

Ashok K. Dutt · Allen G. Noble  
Frank J. Costa · Rajiv R. Thakur  
Sudhir K. Thakur *Editors*

# Spatial Diversity and Dynamics in Resources and Urban Development

Volume II: Urban Development

 Springer

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Rajiv R. Thakur • Sudhir K. Thakur

Editors

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# Preface

One of the most significant characteristics of urban development is uneven spatial development both in the core and peripheral regions of the world. This has caused a pronounced restlessness in both the core and peripheral regions. Conventional wisdom about urban development is fast undergoing sea changes and urban geographers are addressing these changes, helping us understand the diversity and dynamics in contemporary urban development issues. This book is a result of a project initiated by Ashok K. Dutt with his colleagues Allen G. Noble and Frank J. Costa (Department of Geography and Planning, University of Akron, Akron, Ohio) to provide a Festschrift in honor of Professor Baleshwar Thakur, former Vice-Chancellor of L. N. Mithila University, Darbhanga, Bihar, and Professor of Geography at the Delhi School of Economics, University of Delhi. Baleshwar Thakur has been a collaborator and contributor on several projects initiated at Akron. During the past more than four decades, Thakur has established his national and international credentials as one of the leading exponents of resource management and urban development. He has been recognized for his research contributions by the Association of American Geographer's Regional Development and Planning Specialty Group Distinguished Scholar Award, besides other recognitions such as the Commonwealth and Fulbright Scholarships and a Shastri Indo-Canadian Fellowship, among others. We take this opportunity to thank all the contributors to the volumes(s) and the family members of the editors in bearing the burden of being away from responsibilities while working on this project.

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Ashok K. Dutt  
Allen G. Noble  
Frank J. Costa  
Rajiv R. Thakur  
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**Part I**  
**Introduction**

# Chapter 1

## Introduction: Urban Development

**Rajiv R. Thakur, Ashok K. Dutt, Allen G. Noble, Frank J. Costa,  
and Sudhir K. Thakur**

**Abstract** This book is the second volume of a two-volume festschrift in honor of Professor Baleshwar Thakur – titled “Spatial Diversity and Dynamics in Resources and Urban Development.” The volume is intended to provide an opportunity for specialists in urban development who utilize urban development processes to understand urban practices, policy, and politics both in the metropolitan and peripheral regions of the world. The volume recognizes that the locus of urban development now lies in the transforming of peripheral regions of the world, which has caused a paradigm shift in regional and local decision making. Given this overview of urban development, this volume revisits our understanding of interdependencies between places and among scales. Beyond the applied nature of chapters, this volume engages with dynamic issues of urban development that can be approached from diverse perspectives. Consequently, contributions use cutting-edge theories and spatial techniques to examine dramatic changes in issues such as: urban growth in developing and transforming regions, infrastructure growth as an urban land shaper, proliferation of housing and squatter settlements, our changing perceptions and quality of urban life, impact of rural to urban migration on land use dynamics, impact of spatial division of labor on ethnicity in cities, the impact of locational decisions at the local and regional scales on metropolitan retail and wholesale space and structure, and the cumulative impact of all of this on future urban planning regulations.

**Keywords** Asian urbanization • Clusters • Glocalization • Metropolitan regions • Peripheral regions • Urban development • Urban space • Urban sustainability • Urban systems

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Urban development, as a process, is undergoing fundamental shifts in both the metropolitan and peripheral regions of the world. Under the impact of economic restructuring, since the 1990s, these changes have manifested in the uneven development of places, reregulation of commodity chains, spatial impacts of technology, and commodification of environmental degradation, among many others. All this has caused dramatic changes in the form and function of the Fordist cities of North America and Europe and the urban landscapes of the global south, requiring citizens, businesses, scientists, and policymakers alike to rediscover the connections between urban practices, policy, and politics (Scott 2012). To contextualize the foregoing comments, half the world's population is now urban (World Bank 2009). Clearly, the challenge for both metropolitan and peripheral regions of the world are different, even as the relationship between both demands competition and cooperation. To that end, urban development, as a process, practice, and profession, will require revisiting our understanding of interdependencies between places and among scales (Scott 2012). At local and regional scales, geographers have been assisting decision makers by providing information and analyses related to issues such as the management of hazards, the management of complex urban systems, and resource allocation, often wrestling with their overlapping roles as scientists and citizens.

