Corruption and Reform in India

This book asks why some governments improve public services more effectively than others. Through the investigation of a new era of administrative reform, in which digital technologies may be used to facilitate citizens’ access to the state, Jennifer Bussell’s analysis provides unanticipated insights into this fundamental question. In contrast to factors such as economic development or electoral competition, this study highlights the importance of access to rents, which can dramatically shape the opportunities and threats of reform to political elites. Drawing on a subnational analysis of twenty Indian states; a field experiment; statistical modeling; case studies; interviews of citizens, bureaucrats, and politicians; and comparative data from South Africa and Brazil, Bussell shows that the extent to which politicians rely on income from petty and grand corruption is closely linked to variation in the timing, management, and comprehensiveness of reforms. The book also illuminates the importance of political constituencies and coalition politics in shaping policy outcomes.

Jennifer Bussell is an assistant professor of public affairs in the Lyndon B. Johnson School of Public Affairs at the University of Texas at Austin. Her research focuses on comparative politics, the political economy of development, and technology policy. Her work has appeared in journals including *Comparative Political Studies*, *International Studies Quarterly*, and *Studies in Comparative International Development*. 
Corruption and Reform in India

Public Services in the Digital Age

JENNIFER BUSSELL
University of Texas at Austin
## Contents

**Figures**  
page vi  

**Tables**  
vii  

**Preface and Acknowledgments**  
ix  

1. Introduction  
1  

2. Explaining the Politics of Technology-Enabled Public Services  
30  

3. Do Reforms Affect the Quality of Services?  
63  

4. Policy Initiation in the Indian States  
97  

5. The Scope of Reform I: Patterns of Policy Implementation  
127  

6. The Scope of Reform II: Coalition Governments  
156  

7. From “Petty” to “Grand” Corruption: Ownership, Management, and the Scale of Reform  
176  

8. Technology-Enabled Administrative Reforms in Cross-National Perspective  
205  

9. Conclusion  
248  

**Appendix A: Technology-Enabled Public Services**  
259  

**Appendix B: Technology-Enabled Services in the Indian States**  
264  

**Appendix C: Conceptualizing and Measuring Corruption**  
272  

**Appendix D: Measuring Cross-National eGovernment Implementation**  
278  

**Bibliography**  
281  

**Index**  
303
Figures

1.1. Overview of the theoretical argument  page 5
2.1. Petty and grand corruption in the Indian states  43
4.1. Cumulative Indian state policy adoption  103
4.2. Petty corruption in the Indian states  106
4.3. Economic conditions (state domestic product) and time to policy initiation  111
4.4. Human development (HDI) and time to policy initiation  112
4.5. Technology infrastructure (teledensity) and time to policy initiation  112
4.6. Electoral competition (ENPS) and time to policy initiation  113
4.7. Petty corruption and time to policy initiation  113
5.1. Maximum number of available services per center in the Indian states (2006)  129
5.2. Number of top twenty-five demanded services available in Indian state service centers  130
5.3. Percentage of services in centers targeted to different socioeconomic groups in the Indian states  131
5.4. Number of high-corruption-potential services available in Indian state service centers  132
5.5. Number of services available for which at least 25% of people report paying a bribe  133
5.6. Extent of automation and computerization in Indian state service centers  150
6.1. Average service provision in coalition states – lead vs. supporting parties  159
7.1. Grand corruption in the Indian states  188
7.2. Scale of service-center implementation in the Indian states  197
7.3. Level of corruption and scale of service center implementation  198
## Tables

2.1. Predictions for Timing of Reform \hspace{1cm} page 31
2.2. Predictions for Scope of Reform in Single-Party States \hspace{1cm} 31
2.3. Predictions for Scope of Reform in Coalition States \hspace{1cm} 31
2.4. Predicted Ownership and Management Models and Scale of Reforms \hspace{1cm} 31
3.1. Subject Pool for Observational Survey \hspace{1cm} 72
3.2. Subject Pool and Treatment Assignment for Experimental Survey \hspace{1cm} 73
3.3. Services Available at Karnataka’s Nemmadi Centers \hspace{1cm} 75
3.4. Summary Statistics for Observational Group \hspace{1cm} 79
3.5. Comparing Economic Outcomes of Computerized Taluk Offices and Nemmadi Centers versus Noncomputerized Taluk Offices – Observational \hspace{1cm} 81
3.6. Comparing Governance Outcomes of Computerized Taluk Offices and Nemmadi Centers versus Noncomputerized Taluk Offices – Observational \hspace{1cm} 82
3.7. Comparing Service Quality Outcomes of Computerized Taluk Offices and Nemmadi Centers versus Noncomputerized Taluk Offices – Observational \hspace{1cm} 83
3.8. Summary Statistics for Experimental Group \hspace{1cm} 86
3.9. Comparing Economic Outcomes of Computerized Taluk Offices and Nemmadi Centers – Experimental \hspace{1cm} 87
3.10. Comparing Governance Outcomes of Computerized Taluk Offices and Nemmadi Centers – Experimental \hspace{1cm} 87
3.11. Comparing Service Quality Outcomes of Computerized Taluk Offices and Nemmadi Centers – Experimental \hspace{1cm} 88
3.12. Demographic Comparison of Observational and Experimental Subject Pools \hspace{1cm} 92
3.13. Regional Demographic Comparison \hspace{1cm} 93
4.1. Variables and Measurements \hspace{1cm} 109
Tables

