are 27.8% more likely to report that getting land and construction related permits is a major or very severe obstacle, enterprises hiring 100-199 employees are 32.9% more likely to report that getting land and construction permits is a major or very severe obstacle, and enterprises having more than 200 employees are 37.8% more likely to report



Figure 9.2a
Setting up a business

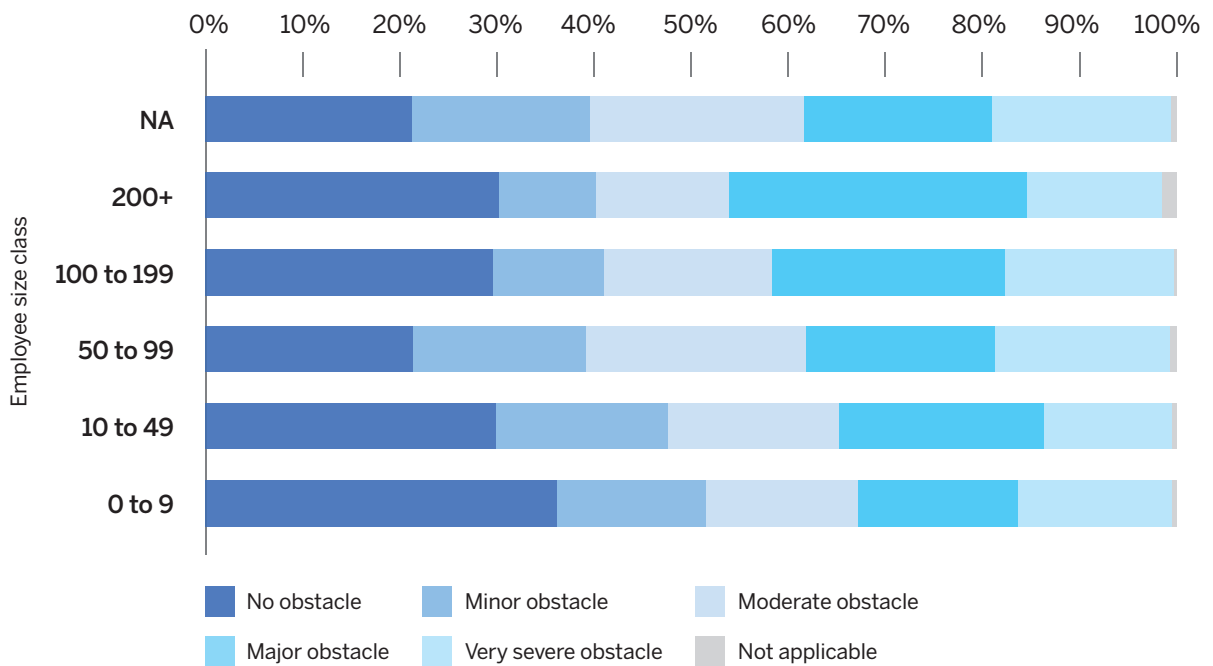


Figure 9.2b
Land and construction

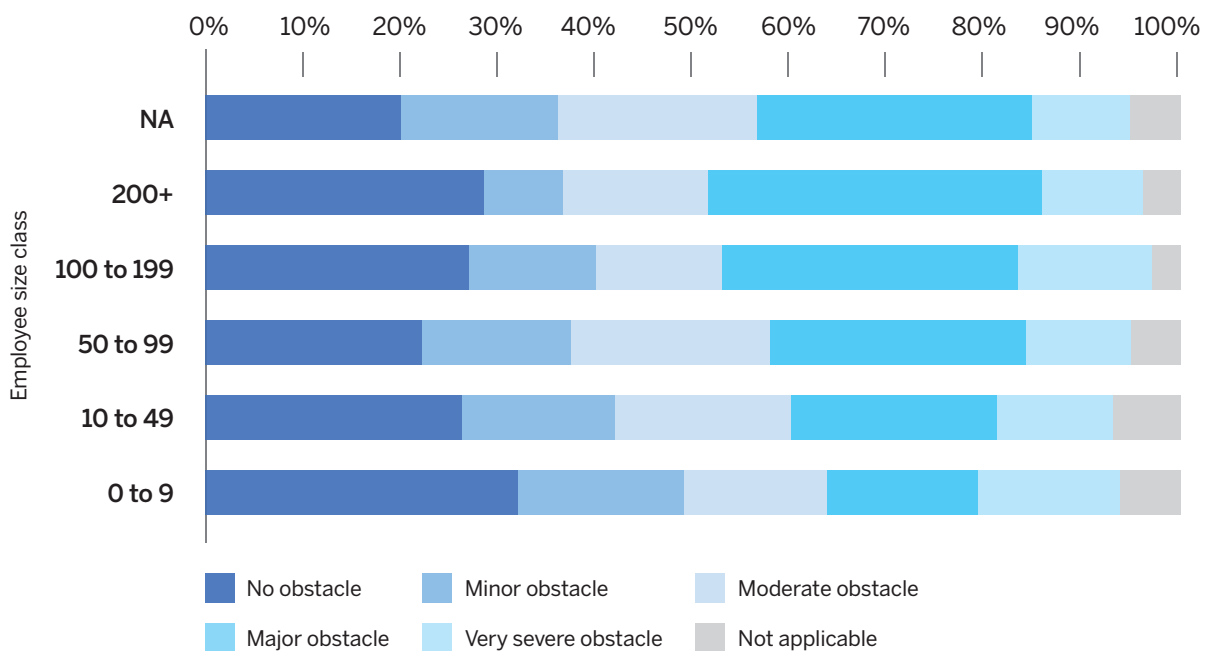
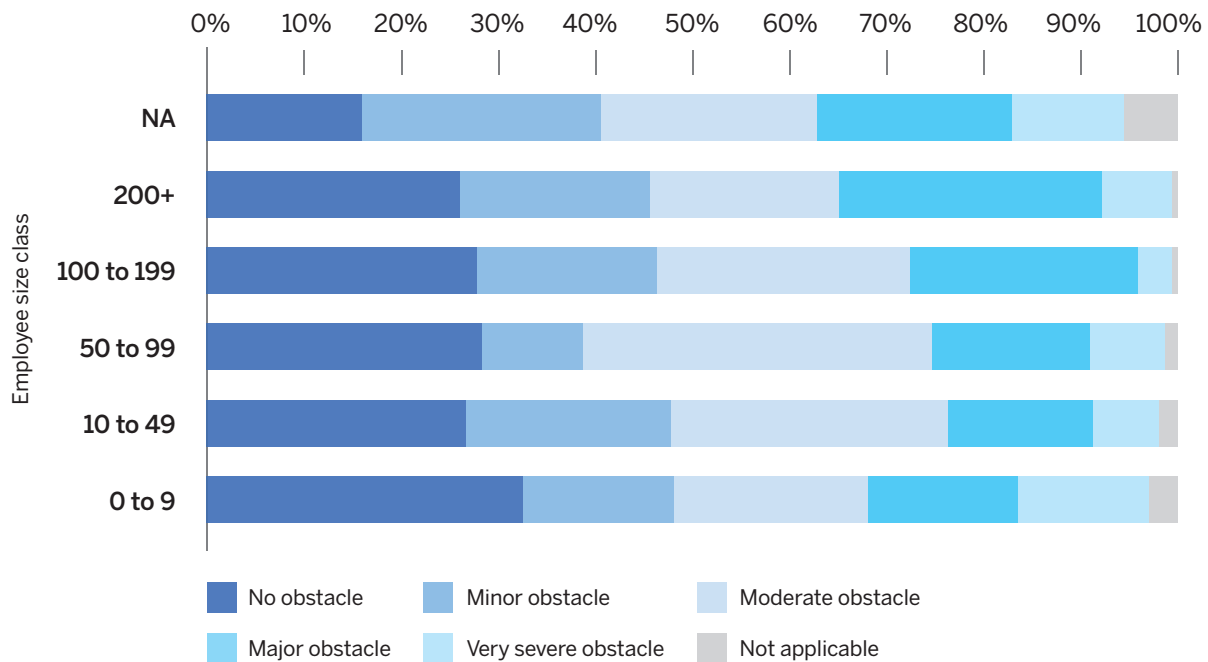




Figure 9.2c
Environment



that getting land and construction related permits is a major or very severe obstacle (Table A22).

The share of firms reporting that they faced major obstacles in getting environmental approvals increased with the size of firms (Figure 9.2c). For instance, about 15% of enterprises that had less than 10 employees felt that environmental clearances were a major obstacle whereas 27% of enterprises with more than 200 employees felt that it was a major obstacle. Compared to enterprises having less than 10 employees, enterprises having more than 200 employees are 55.8% more likely to report that getting environmental clearances is a major or very severe obstacle (Table A22).