Results of the dynamic growth of cities include our increased attention to issues such as urban growth in developing and transforming regions, infrastructure growth as an urban land shaper, proliferation of housing and squatter settlements, our changing perceptions and quality of urban life, impact of rural to urban migration on land use dynamics, impact of spatial division of labor on ethnicity in cities, the impact of locational decisions at the local and regional scales on metropolitan retail and wholesale space and structure, and the cumulative impact of all this on future urban planning regulations. Whether the issue at hand is assessing the financial vulnerability to climate related natural hazards or assessment of housing for low-income groups, all these changes are affecting urban development outcomes that decision makers must consider. Geographers along with other social and applied scientists for long have been contributing to urban policy decision making in a variety of ways, such as creating planning initiatives and providing spatial decision support systems.

Considering that the locus of urban development is in the peripheral regions of the world, to meet the challenges of rapid urbanization city leaders must move quickly to plan, network, and finance sustainable growth. The experience of urban demographic shifts in Asia, Sub-Saharan Africa, Latin America, and the Caribbean already shows that much of the transformations in terms of urban growth is happening in the small- and medium-sized cities of these regions (World Bank 2009). In Ethiopia, Ghana, Tanzania, and Uganda, redistribution of agricultural land and the reforms in land administration have already brought about social reengineering and computerization of land information systems (Byamugisha 2014). As a result, land policy, administration, and management have become areas of demand for technical and operational support in many parts of the world.

Cities themselves are functional regions connected with other places by networks of transportation, communication, finance, and trade. Effective urban policy

making requires an understanding of these spatial and functional characteristics. Bangladesh is an example of a country that has been working toward structural transformation of its economic production, thereby affecting its urban development outcomes in the long run. An aspect of this change is the creation of a globally competitive urban space through its successful garment industry (Muzzini and Aparicio 2013). Similarly, several Sub-Saharan African cities confront vast economic, social and environmental challenges, as a result of which both local governments and the international community have begun to work together to close the gap between infrastructure and services. Anticipating accelerated urban growth in African cities, there is a need for the following, namely, (a) a clear understanding of urbanization and sectoral policies in African cities, (b) focus on issues such as decentralization, basic services provision, and local governance issues, and (c) creation of a financial framework to address strategic and operational growth of infrastructure and local investment financing (Paulais 2012).

Rural to urban migration, whether in China, India, Brazil, Russia, the broader Asia-Pacific or Sub-Saharan Africa, has caused a paradigm shift in regional and local decision making (World Bank 2009). The Chinese experience of rural to urban migration in the past two decades has played a significant role in shaping the economic and demographic landscape of their cities (Yusuf and Saich 2008). In fact, China's mobility rate, their sheer size, and the dramatic economic and social consequences have been well documented in literature and in the media too. *Last Train Home* is a 2009 documentary film directed by Lixin Fan that has depicted how Chinese cities plunge annually into chaos when nearly 130 million migrant workers travel to their home villages for the New Year's holiday (Fan 2009). Although this discussion of urban policy provides us a perspective, the implications are that cities, of course, are more than built environments where people are primary components, and significant inequities exist among city dwellers with respect to the basic necessities of life.

Urban development in the metropolitan regions and that in peripheral regions have a systemic relationship. Many scholars have written about the economic crisis of late Fordism in North America and Europe in the 1970s, resulting in the rise of post-Fordism, which not only influenced the urbanization processes in the global north but also influenced the same processes in the global south after the 1990s (Sassen 2001; Scott 2012). In other words, the economic restructuring and competitiveness that followed the economic turbulences of the 1970s to the 1990s created a new geography of urban development. A significant characteristic of this new geography of urban development was that many regions moved away from pursuing large manufacturing facilities toward the redeployment of local assets, including a recognition of the potential of some service activities to foster economic growth, even in rural areas. As old manufacturing regions in the global north succumbed to competition from newly industrializing regions in the global south, a new wave of urban development occurred that was characterized by a new international division of labor (Coe et al. 2007). In other words, urban development in the newly industrializing countries was largely the product of the search for cheap and profitable locations. As such, steel mills closed in the mature industrial regions of the former

metropolitan world while semiconductor production moved to the newly industrializing world in places such as Malaysia and Thailand and peripheral regions of the global north, such as the M4 Corridor west of Central London and in the Silicon Glen near Glasgow, Scotland. With these changes in the geography of urban development comes the challenge of accelerated demand for basic urban services in the form of infrastructure, employment, land, energy, and affordable housing by the billions who are adding to the cities (Coe et al. 2007).