4.2. Policy Initiation Cox Proportional Hazards Model 115
5.1. The Quantity of Services – OLS Models 135
5.2. The Quantity of Services – Poisson Models 137
5.3. Evaluating Corruption and Types of Services – OLS Models 139
5.4. Evaluating Corruption and Types of Services – Poisson Models 139
7.1. Ownership and Management Models by State 177
7.2a. Ownership and Management Models and Level of Petty Corruption 190
7.2b. Ownership and Management Models and Level of Grand Corruption 191
8.1. Predicted Reform Outcomes from Previous Studies – Access to Patronage Resources and Electoral Competition 208
8.2. Predicted Reform Outcomes – Assuming Opportunity to Target Goods to Constituents 209
8.3. Summary of South African Service Reforms 218
8.4. Summary Statistics and Sources for Variables 234
8.5. Time Series Cross-Sectional Regressions for eGovernment Scores Regressed on Transparency International Corruption Perceptions Index Score and Controls 236
8.7. Cross-Sectional Regressions for eGovernment Scores Regressed on Transparency International Corruption Score and Controls – All Variables Set at Mean for Period 2001–2008 243
A.1. Characteristics of Technology-Enabled Public Services in India 261
B.1. Policy Initiation in the Indian States 265
B.2. State Outcomes 266
B.3. Services Available in State One-Stop Centers 268
C.1. Petty and Grand Corruption in the Indian States 274
The seeds of this project germinated long before graduate school, when, during my first job out of college, I had the opportunity to live in Johannesburg. At the time, few people I knew in the United States had mobile phones, but it seemed that everyone I met in South Africa did. In poorer areas, where fewer individuals could afford phones, entrepreneurs rented out “talk time” at street corner stands. Simultaneously, the business world was feeling the tremors of a major shift in business strategy due to the emergence of the Internet. This confluence of events, which perplexed me at the time, also made it seem inevitable that, somehow, these new technologies would change the lives not only of Western business executives and their customers in developed countries, but also of the poorest individuals in developing countries. How this would happen in practice, and what role governments of developing countries might play in the process, remained a wide-open question.

In hindsight, it is perhaps obvious that information and communication technologies have changed the lives of individuals and communities around the world, but these changes are not necessarily those that were predicted in the 1990s. Indeed, prophecies of borderless commerce and government have, for the most part, gone the way of landline telephones. Bricks-and-mortar businesses continue to exist and thrive, albeit typically with an integrated online counterpart; and governments, with territorial boundaries and predominant power structures, endure. Even as digital technologies are credited with fomenting revolutions, national governments exert control, through technical means, to retain their domestic authority. The world has changed, but in ways profoundly shaped by what existed before.

In graduate school, as a part of a National Science Foundation–supported initiative to study the use of information and communication technologies in developing countries, I had the opportunity to visit India and explore these topics. It was in India that the power of preexisting institutions to influence the effects of new technologies became particularly evident to me.
Preface and Acknowledgments

I was struck by the contrast between a burgeoning domestic information technology industry, strong enough to influence domestic politics debates as far afield as the United States, and a populace that was only beginning to utilize mobile phones and the Internet. If average individuals were benefitting from the “digital revolution,” it was most often the result of government initiatives to introduce new technologies into service delivery. Even more striking, as I discovered on visits to multiple Indian states, was that these benefits were highly varied, with programs, if they existed, differing quite dramatically in the actual services they provided to citizens.