The highest share of enterprises with fewer than 50 employees as well as enterprises with more than 99 employees reported that labour related regulations were not an obstacle for doing business (Figure 9.2d, Page 72). Compared to enterprises having less than 10 employees, enterprises having 10-49 employees are 16.4% more likely to report that labour related approvals are a major or very severe obstacle, enterprises having 50-99 employees are 33.8% more likely to report that labour related approvals are a

major or very severe obstacle, and enterprises having more than 200 employees are 43.7% more likely to report that labour related processes is a major or very severe obstacle (Table A22).

For getting water and sanitation, for all size classes barring 50-99 size class, the highest share of enterprises reported that regulations were not an obstacle (Figure 9.2e, Page 72). Compared to enterprises having less than 10 employees, enterprises having 50-99 employees are 30.4% more likely to report that getting water connection is a major or very severe obstacle, and enterprises having more than 200 employees are 26.9% more likely to report that getting water connection is a major or very severe obstacle (Table A22).

For getting electricity, there does not appear to be much difference in perception of obstacles for different size classes (Figure 9.2f, Page 73). The highest share of enterprises (approximately 30% to 40%) across all classes reported that regulations were not an obstacle.

Regulations pertaining to taxes were not an obstacle for nearly 35% enterprises with less than



Figure 9.2d
Labour

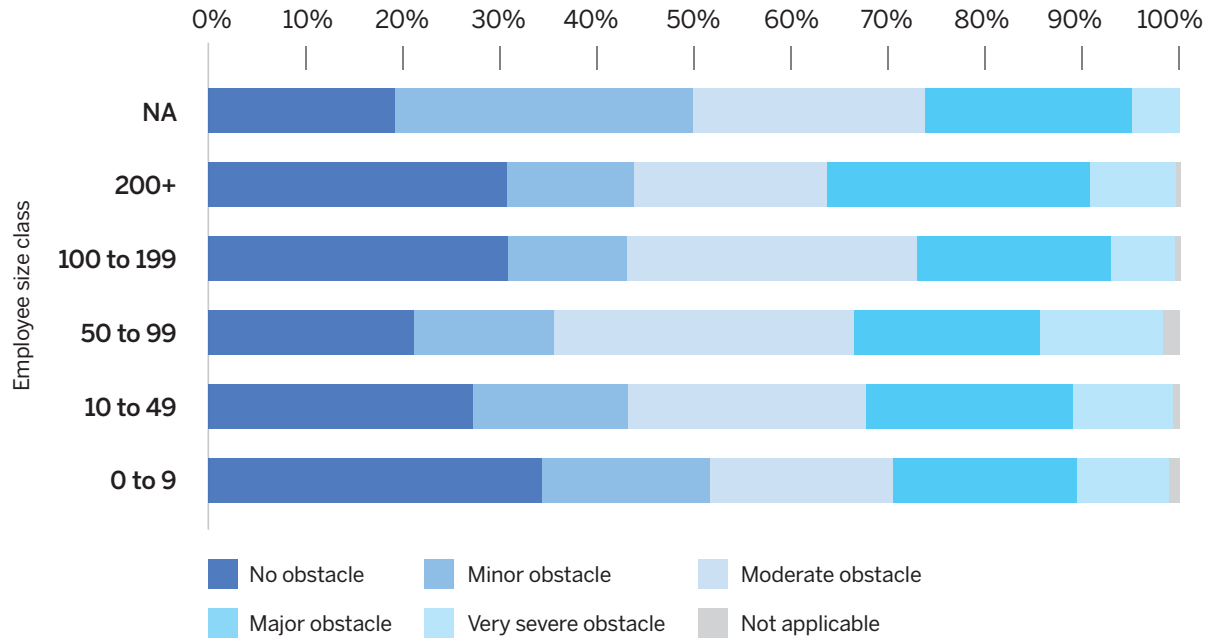


Figure 9.2e
Water and sanitation

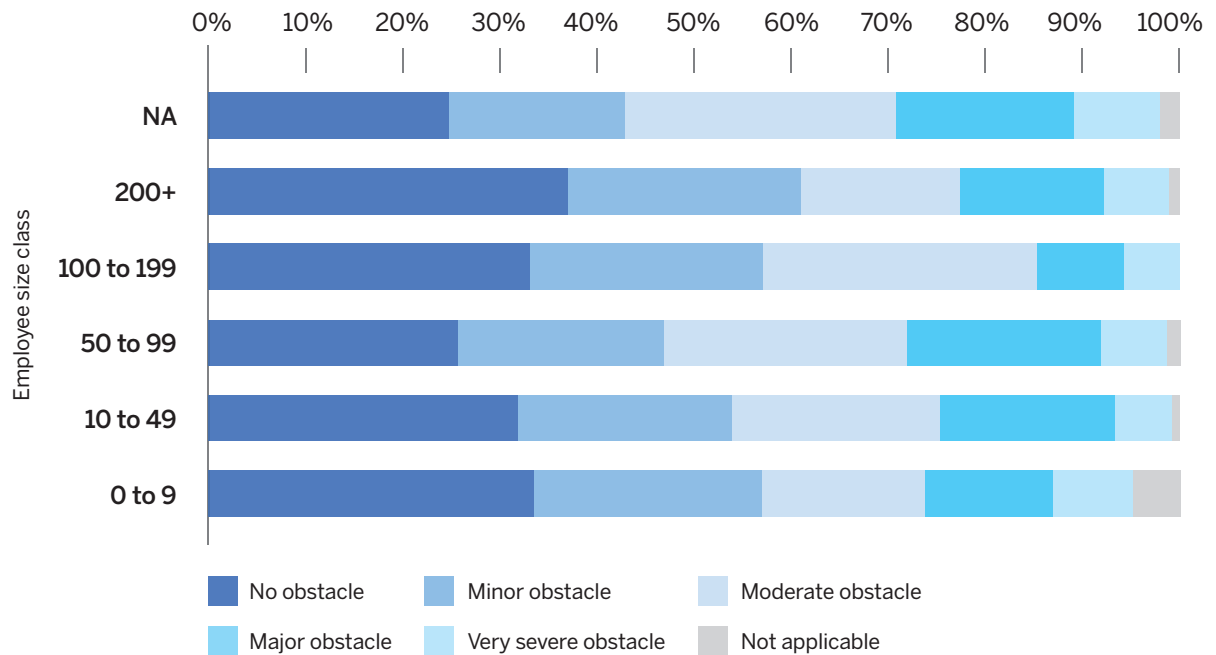




Figure 9.2f
Electricity

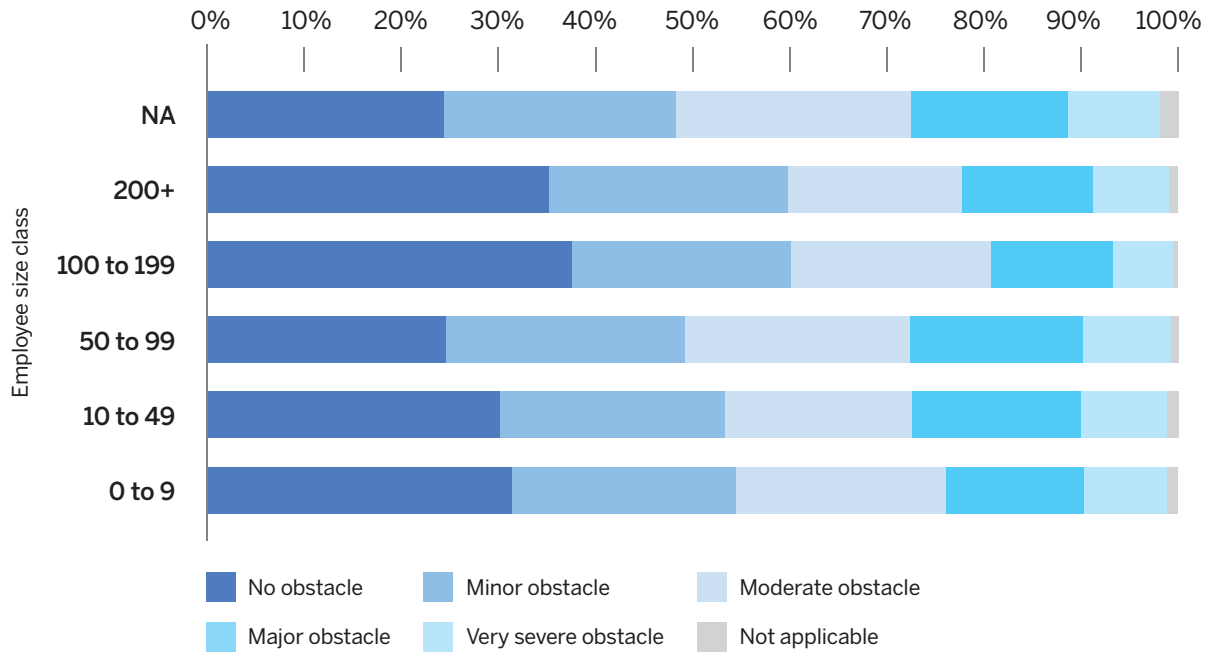
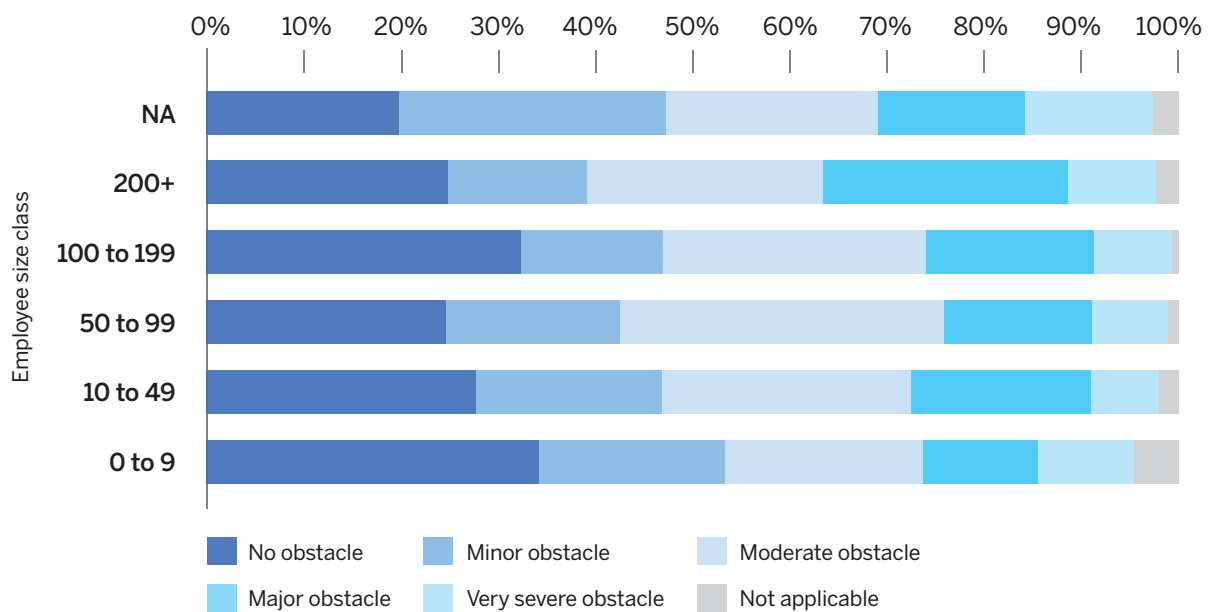


Figure 9.2g
Taxes



10 employees, 28% enterprises in size class 10-49, and 32% enterprises in size class 100-199 (Figure 9.2g, Page 73). These regulations constituted a major obstacle for around 25% enterprises having more than 200 employees. Compared to enterprises having less than 10 employees, enterprises having 10-49 employees are 15.4% more likely to report that tax related compliance is a major or very severe obstacle, enterprises having 100 to 199 employees are 25.9% more likely to report tax related compliances as a major or very severe obstacle, and enterprises having more than 200 employees are 53.6% more likely report that tax related compliance is a major or very severe obstacle (Table A22).

In summary, there is some evidence that the larger firms face more regulatory hurdles in doing

business in India though this evidence is not as strong as one would have expected from observing the preponderance of small firms. In the specific case of labour regulations, enterprises in 50-99 and 200+ employee size categories are much more likely to report major or severe obstacles compared to less than 10 employee size enterprises. But the obstacles for large firms could be related across other departments also. However, at least a few instances of larger firms reporting easier regulatory environment suggest that other factors could be at play, including the ability of larger firms to affect the regulatory environment in their own favour. Possibly, they are better able to muster resources necessary to obtain speedier clearances.

Chapter 10.

Recommendations for Future Reforms

In this report, we have reported the national-level findings of a survey of more than 3,000 enterprises we conducted to assess the ease of doing business. The survey questions asked enterprises to report factual information as well as their perceptions with respect to regulatory requirements in areas such as setting up business, environmental and labour regulations and electricity and water shortages. In most cases, the findings are as expected. One major exception is with respect to enterprise size: the hypothesis that small enterprises with less than 50 workers are subject to less regulatory delays in the grant of permits and clearances finds at best weak support.

Based on our results, several conclusions may be drawn with respect to future reforms. In the remainder of this chapter, we summarise these conclusions.

1. Greater Ease of Doing Business is Essential to Faster Growth:

In Chapter 8, we have found very strong association between greater ease of doing business and higher rates of growth. We divided the states into those that have experienced faster growth and those that have experienced slower growth during the decade spanning from 2004-05 to 2013-14. We found that fast-growing states systematically exhibited fewer delays in the grant of permits and clearances in various areas as also greater flexibility in the implementation of labour and environmental laws. While our analysis does not establish a causal relationship flowing from greater ease of doing business to faster growth, it does strongly suggest that growth and ease of doing business form a virtuous cycle such that one reinforces the other.

2. Enterprises Need to be Better Informed About Improvements in the