Given this overview of urban development, this volume is a festschrift in honor of Professor Baleshwar Thakur for his contributions to research in urban development and resource management in developing countries. Through his research, teaching, and services, Professor Thakur, during the past more than four decades, has established his national and international credentials as one of the leading exponents of resource management and urban development. He has been recognized for his research contributions by the Association of American Geographers' Regional Development and Planning Specialty Group's Distinguished Scholar Award, besides other recognitions such as the Commonwealth and Fulbright Scholarships, and a Shastri Indo-Canadian Fellowship among many others. In this spirit, the editors asked contributors to contextualize their research on issues and topics within urban development that Professor Thakur had pursued himself over the past more than four decades. The contributors examine cutting-edge theories explaining diversity and dynamics in urban development. Topics covered include human vulnerability to hazards, space and urban problematics, assessment and evaluation of regional urban systems and structures, and urban transformations as a result of structural change, economic development, and underdevelopment. The significance of these topics lie in the pace and volume of change as is happening in geography, reflecting continued development within established fields of inquiry and the introduction of significantly new approaches during the past decade. The book contains 25 chapters organized under eight parts: (1) Introduction, (2) Theoretical Basis, (3) Quantitative Analysis, (4) Economic Impact, (5) Infrastructure Development, (6) Housing, (7) Planning, and (8) Cities. Although this chapter organization may be dubbed as contentious and problematic, the editors argue that the articulation of what constitutes 'urban' is embedded in how we describe, interpret, and analyze a process, event, meaning, experience, and institutions within the urban arena.

The introductory part consists of two chapters. The first chapter is an overview on the theme of urban development and the second is a review of Professor Baleshwar Thakur's academic background and contributions to resource development in developing countries and urban development, with a particular focus on India. The second part, on theoretical basis, contains four chapters beginning with Sudhir Thakur's review of regional urban systems in India. The author identifies the trends in the existing literature. Drawing on evidence from four broad macro-regional urban systems, namely Delhi, Kolkata, Chennai, and Mumbai, the author takes regional differences into account to further understand trends, patterns, and implications. Given India's rapid urban growth, this chapter makes wonderful reading as the author presents several research directions for urban systems in India. Chapter 4 by Swapna Banerjee-Guha presents a critique of neoliberal urbanism in



the context of recent urban policies of India. This chapter is followed by two chapters with the central theme of 'urban sustainability.' In Chap. 5 Jitender Saroha analyzes sustainable urbanization in India, highlighting problems and limitations, and in Chap. 6 Chris Cusack and Kathryn Bill examine Nairobi's engagement with sustainable urban planning through the lens of 'glocalization' even as it plays a unique role as both capital and primate city for Kenya. Cusack and Bill advocate the need to develop strategic planning initiatives combining community knowledge with advanced technology through public participation GIS.

The third part, on 'quantitative analysis,' is composed of three chapters, two of which focus on aspects of Asian urbanization; the third chapter examines spatiotemporal patterns in Asian Indian settlements in major gateways of the United States. All three chapters use large data sets to provide an in-depth empirical analysis. Chapter 7, by Dutt, Costa, and Tetley, uses three different statistical techniques to establish that Asian urbanization is correlated with development and expenditure on development. The authors argue that because urbanization is believed to have been caused by migration from rural to urban areas, the best intervention may be by arresting urban explosion through policies that would manage socioeconomic development in rural areas. Chapter 8 is a unique contribution by Brunn, Devriendt, Boulton, Derudder, and Witlox who provide a very timely analysis of the impact of global financial crisis on urbanization processes in South and Southeast Asia. The uniqueness of this chapter lies in the use of the Worldwide Web as an alternative source of real-time urban rankings to understand the recent financial crisis at global and regional scales. The last chapter in this part, by Harvey, Butler, Henry, and Frazier, uses the concept of 'gateways' to examine the successive settlement patterns of Asian Indians in the United States. In many ways this chapter fills a gap in the under-researched topic of Asian Indian immigration to the United States. The authors break new ground as they draw upon case studies from the metroplexes of Dallas–Ft. Worth, Metropolitan Phoenix, and Austin, Texas, to conclude that Asian Indian immigration represents a significant and continuing current wave of immigration to the United States providing seeds to socioeconomic change.