An explanation for this policy variation was not immediately obvious, and understanding these differences became a goal of my graduate research. It was only through a subsequent analysis of government technology adoption across India that I came to understand how deeply variations in the institutions of governance – in particular, patterns of rent seeking – had shaped the transformative power of new technologies. It is this relationship between political institutions, corruption, and technology-enabled reform that is the central subject of the research presented here.

This book, then, serves as my contribution to our understanding of how digital information and communication technologies can dramatically affect the character of everyday life. I do not evaluate individual use of technology, or government efforts to support growth in the information technology sector itself, but rather the use of digital technologies in the provision of public services to citizens. I chose to focus on this nexus of citizen-government interaction because it is where I posit some of the most important effects of new technologies for citizens in developing countries can emerge, but it is also here that politics – and the incentives of political elites – play a primary role in affecting the nature of outcomes.

In formal terms, this project began as a dissertation in the Department of Political Science at the University of California, Berkeley, and evolved into a book during a postdoctoral fellowship at the Center for Asian Democracy at the University of Louisville and my first year as an assistant professor in the Lyndon B. Johnson School of Public Affairs at the University of Texas at Austin. I am grateful to each of these institutions for their support during this process.

Writing a book has been a process of exploration and growth, one immeasurably facilitated by the people who have been a part of the experience. Interactions with those noted here made for highly stimulating, challenging, and downright pleasant experiences in graduate school and the first few years of my academic career. In Austin, the faculty of the LBJ School welcomed me with open arms and for this I am very grateful. I offer extra thanks to Josh Busby, Angela Evans, Shama Ghamkar, Robert Hutchings, Victoria Rodriguez, Chandler Stolp, Peter Ward, Kate Weaver, Robert Wilson, and my fellow new Longhorns, Paul von Hippel and Varun Rai, for facilitating a smooth transition at UT.
Preface and Acknowledgments

At Berkeley, many individuals provided important feedback and advice along the way. Steve Weber encouraged me to come to Berkeley and has been a constant source of academic support, intellectual creativity, and bountiful humor. Pradeep Chhibber’s insights on both general trends and minutiae of Indian politics helped ground my analysis, and his conceptual and theoretical advice at a number of key junctures provided crucial direction. Steve Vogel served as a perpetual resource for detailed feedback and advice; Laura Stoker imparted a rare mix of good cheer, positive reinforcement, and intense critique; and Peter Evans’ model of comparative analysis and perspective on the state offered an important guide for my own work. David Collier, Ruth Collier, Robert Powell, Annalee Saxenian, and John Zysman all provided much appreciated guidance and encouragement.

This book would have been much longer in coming if not for a wonderful year in Louisville with ample time to write and revise. I thank Shipping Hua for the opportunity and resources of the Center for Asian Democracy and my co-Fellows Jungug Choi and Tim Hildebrandt for making time for an occasional break for sustenance.

Thanks are also due to many others who have offered feedback and inspiration as this project developed from idea, to dissertation, to book. I am grateful to Mary Breeding, Sumit Ganguly, Gabriella Montinolla, Sandeep Shastri, Preerna Singh, Matthew Wiseman, and Adam Ziegfeld, as well as seminar participants at the Berkman Center at Harvard University; Harvard Business School; the Indian Institute of Information Technology, Bangalore; the London School of Economics; Northwestern University; CDDRL at Stanford University; and the LBJ School at the University of Texas at Austin for their questions, comments, and advice. I offer especially warm thanks to Irfan Nooruddin, who has been helpful in so many ways.

The comments of two anonymous reviewers provided invaluable feedback for revisions that have greatly improved the manuscript. Emily Spangler, my editor at Cambridge University Press, has pleasantly and efficiently guided the project to this stage. I am grateful to each of them for their contributions of time and effort.

Additional thanks go to the multiple organizations and institutions who helped fund my graduate education and research, including Berkeley’s Graduate Division, the Charles and Louise Travers Department of Political Science, the Institute for International Studies, the Berkeley Roundtable on the International Economy, and the Berkeley Center on the Information Society. The National Science Foundation funded a large portion of this research through Grant #0326582. This grant, under the leadership of Professor Eric Brewer, supported an interdisciplinary group of computer scientists, electrical engineers, information scientists, and social scientists interested in information and communication technologies in developing countries, and I was grateful to be included on this team. Immortalized as TIER (Technology and Infrastructure for Emerging Regions), this team,
Preface and Acknowledgments

including Mike Demmer, Melissa Ho, R. J. Honicky, Matthew Kam, Sergiu Nedevschi, Joyojeet Pal, Rabin Patra, Matt Podolsky, Divya Ramachandran, and Sonesh Surana, provided an important intellectual home for the development of this project in Berkeley as well as in India, Qatar, and Venezuela. Renee Kuriyan served as an intrepid guide on our first trip to India together and remains an intellectual sounding board and valued friend.