Ease of Doing Business:

Our survey findings point to vast gap between what the enterprises know and what the government officials say they have done to improve procedures relating to various permits and clearances. Enterprises are often unaware of the single window facilities for clearances and permissions that many states have created in recent years. For instance, among start-ups, which are of recent origin, only 20% report using single window systems for setting up a business. Even among experts, only 41% report having the knowledge of the existence of the facility. Information dissemination so that enterprises are aware of ways to ease the compliance burden of regulation, such as access to single clearance windows, can yield substantial gains in productivity at relatively low costs.

3. Enhance Flexibility of Labour Laws:

Reforming labour laws and achieving greater flexibility in their implementation can greatly help enhance the ease of doing business. Our survey findings greatly reinforce the existing body of research pointing to the need for a more flexible labour market. According to our survey findings, firms in labour-intensive sectors find compliance with labour-related regulations particularly onerous. This fact translates into enterprises avoiding the labour-intensive sectors. A larger number of firms in labour-intensive sectors report that finding skilled workers, hiring contract labour, and firing employees was a major obstacle. Labour-intensive firms also reported significantly higher average time taken for environmental approvals and more days lost due to strikes and lockouts. The fact that enterprises in labour-intensive sectors experience greater difficulty than those in capital-intensive sectors points to the need for further reform in this area. In addition, more flexible labour laws will also allow enterprises to grow larger and reap economies of scale, generating

productivity improvements, job creation, and higher growth.

4. Accelerate Power Sector Reforms:

Facilitating power sector reforms will help ensure that power-intensive enterprises have access to steady and uninterrupted power without undue delays or regulatory burdens. Our study shows that enterprises in high-growth states on average report monthly power shortages that are ten hours less than those reported by low-growth states. Further, enterprises in high-growth states are 60% less likely to report that electricity is a major or very severe obstacle compared to enterprises in low-growth rate states. Our results have also shown that power-intensive enterprises are most likely to be hobbled by access to power issues, and addressing this bottleneck will enhance efficiency, productivity, and job creation in crucial power-intensive sectors. Action on this aspect is very much under the domain of the states. As India is increasingly achieving a state of surplus power capacities, states have the opportunity to use this to their advantage for lowering the electricity costs and making electricity available faster and more reliably through opening up the electricity distribution sector for competition and improving the regulatory capacity in their states.

5. Facilitate Firm Entry and Exit:

We must reduce sclerosis in the structure of industry by encouraging the entry of new enterprises and expediting the timely and least costly exit for sick enterprises, which wish to exit. The research and our survey clearly indicate that greater dynamism in Indian industry, in the form of more churn among existing enterprises, will boost productivity, job creation, and boost economic growth in the medium-to-long term. For instance, our survey shows that younger firms take less time and incur lower costs in regulatory compliance than older firms. They are also to be found preponderantly in high-growth states. This suggests that, other things being equal, an increased pace of “creative destruction” which allows more rapid entry and exit should lead to an increase in productivity. The new bankruptcy code is an important start in improving the exit process; a comparable effort must be made to stimulate entry of new enterprises, which are often deterred from entering at all by the regulatory burden and compliance costs, and therefore do not figure in the survey at all.

6. Level playing field for small and large firms:

Although our survey does not show uniformly adverse regulatory environment for large firms (by employees), it does show that in many specific areas, larger firms are at a disadvantage compared to smaller firms. While administrative convenience and differences in capacity of firms to adhere to regulations imply that some differences would exist in regulations for larger firms vis-à-vis smaller ones, the regulations that place disproportionately large compliance burden on large firms in particular need to be addressed. The survey has shown that in several instances larger firms perceive greater regulatory obstacles compared to smaller firms despite them likely to have greater capacity to absorb the compliance costs. This state of affairs discourages smaller firms from growing larger.