Composed of four chapters, the fourth part of the book addresses the economic impact of urbanization processes, particularly in the non-Western context. In Chap. 10, Neil Reid and Jay Gatrell address the challenges experienced by 'clusters' in some non-Western contexts such as Brazil, India, and Nigeria. They also point out that the dynamics of economic development and urbanization in developing countries are distinct. After Sudhir Thakur's very elaborate review of regional urban systems in India in Part II, Chap. 11 engages the concept of 'urban systems' in India with a distinction. Dahiya studies growth and evolution of Indian urban systems with an emphasis to include all urban places with greater than 20,000 population, at national and macroregional levels, for a 100-year period, and relates urban size with economic development in each macroregion. His research contributes to our understanding of the changing structure and behavior of the national and macroregional urban systems in India, through successive time periods during the past century. In Chap. 12, Chatterjee and Noble contextualize the impact of the twin processes of globalization and urbanization on higher education in India. In other words, this

chapter advances the argument that Indian cities are evolving into a significant stock of human capital assets. The last chapter of this part, by Chatterjee, proposes a framework to understand the socioenvironmental aspects of risks that exist in urban India and their effects on the production and distribution of risks for the marginal population in its cities.

Part V provides three chapters that focus on the role of two key infrastructures, namely, high technology and transportation systems, on contemporary urban development. Infrastructure and contemporary urban development provide an extremely fertile ground to reflect upon issues such as sustained growth. Infrastructure is a true enabler for countries such as India through competitiveness, yet infrastructure development itself will not drive economic growth unless it is aligned with the country's economic, social, and environmental priorities. In Chap. 14, RajRani Kalra brings out findings from her research on the sociospatial impact of high technology in Bengaluru (formerly Bangalore). Kalra concludes that although high technology has proven to overcome the constraints of space and time, there is a distinct locational bias that has increased the gap between the haves and have-nots in the Bengaluru region. In Chap. 15, Ranjan, Lal, and Susaeta analyze the space-shrinking nature of Delhi's mass rapid transit system. They use a multinomial logit model to determine the effects of rider characteristics on mode choice. The last chapter in this part, by Gopa Samanta, is provocative. She examines critical issues of mobility and marginality for the 'cycle rickshaw' as a non-Western mode of transportation in South Asian cities. Samanta is bold in her research questions and lays bare the practice of using research methods to understand our urban social world.

Part VI contains three chapters that cover the dynamics of housing in a peripheral region. In keeping with the theme of housing but focusing on ethnic variables, José R. Díaz-Garayúa in Chap. 17 researches how they might influence housing values in metropolitan San Juan. His study helps to understand race, ethnicity, and place in the context of the island of Puerto Rico. In Chap. 18, Satya Prakash Kaushik examines the socioeconomic implications of extensive urban growth in the surrounding areas of Delhi, leading to large scale conversion of agricultural land into "farmhouses" for the rich. Many push-and-pull factors in the form of capital-intensive manufacturing activity and increased presence of multinational corporations has led to an overall increase in affluence and has caused the skyrocketing of real estate values. In the process of his research, the author examines the relationship between social capital, economic performance, and uneven regional development. The last chapter in this part, by Braj Raj Kumar Sinha, examines human migration in Bolpur Town. The chapter underscores the importance of decisions to relocate as a significant decision of households with far-reaching implications for the links between places. The significance of this study lies in the fact that as geographers learn more about demographic influences and economic circumstances on migration, population analysts should become better able to inform public policy at both national and local scales.

The seventh part of the book addresses urban policy and planning in the context of Indian cities such as Rohtak in Haryana, Varanasi in Uttar Pradesh, and Calcutta in West Bengal. Chapter 20 by Sangwan and Sangwan addresses the importance of

intracity use mobility in the city growth direction, laying emphasis on the planning of various land use components so that balance can be maintained among them within the city limits. Chapter 21 by Rana P.B. Singh provides an in-depth examination of the urban planning dynamics of the cultural and natural heritage of Varanasi City. The author presents the rationale for proposing Varanasi as a heritage city in the World Heritage list. The last chapter in this part, by Halder, Dutt, and Shi, focuses on an examination of the socioeconomic characteristics of Calcutta slums. The authors study the urban policy dynamics of slums in a hyper-urbanizing Calcutta (or Kolkata) whose socioeconomics is guided by an extensive informal economy and sizeable demographics that finds linkages to Bangladeshi migrant and refugee populations and the historical and geographic circumstances that are inevitably mired in poverty and desperation. Even though the three chapters deal with urban planning issues in the Indian context, yet these particularities most certainly merit treatment on their own terms and in their own right.