Fieldwork in all of its inspiring and eye-opening glory is also often a lonely and isolating experience – I owe sincere thanks to those who helped me get there, who helped me meet the right people, and who became friends along the way. In India, I am indebted to Professor Ashok Jhunjhunwala, who provided much appreciated research advice and a home at the Indian Institute of Technology, Madras, during the early stages of this project. Lloyd, Susanne, and Matthew Rudolph facilitated my research in Rajasthan and elsewhere. Rohit Singh provided many important insights into Rajasthani political and bureaucratic practices and, with his wife Nina, offered even more impressive evidence of Indian hospitality. In Karnataka, Ram Manohar offered generous time, local contacts, and a firsthand view of Bangalore political history. Both academic inspiration and a welcomed social introduction to Bangalore were found with Indrani Medhi, Udai Pawar, Aishwarya Ratan, and Nimmi Rangaswamy – all, currently or formerly, of Microsoft Research India. Special thanks are due to Kentaro Toyama, who provided in-kind support for this project, worked tirelessly to foster a wide range of research on information technologies in developing countries, and always had something interesting to say. In South Africa, Nhlanhla Mabaso, on multiple occasions, provided intellectual guidance and new insights into the amazing city that is Johannesburg. My research in Brazil was expertly facilitated by Aaron Shaw, and I am grateful to Sérgio Amadeu for perspectives on Brazil’s technology-enabled reforms. I am particularly thankful for all those public- and private-sector representatives who graciously agreed to be interviewed for this project but will, for current purposes, remain nameless.

I was blessed, I believe, with the best possible cohort (plus a year or so on either side) in graduate school at Berkeley. I have been repeatedly inspired, comforted, excited, and challenged by Boris Barkanov, Naazneen Barma, Jordan Branch, Rebecca Chen, Naomi Choi, Brent Durbin, Darshan Goux, Matt Grossmann, Ken Haig, Rebecca Hamlin, Dave Hopkins, Amy Lerman, Mike Murakami, Mark Oleszek, Ely Ratner, Jessica Rich, Toby Schulze-Cleven, Sarah Snip Stroup, Regine Spector, and especially Thad Dunning, not to mention some key external participants, Tom Annese, Inseyeh Barma, Mark Haven Britt, Kyra Naumoff Shields, Erin Rowley, and John Stroup. It was, indeed, a great caper. Thanks also to those a bit ahead in the game, who offered fantastic advice and wonderful models of progress and success: Libby Anker, David Bach, Taylor Boas, Pat Egan, Ed Fogarty, Jill Greenlee, Martha Johnson, Naomi Levy, Keena Lipsitz, Megan Mullen, Abraham Newman, Tatishe Nteta, Grigo Pop-Eleches, Robin Turner, and
Preface and Acknowledgments

Zach Zwald, as well as those following closely behind, who provided a fresh perspective and the necessary incentive to get writing: Margaret Boittin, Jen Brass, Crystal Chang, Adam Cohon, Miguel de Figueredo, Jennifer Dixon, Veronica Herrera, Jody LaPorte, Danielle Lussier, Simeon Nichter, Sarah Reckhow, Neal Richardson, and Susanne Wengle. Participation in the South Asian studies group in the Political Science department was a special treat – I thank our leader Pradeep Chhibber and Matthew Baxter, Francesca Jensenius, Manoj Mate, Dann Naseemullah, Anasuya Sengupta, Vasundhara Sirnate, and Pavithra Suryanarayan for their keen insights and good cheer.

The world outside of academia played an important role in ensuring that I had the energy and stamina to finish this project. Eunpa Chae and Jill Jeffrey helped me keep it together, year after year. My husband, not to mention the wonderful extended family I gained through him, makes me feel at home, wherever we are. My grandparents, Paul and Ruth Fitzwater, who both saw the beginning of this journey but not its end, are forever in my heart. I thank my siblings, Kim Fields, Mark Bussell, and Scott Bussell, and their families, for their continued indulgences and, more importantly, enduring sense(s) of humor. My parents, Jean and Harold Bussell, have, I believe from day one, fostered my love for learning, through both their encouragement and their example. My admiration, gratitude, and love know no bounds. Thank you.