7. Improving Access to Finance:

The survey shows about half of the enterprises do not borrow from financial institutions, and about a third consider (lack of) access to finance as a major or very severe obstacle for business in the country. There is a large variation in the experiences of enterprises in different states regarding the access to finance. This suggests that enhancing the access to low-cost capital to businesses could be an important vehicle to improve business environment, especially in poorer states such as Bihar.

Our survey strongly complements the findings of existing research: there is a significant and robust correlation between a favourable business regulatory environment and greater economic activity. The report clearly demonstrates that faster growing states have, for the most part, a more conducive business climate than slower growing states. These results should provide the impetus to press ahead with the economic reforms agenda.

Our report reinforces the existing evidence supporting the presence of a virtuous circle between a favourable business environment and greater economic activity, higher productivity, and creation of high-wage jobs. Therefore, India needs to reform with alacrity because the ability to do business, create wealth as a consequence, and redistribute in a sensible, well-designed manner remains the best way to give millions of Indians a chance for a better life and to make their way out of poverty.

APPENDIX

Appendix Tables

Tables A1 to A7

Relationship between time taken, obstacles and costs higher than prescribed

Table A1

Variables	Obstacle: Setting up a business
Time taken: Setting up a business	13.62** (5.839)
Costs higher than prescribed fees	0.171*** (0.0534)

Table A2

Variables	Obstacle: Land and construction
Time taken: Land allotment	85.80*** (14.80)
Time taken: Construction permit	-3.660 (5.431)
Time taken: All NOCs for construction	-8.173** (3.251)
Costs higher than prescribed fees	0.0920 (0.0565)

Table A3

Variables	Obstacle: Environment
Time taken: Environmental approvals	11.60 (7.881)
Time taken: Environmental renewals	-0.848 (6.608)
Costs higher than prescribed fees	0.639*** (0.0802)

Table A4

Variables	Obstacle: Labour
Time taken: Labour approvals	-9.277 (5.953)
Time taken: Labour renewals	-5.645 (4.016)
Days lost due to strikes	1.423* (0.842)
Costs higher than prescribed fees	0.470*** (0.0664)

Table A6

Variables	Obstacle: Water
Time taken: getting water connection	9.501** (4.431)
Time taken: Hours of water shortage	27.85*** (5.397)
Costs higher than prescribed fees	0.424*** (0.0799)

Table A5

Variables	Obstacle: Electricity
Time taken: getting electricity connection	19.60*** (3.721)
Time taken: Hours of power shortage	24.68*** (2.332)
Costs higher than prescribed fees	0.262*** (0.0657)

Table A7

Variables	Obstacle: Taxes
Time taken: Registering for VAT	10.53** (4.784)
Time taken: Registering for all other taxes excluding VAT	9.928** (4.596)
Costs higher than prescribed fees	0.479*** -0.0627

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table A8**Time taken for young enterprises**

Variables	Setting up a business	Land allotment	Construction permit	Electricity connection	Sewerage connection	Hours of power shortage
Young enterprises	-20.30*** (5.778)	-46.11*** (16.47)	-18.00*** (5.624)	-7.567** (3.234)	-11.43* (6.495)	7.443*** (2.153)
Constant	108.6*** (3.183)	133.8*** (8.358)	80.22*** (2.929)	51.95*** (1.721)	50.65*** (2.826)	33.43*** (1.082)
Observations	2,050	435	1,294	1,674	470	2,000
R-squared	0.006	0.018	0.008	0.003	0.007	0.006

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Table A9**Obstacles for young enterprises**

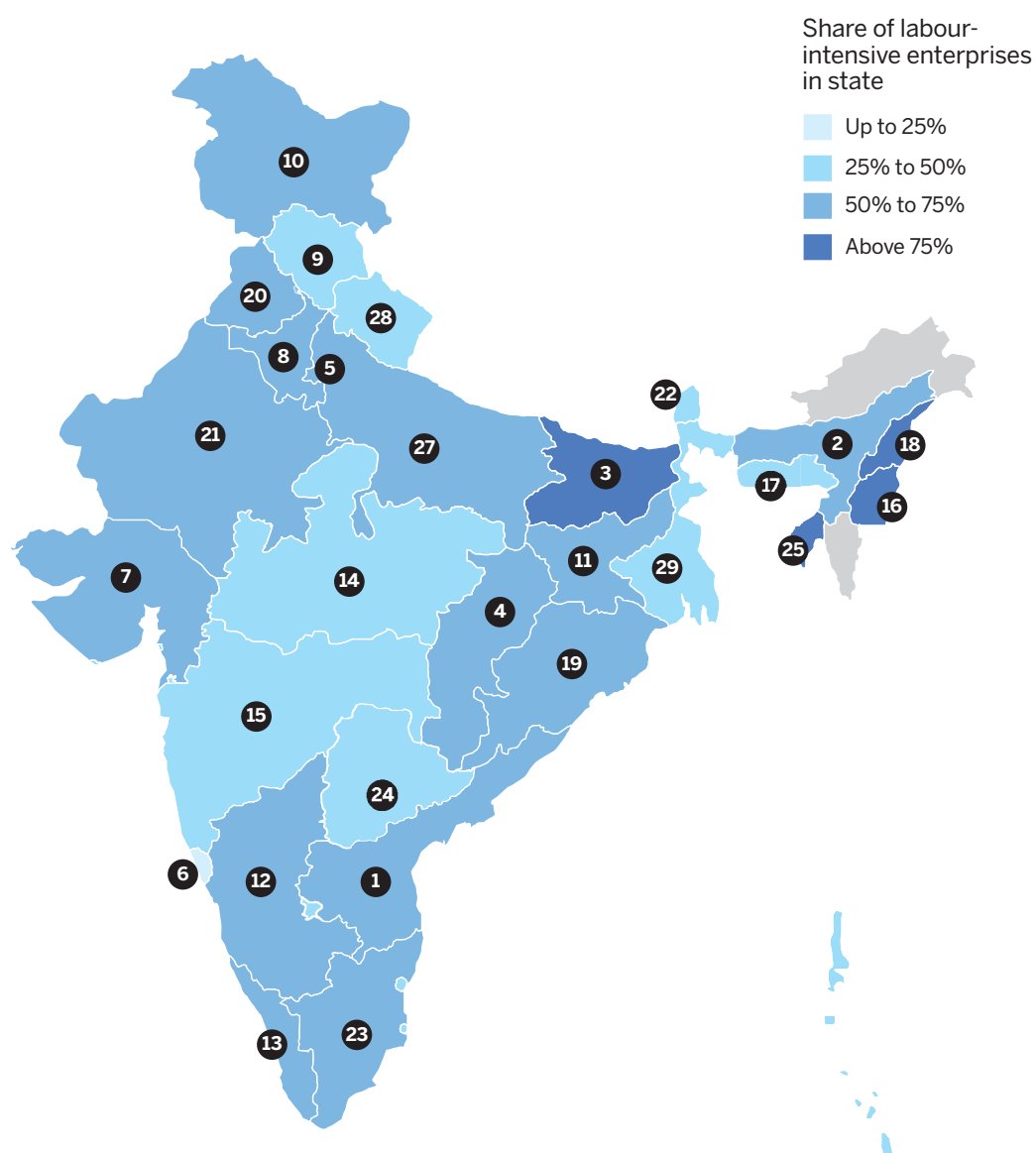
Variables	Setting up a business	Land allotment	Construction permit	Electricity connection	Sewerage connection	Electricity	Taxes
Young enterprises	-0.156*** (0.0542)	-0.206*** (0.0546)	0.0722 (0.0663)	-0.142** (0.0612)	-0.299*** (0.0764)	-0.085 (0.0606)	-0.206*** (0.0603)
Constant	-0.452*** (0.0261)	-0.448*** (0.0261)	-1.234*** (0.0336)	-0.877*** (0.0290)	-1.215*** (0.0332)	-0.898*** (0.0292)	-0.787*** (0.0282)
Observations	3,276	3,276	3,276	3,276	3,276	3,276	3,276

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1



Table A10

State-wise distribution of labour-intensive firms



Share of labour-intensive enterprises in state

- Up to 25%
- 25% to 50%
- 50% to 75%
- Above 75%

Total enterprises 3276 (56.35)

Number of enterprises (Share of labour-intensive enterprises in state)

1. Andhra Pradesh.....	202 (63.86 %)	11. Jharkhand.....	34 (52.94 %)	21. Rajasthan.....	140 (51.43 %)
2. Assam.....	46 (54.35 %)	12. Karnataka.....	159 (57.86 %)	22. Sikkim.....	27 (33.33 %)
3. Bihar.....	50 (88.00 %)	13. Kerala.....	89 (61.80 %)	23. Tamil Nadu.....	471 (66.45 %)
4. Chhattisgarh.....	34 (64.71 %)	14. Madhya Pradesh.....	44 (45.45 %)	24. Telangana.....	223 (43.95 %)
5. Delhi.....	69 (53.62 %)	15. Maharashtra.....	405 (47.16 %)	25. Tripura.....	30 (100.00 %)
6. Goa.....	30 (13.33 %)	16. Manipur.....	30 (96.67 %)	26. Union Territories.....	57 (29.82 %)
7. Gujarat.....	365 (60.27 %)	17. Meghalaya.....	30 (33.33 %)	27. Uttar Pradesh.....	185 (52.43 %)
8. Haryana.....	84 (61.90 %)	18. Nagaland.....	30 (83.33 %)	28. Uttarakhand.....	41 (31.71 %)
9. Himachal Pradesh.....	40 (27.50 %)	19. Odisha.....	36 (55.56 %)	29. West Bengal.....	116 (46.55 %)
10. Jammu & Kashmir.....	44 (70.45 %)	20. Punjab.....	165 (65.45 %)		



Table A11

Age distribution of 1,846 labour-intensive firms

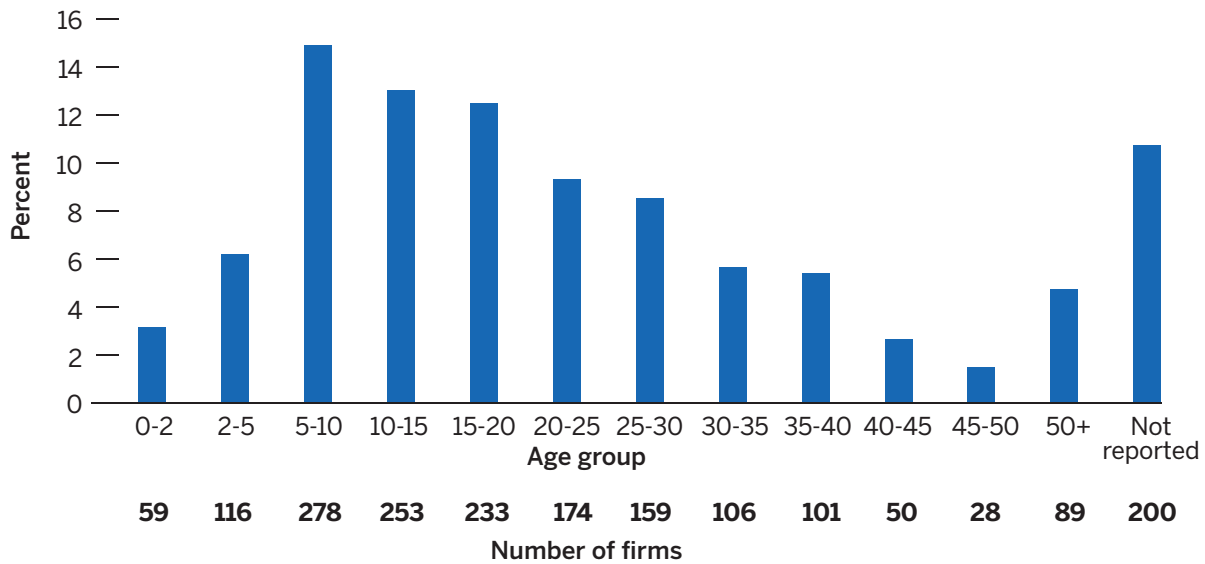


Table A12

Processes for labour-intensive sectors

Variables	Self certification under minimum wages act	Self certification under payment of wages act
Labour intensive sector	-0.136*** (0.0446)	-0.122*** (0.0448)
Constant	-0.167*** (0.0333)	-0.214*** (0.0334)
Observations	3,276	3,276

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table A13

Constraints pertaining to labour

Variables	Obstacle: inadequately skilled workforce	Obstacle: hiring contract labour	Obstacle: firing employees
Labour intensive sector	0.194*** (0.0545)	0.329*** (0.0641)	0.144** (0.0579)
Constant	-1.139*** (0.0423)	-1.519*** (0.0516)	-1.258*** (0.0447)
Observations	3,276	3,276	3,276

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table A14**Obstacles for labour-intensive enterprises**

Variables	Obstacle: setting up a business	Obstacle: land and construction permits	Obstacle: Labour	Obstacle: Taxes
Labour intensive sectors	0.159*** (0.0464)	0.120*** (0.0464)	0.149*** (0.052)	0.120** (0.0505)
Constant	-0.580*** (0.0352)	-0.565*** (0.0351)	-0.997*** (0.0399)	-0.903*** (0.0386)
Observations	3,276	3,276	3,276	3,276

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table A15**State-wise Gross Domestic Product Average YoY Growth Rates (2004-05 to 2013-14)**

State/UT	Growth rate (%)	State/UT	Growth rate (%)	State/UT	Growth rate (%)
Andhra Pradesh	7.00	Jharkhand	7.20	Rajasthan	8.14
Assam	5.57	Karnataka	7.36	Sikkim	16.49
Bihar	9.45	Kerala	7.38	Tamil Nadu	9.20
Chhattisgarh	8.04	Madhya Pradesh	8.25	Telangana	9.80
Delhi	9.99	Maharashtra	9.00	Tripura	8.63
Goa	10.26	Manipur	5.57	Union territories	8.87
Gujarat	9.33	Meghalaya	8.25	Uttar Pradesh	6.63
Haryana	8.52	Nagaland	7.69	Uttarakhand	12.45
Himachal Pradesh	7.78	Odisha	6.59	West Bengal	6.64
Jammu & Kashmir	5.82	Punjab	6.69		

Source: Directorate of Economics and Statistics of respective State Governments

Table A16**Sectoral distribution of enterprises in high-growth and low-growth states (10 year average)**

Manufacturing Sector	Number of enterprises in Manufacturing sector	% of total enterprises in high-growth states	% of total enterprises in low-growth states	% of enterprises from high-growth states in mfg sector	% of enterprises in low-growth states in mfg sector
Basic metals	157	4.65	5.04	61	39
Beverages	47	1.21	1.82	53	47
Chemicals	170	6.20	3.47	75	25
Coke & ref petrol	30	0.58	1.49	40	60
Computers/electronics	48	1.74	0.99	75	25
Electrical equipment	147	4.84	3.88	68	32
Fabricated metals	228	6.49	7.77	59	41
Food	323	9.10	11.16	58	42
Furniture	26	0.68	0.99	54	46
Leather	62	2.27	1.24	76	24
Machinery /equipment	213	7.02	5.62	68	32
Motor vehicles	92	2.95	2.56	66	34
Other manufacturing	260	8.28	7.36	66	34
Non-metallic minerals	313	8.08	12.07	53	47
Other transport	23	0.58	0.91	52	48
Paper	100	3.00	3.14	62	38
Pharmaceuticals	109	3.87	2.40	73	27
Printing	61	2.13	1.40	72	28
Rubber and plastic	190	6.24	5.04	68	32
Textiles	328	11.13	8.10	70	30
Tobacco	24	0.39	1.32	33	67
Wearing apparel	167	5.66	4.13	70	30
Wood	78	1.16	4.46	31	69
NA	80	1.74	3.64	45	55
Total	3,276	100	100		

Table A17**Age distribution of enterprises in high-growth and low-growth states**

Age group	Number of enterprises	% of enterprises in high-growth states	% of enterprises in low-growth states	% of enterprises in high-growth states to total enterprises	% of enterprises in low-growth states to total enterprises
0-2	120	4.45	2.31	77	23
2-5	211	7.02	5.45	69	31
5-10	468	14.42	14.05	64	36
10-15	455	13.41	14.71	61	39
15-20	473	14.96	13.55	65	35
20-25	328	9.49	10.91	60	40
25-30	273	9.05	7.11	68	32
30-35	184	5.52	5.79	62	38
35-40	154	4.45	5.12	60	40
40-45	90	2.52	3.14	58	42
45-50	55	1.50	1.98	56	44
50+	139	3.78	5.04	56	44
NA	3,276	9.44	10.83	60	40
Total		100	100		

Table A18**Size distribution of enterprises in high-growth and low-growth states**

Employee size class	Number of enterprises	% of total enterprises in high-growth states	% of total enterprises in low-growth states	% of enterprises in high-growth states in employee size class	% of enterprises in low-growth states in employee size class
0-9	786	23.18	25.37	61	39
10-49	1457	43.08	46.86	61	39
50-99	299	10.60	6.61	73	27
100-199	184	6.15	4.71	69	31
200+	253	8.81	5.87	72	28
NA	297	8.18	10.58	57	43
Total	3,276	100	100		

Table A19**Time taken for high-growth and low-growth states**

Variables	Construction permits		Labour approvals		Electricity Connection		Hours of power shortage	
		All NOCs for construction		Labour renewals		Water connection		Hours of water shortage
High growth states	-17.59*** (5.156)	-18.33*** (3.065)	-10.07* (5.567)	-8.053** (3.793)	-19.45*** (3.004)	-11.99*** (3.726)	-10.22*** (1.912)	14.96*** (3.440)
Constant	86.30*** (4.069)	67.54*** (2.465)	66.15*** (4.535)	48.70*** (3.117)	62.27*** (2.405)	51.77*** (3.112)	41.56*** (1.496)	15.91*** (2.611)
Observations	1,294	1,147	1,412	1,192	1,674	820	2,000	644
R-squared	0.009	0.03	0.002	0.004	0.024	0.013	0.014	0.029

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Table A20**Costs higher than prescribed fees for high-growth state**

Variables	Time taken to get electricity connection	Hours of power shortage
High growth states	0.150** (0.0640)	0.287*** (0.0613)
Constant	-1.398*** (0.0523)	-1.350*** (0.0509)
Observations	3,276	3,276

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Table A21**Obstacles for high- and low-growth states**

Variables	Setting up a business	Land and construction	Environment	Labour	Water and sanitation	Electricity	Taxes
High growth states	-0.306*** (0.0470)	-0.243*** (0.0471)	-0.165*** (0.0590)	-0.135*** (0.0524)	-0.302*** (0.0604)	-0.612*** (0.0525)	-0.208*** (0.0510)
Constant	-0.301*** (0.0366)	-0.347*** (0.0368)	-1.116*** (0.0455)	-0.827*** (0.0409)	-1.101*** (0.0452)	-0.573*** (0.0383)	-0.707*** (0.0395)
Observations	3,276	3,276	3,276	3,276	3,276	3,276	3,276

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Table A22**Obstacles by employee size class**

Variables	Obstacle: Setting up a business	Obstacle: Land and construction	Obstacle: Environment	Obstacle: Labour	Obstacle: Water	Obstacle: Taxes
10 to 49	0.0503 (0.0589)	0.0826 (0.0593)	-0.00232 (0.0758)	0.164** (0.0666)	0.108 (0.0795)	0.154** (0.0657)
50-99	0.190** (0.0885)	0.278*** (0.0884)	0.113 (0.112)	0.338*** (0.0964)	0.304*** (0.112)	0.152 (0.0989)
100-199	0.258** (0.106)	0.329*** (0.106)	0.187 (0.131)	0.164 (0.120)	-0.0193 (0.151)	0.259** (0.116)
200+	0.376*** (0.0927)	0.378*** (0.0931)	0.558*** (0.106)	0.437*** (0.100)	0.269** (0.120)	0.536*** (0.0981)
Constant	-0.591*** (0.0477)	-0.633*** (0.0481)	-1.286*** (0.0611)	-1.041*** (0.0547)	-1.413*** (0.0654)	-1.004*** (0.0539)
Observations	3,276	3,276	3,276	3,276	3,276	3,276

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

ANNEXURE

Annexure 1



We compute GDP growth rate at the state-level between 2012-13 and 2013-14. States that have an annual growth rate above the median are classified as high-

growth and those that have an annual growth rate below the median are low-growth.

Table 1.1. Provides the list of high-growth states

Table 1.1
High-Growth States

State Name	Number of Enterprises in State	% of Enterprises in High-Growth States	State Name	Number of Enterprises in State	% of Enterprises in High-Growth States
Andhra Pradesh	202	10.63	Maharashtra	405	21.3
Assam	46	2.42	Meghalaya	30	1.58
Bihar	50	2.63	Sikkim	27	1.42
Delhi	69	3.63	Tamil Nadu	471	24.78
Goa	30	1.58	Tripura	30	1.58
Gujarat	365	19.2	Union Territories	57	3.00
Jharkhand	34	1.79	Uttarakhand	41	2.16
Madhya Pradesh	44	2.31	Total	1,901	100

Table 1.2**Sectoral distribution of enterprises in high-growth and low-growth states**

Manufacturing Sector	% of Total Enterprises in High-Growth States		% of Total Enterprises in Low-Growth States		% of Enterprises from High-Growth States in mfg sector		% of Enterprises in Low-Growth States in mfg sector
	Number of Enterprises in High-Growth States		Number of Enterprises in Low-Growth States		Number of enterprises in mfg sector		
Basic metals	89	4.68	68	4.95	157	56.69	43.31
Beverages	35	1.84	12	0.87	47	74.47	25.53
Chemicals	111	5.84	59	4.29	170	65.29	34.71
Coke & ref petrol	21	1.10	9	0.65	30	70.00	30.00
Computers/electronics	29	1.53	19	1.38	48	60.42	39.58
Electrical equipment	83	4.37	64	4.65	147	56.46	43.54
Fabricated metals	122	6.42	106	7.71	228	53.51	46.49
Food	175	9.21	148	10.76	323	54.18	45.82
Furniture	12	0.63	14	1.02	26	46.15	53.85
Leather	44	2.31	18	1.31	62	70.97	29.03
Machinery/equipment	124	6.52	89	6.47	213	58.22	41.78
Motor vehicles	48	2.52	44	3.20	92	52.17	47.83
Other manufacturing	140	7.36	120	8.73	260	53.85	46.15
Other non-metallic minerals	200	10.52	113	8.22	313	63.90	36.10
Other transport	11	0.58	12	0.87	23	47.83	52.17
Paper	56	2.95	44	3.20	100	56.00	44.00
Pharmaceuticals	66	3.47	43	3.13	109	60.55	39.45
Printing	42	2.21	19	1.38	61	68.85	31.15
Rubber and plastic	105	5.52	85	6.18	190	55.26	44.74
Textiles	210	11.05	118	8.58	328	64.02	35.98
Tobacco	9	0.47	15	1.09	24	37.5	62.5
Wearing apparel	110	5.79	57	4.15	167	65.87	34.13
Wood	21	1.10	57	4.15	78	26.92	73.08
NA	38	2.00	42	3.05	80	47.50	52.50
Total	1,901	100	1,375	100	3,276		

Table 1.2. provides the sectoral distribution of high- and low-growth states. On the whole, the highest share of enterprises in high-growth states are in textiles, food and other non-metallic minerals. However,

within manufacturing sectors, more than 70% of enterprises in leather, beverages, and coke and refined petroleum are located in high-growth states.

Table 1.3**Age distribution of enterprises in high-growth and low-growth states**

Age group	% of enterprises in high-growth states		% of total enterprises in low-growth states		% of enterprises in high-growth states to total enterprises		% of enterprises in low-growth states to total enterprises
	Number of enterprises in high-growth states		Number of enterprises in low-growth states		Number of enterprises		
0-2	81	4.26	39	2.84	120	67.50	32.50
2 to 5	148	7.79	63	4.58	211	70.14	29.86
5 to 10	300	15.78	168	12.22	468	64.10	35.90
10 to 15	242	12.73	213	15.49	455	53.19	46.81
15-20	275	14.47	198	14.40	473	58.14	41.86
20-25	173	9.10	155	11.27	328	52.74	47.26
25-30	177	9.31	96	6.98	273	64.84	35.16
30-35	106	5.58	78	5.67	184	57.61	42.39
35-40	85	4.47	69	5.02	154	55.19	44.81
40-45	51	2.68	39	2.84	90	56.67	43.33
45-50	31	1.63	24	1.75	55	56.36	43.64
50+	76	4.00	63	4.58	139	54.68	45.32
NA	156	8.21	170	12.36	326	47.85	52.15
Total	1901	100	1375	100	3,276	58.03	41.97

In general, the share of young enterprises in high-growth states is higher than the share of enterprises in low-growth states. For instance, 28% of all enter-

prises in high-growth states are below the age of ten whereas 20% of all enterprises in low-growth states are below the age of ten.

Table 1.4**Size distribution of enterprises in high-growth and low-growth states**

Age group	Number of Enterprises in High-Growth States	% of Total Enterprises in High-Growth States	Number of Enterprises in Low-Growth States	% of Total Enterprises in Low-Growth States	Number of enterprises in Employee Size Class	% of Enterprises in High-Growth States in Employee Size Class	% of Enterprises in Low-Growth States in Employee Size Class
0-9	486	25.57	300	21.82	786	61.83	38.17
10-49	844	44.40	613	44.58	1,457	57.93	42.07
50-99	194	10.21	105	7.64	299	64.88	35.12
100-199	111	5.84	73	5.31	184	60.33	39.67
200+	141	7.42	112	8.15	253	55.73	44.27
NA	125	6.58	172	12.51	297	42.09	57.91
Total	1,901	100	1,375	100	3,276	58.03	41.97

For enterprises in both high-growth and low-growth states, a majority of enterprises have less than 49 employees.

We compare time taken for getting approvals, share

of enterprises reporting that the costs they incurred were higher than prescribed fees, and obstacles faced in different areas of doing business for enterprises in high-growth versus low-growth states.

Table 1.5**Average time taken for enterprises in high-growth and low-growth states**

Variables	Low-growth rate states	High-growth rate states	Difference in mean
Setting up a business	104.6 (4.01)	101.02 (3.55)	3.58
Land allotment	119.39 (11.65)	123.85 (9.26)	-4.46
Construction permits	83.52 (3.73)	68.69 (3.37)	14.84***
NOCs for construction	65.63 (2.53)	48.44 (1.74)	17.19
Environment approvals	75.15 (4.57)	69.38 (4.67)	5.77
Environment Renewals	67.11 (5.38)	51.99 (2.72)	15.11***
Labour compliances	73.03 (5.27)	52.38 (2.88)	20.65***
Labour renewals	55.01 (4.22)	37.47 (1.62)	17.54***
Days lost due to strikes	5.46 (0.58)	4.14 (0.45)	1.32*
Electricity connection	58.58 (2.82)	44.58 (1.59)	14.00***
Water connection	46.45 (2.85)	41.47 (2.15)	4.98
Sewerage connection	49.24 (3.91)	47.86 (3.36)	1.37
Hours of power shortage	36.93 (1.28)	33.87 (1.36)	3.06
Hours of water shortage	21.04 (2.22)	28.8 (2.68)	-7.76***
Registering for VAT	49.23 (4.17)	35.64 (1.78)	13.59***
Registering for all other applicable taxes	52.74 (4.47)	35.14 (1.38)	17.60***

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

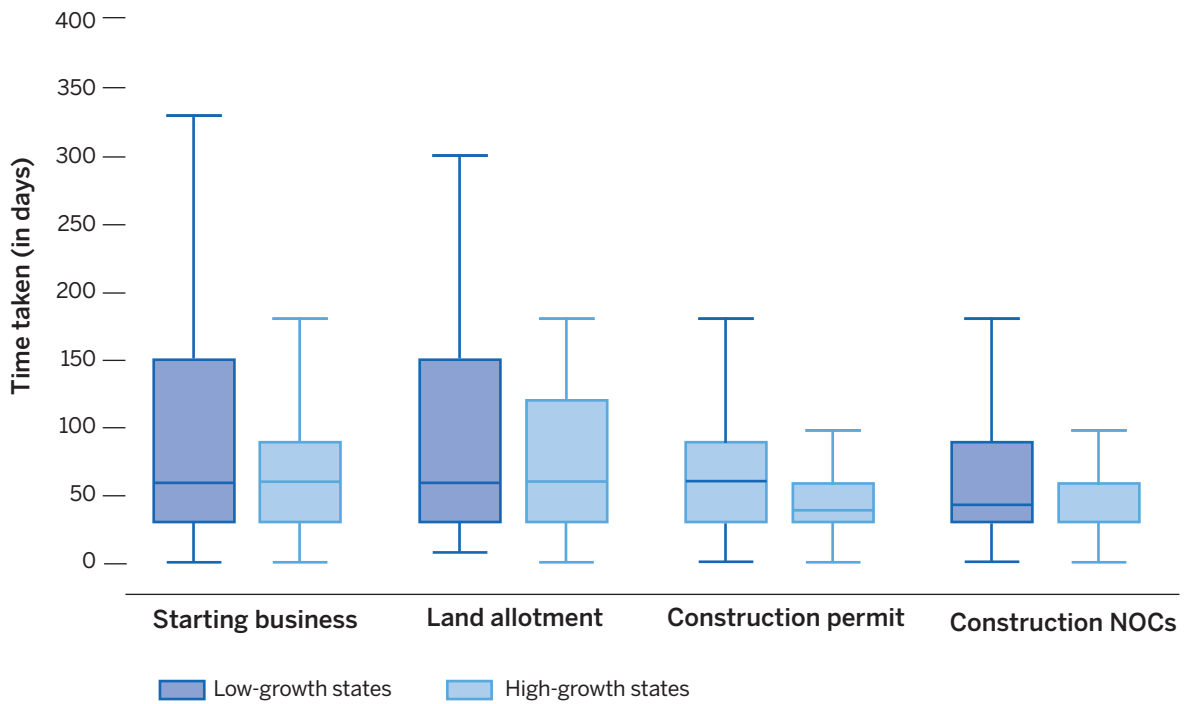
Table 1.5 shows the average time taken (days) for enterprises in low-growth states and high-growth states for getting all approvals and the differences in their means.

The time taken is higher for enterprises in low-growth states for all areas of doing business except for land allotment with the difference being significantly

higher in the case of getting construction permits, all approvals for construction, environmental approvals, environmental renewals, labour approvals, labour renewals, electricity connection, and days lost due to strikes. Enterprises in low-growth states reported significantly less number of hours of water shortage in a typical month.

Figure 1.1a

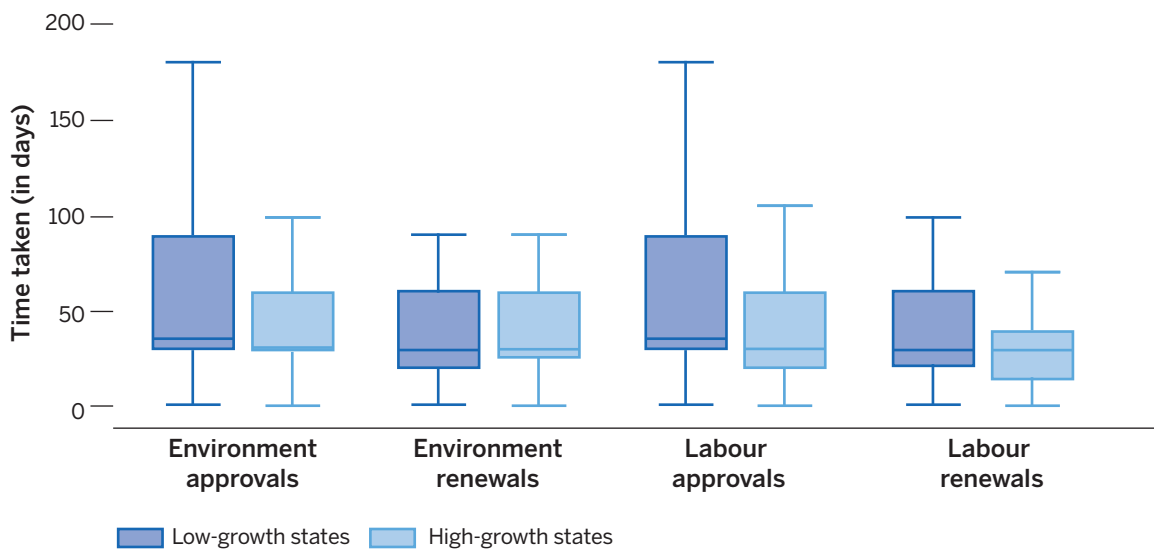
Time taken for setting up a business and getting land allotment and construction permits



Excludes outside values

Figure 1.1b.

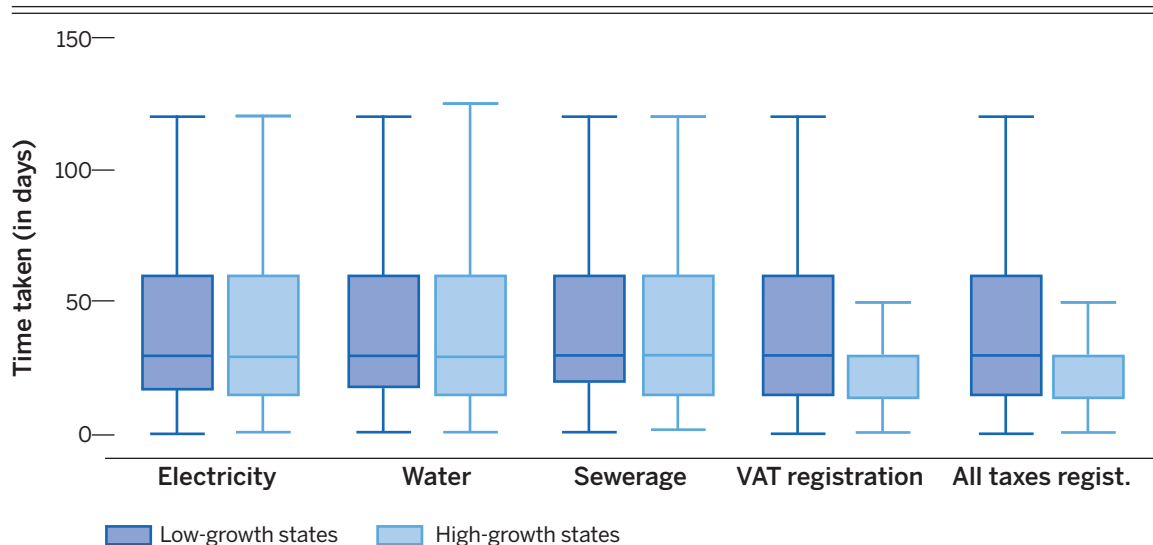
Time taken for environment and labour



Excludes outside values

Figure 1.1c

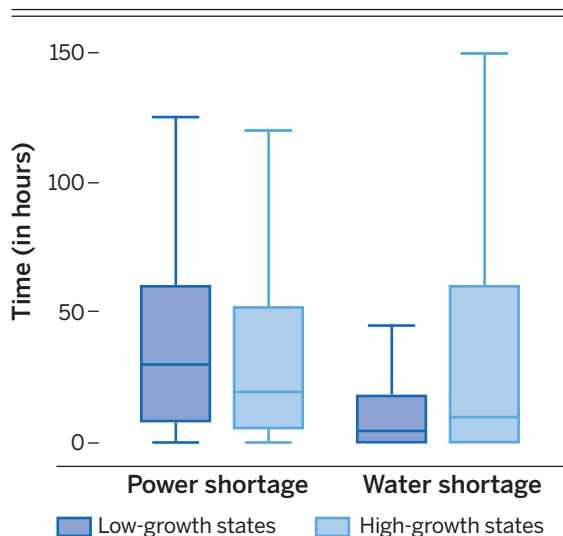
Time taken for infrastructure and taxes



Excludes outside values

Figure 1.1d

Hours of power & water shortage



Excludes outside values

Figures 1.1a to 1.1c show the distribution of the time taken for enterprises in high-growth and low-growth states for getting different permits and approvals. Figure 1.1d shows the distribution of hours of power shortage and water shortage for enterprises in high-growth and low-growth states.

Although the distribution of enterprises in low-growth and high-growth states have similar medians for time

taken to start a business and getting land allotment, the top 25% of enterprises in low-growth states report a much higher time taken for starting a business and getting land allotment compared to top 25% of enterprises in high-growth states (Figure 1.1a).

For construction permits and all construction related approvals, the top 25% of enterprises in low-growth states report a higher time taken compared to top 25% of enterprises in high-growth states.

The top 25% enterprises in low-growth states report a much higher time taken for environmental approvals and labour approvals compared to top 25% of enterprises in high-growth states (Figure 1.1b).

The distribution is similar for low-growth and high-growth states for time taken to get electricity, water, and sewerage connection (Figure 1.1c). In case of time taken for registering for VAT and all other applicable taxes, we see the distribution is very different for low-growth and high-growth states with top 25% of enterprises in the former reporting a much higher time taken compared to the top 25% of enterprises in the latter.

The distributions for hours of power shortage for enterprises in low-growth and high-growth states show that the former has a higher median (Figure 1.1d). In case of hours of water shortage, the latter has a higher median and range.

Table 1.6**Time taken for high growth and low growth states**

Variables	High growth states	Constant	Observations	R-squared
Construction permits	-12.76** (5.157)	83.23*** (4.06)	1294	0.005
All NOCs for construction	-11.68*** (3.061)	63.03*** (2.43)	1147	0.013
Environment Approvals	-17.96*** (6.668)	82.94*** (5.18)	1190	0.006
Environment Renewals	-15.11*** (5.538)	67.11*** (4.26)	1163	0.006
Labour approvals	-20.65*** (5.518)	73.03*** (4.47)	1412	0.01
Labour renewals	-17.54*** (3.751)	55.01*** (3.07)	1192	0.018
Days lost due to strikes	-1.317* (0.728)	5.458*** (0.53)	927	0.004
Electricity Connection	-14.00*** (2.997)	58.58*** (2.37)	1674	0.013
Hours of water shortage	7.763** (3.454)	21.04*** (2.32)	644	0.008
VAT registration	-13.59*** (3.967)	49.23*** (3.14)	1656	0.007
Registration for other applicable taxes	-17.60*** (3.820)	52.74*** (3.06)	1555	0.013

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Table 1.6 shows the difference between high- and low-growth rate states in terms of time taken in specific areas of doing business.

We find that enterprises in high-growth states:

- Took 13 fewer days on average to get construction permit compared to low-growth states
- Took 12 fewer days on average for getting all NOCs for construction
- Took 18 fewer days on average for getting environmental approvals
- Took 15 fewer days on average of getting environmental renewals
- Took 21 fewer days on average for getting labour approvals
- Took 18 fewer days on average for getting labour renewals
- Reported losing 1 fewer day on average due to strikes
- Took 14 fewer days on average for getting electricity connection
- Took 14 fewer days on average for registering for VAT and 18 fewer days on average for registering for all other taxes
- Reported 8 more hours of water shortage in a typical month compared with enterprises in low-growth rate states.

Table 1.7**Costs higher than prescribed fees for high growth state**

Variables	Labour
High growth states	0.179*** (0.0581)
Constant	-1.267*** (0.0458)
Observations	3,276

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Table 1.7 reports the difference in enterprises reporting that the costs they incurred for getting approvals and compliances were higher than the fees prescribed for different areas of doing business for high-growth rate and low-growth rate states.

We find that enterprises in high-growth states are: 18% more likely to report that the costs incurred were higher for getting labour approvals as compared to enterprises in low-growth rate states

Table 1.8**Obstacles for high and low growth states**

Variables	Setting up a business	Land and construction	Environment	Labour	Water and sanitation	Electricity	Taxes
High growth states	-0.321*** (0.0462)	-0.275*** (0.0463)	-0.104* (0.0583)	-0.0742 (0.0516)	-0.556*** (0.0614)	-0.363*** (0.0517)	-0.234*** (0.0502)
Constant	-0.308*** (0.0344)	-0.341*** (0.0345)	-1.157*** (0.0435)	-0.868*** (0.0389)	-1.003*** (0.0408)	-0.723*** (0.0372)	-0.704*** (0.037)
Observations	3,276	3,276	3,276	3,276	3,276	3,276	3,276

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Table 1.8 compares enterprises in high-growth rate states reporting areas of doing business to be major or a severe obstacle with enterprises in low-growth rate states. We find that high-growth states are:

- 32% less likely to report that setting up a business is a major or very severe obstacle compared to those in low-growth rate states.
- 28% less likely to report that land and construction related approvals are a major or very severe obstacle.
- 10% less likely to report that environmental ap-

provals are a major or very severe obstacle compared to enterprises in low-growth rate states.

- 56% less likely to report that water and sanitation are a major or very severe obstacle and nearly 36% less likely to report that electricity is a major or very obstacle compared to enterprises in low-growth rate states.
- 23% less likely to report taxes to be a major or very severe obstacle compared to those in low-growth rate states.

Table 1.9**Share of enterprises reporting obstacles faced for high growth and low growth states**

		No obstacle	Minor obstacle	Moderate obstacle	Major obstacle	Very severe obstacle	Not applicable
Setting up a business	▼	20.40%	16.80%	18.90%	25.40%	17.90%	0.56%
	▲	39.00%	15.70%	16.80%	16.00%	12.00%	0.54%
Land and construction	▼	17.80%	13.50%	19.50%	26.40%	15.00%	7.85%
	▲	36.00%	16.90%	14.80%	18.90%	9.24%	4.10%
Environment	▼	22.10%	18.20%	31.20%	18.80%	8.46%	1.24%
	▲	31.50%	19.30%	21.90%	16.70%	7.97%	2.64%
Labour	▼	20.20%	13.70%	29.00%	26.30%	10.20%	0.63%
	▲	34.00%	18.00%	20.40%	17.20%	9.47%	0.97%
Water and sanitation	▼	21.30%	21.90%	24.20%	21.20%	9.88%	1.56%
	▲	41.60%	22.30%	19.20%	11.90%	3.50%	1.54%
Electricity	▼	22.30%	22.20%	24.90%	17.70%	12.10%	0.83%
	▲	37.20%	24.40%	16.80%	14.60%	5.60%	1.35%
Taxes	▼	20.00%	20.20%	26.50%	21.80%	9.08%	2.48%
	▲	34.90%	18.10%	23.60%	13.10%	7.91%	2.40%

▼ Low growth states ▲ High growth states

Table 1.9 shows the proportion of enterprises reporting how much regulations were an obstacle for doing business for all areas.



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