In the final part of the book, the chapter collection on ‘cities’ as a genre demonstrates that there is not, nor should there be, consensus in the urban arena. Beyond demonstrating rude diversity for its own sake, the author’s intention is that the different positions articulated here become the basis for critical reengagement. In Chap. 23, P.R. Sharma, A.N. Tiwary, and G.N. Singh examine the following for Lucknow and Mirzapur City: (1) how the spatial structures of Indian cities are affected by socioeconomic variations; (2) how the socioeconomic variations among Indian cities are manifest in their changing internal structure, population characteristics, and social patterns; and (3) how changes occur in the spatial patterns of the Indian cities in general with the analysis of the two cities representing different size categories of urban centers to evaluate spatial similarities and contrasts. Although the subject of urban futures is often associated with speculative scenarios, there will undoubtedly be some order through technological, innovation, and exclusionary social geographies. In Chap. 24, Annapurna Shaw examines the informal sector in the Kolkata metropolitan region to articulate a role for them in the process of local economic development. Considering that the growth and integration of the informal sector in local economic development assumes exploring a range of spatial strategies, Shaw compels the reader to reflect on the possibilities for alternative or non-capitalist informal sector geographies. The last chapter in this part and also in this volume, by Basu and Murnaghan, demonstrates how certain kinds of urban spaces are excluded in conventional policy planning. More specifically, the chapter demonstrates through case studies from New York City and Fatehpur Sikri in India how children become vulnerable and marginalized even in organized policy planning, revealing the complex connections between workplaces and homeplaces.

As you read the chapters of this book, you will agree the book is centrally concerned with dynamic issues that can be approached with diverse perspectives within the field of urban development and the related social science disciplines within which it is increasingly embedded. We hope that this book, and both volumes, will provide scholars and practitioners with a broad range of issues with multiple perspectives in both metropolitan and peripheral regions.

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## Chapter 2

# Baleshwar Thakur: Professional Career and Contributions

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Professor Baleshwar Thakur, 2013

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**Abstract** This chapter is a discussion of the growth, evolution, and contribution of Baleshwar Thakur (B.T.) to Indian geographic research. He is a doyen among Indian geographers and has been an acclaimed teacher, scholar, and administrator throughout his illustrious career of four and a half decades. He made immense contributions to the discipline and strived for its popularization both within and outside India. His research career can be divided into two phases: 1964–1980 and the post-1980s. During the first phase he was interested in understanding the long-term processes of urbanization in its regional context in developing countries, focusing on India, using quantitative methods. After accepting the position of Reader in Geography at the University of Delhi, his interests shifted to the study of natural resource management and the history of Indian geography, although he pursued his interest in urban geography as well. His contributions during the past five decades can be subdivided into four broad areas: urban geography, quantitative geography, natural resource management, and history of Indian geography. He continues to be actively engaged in research and publications, and his contributions serve as a model for young Indian geographers aspiring to become scholars.

**Keywords** Urban geography • Quantitative geography • Natural resource management • History of Indian geography

## 2.1 Background

Baleshwar Thakur (B.T.), nicknamed ‘*Bale*’ by his parents, is a doyen among Indian geographers. He has worn several hats to his distinction and has been an acclaimed teacher, scholar, and administrator through his illustrious career of four and half decades. He is among the few selected Indian geographers who transcends beyond the parochial boundaries of academic pursuit. He can be characterized as an ‘erudite knowledge seeker,’ and a ‘knowledge distributor’ to those who are passionate about knowledge and understanding the world through the lens of a perceptive geographer. He transmitted immense affection to his students and served on the graduate committees and doctoral dissertations of several dozens of students at Patna and Delhi University. He has an insatiable passion to push the ‘frontiers of academic knowledge’ beyond its boundaries. Although he retired from the University of Delhi in 2008, yet he spends hours reading journals, engaging in research, visiting the Ratan Tata Library at the Delhi School of Economics (DSE), University of Delhi; and would meet with students to advise them on their research projects. His commitment and dedication to research shows that one can retire from a university position but does not retreat from an academic life. Throughout his long career, he has been very much a field geographer and has traveled every nook and corner of the Indian subcontinent.

He was born on July 16, 1943 at Sarabey village of Madhubai district in North Bihar in a working-class family. He is the second of three siblings. His father and cousin uncle were influential in his early education that led him to obtain a first divi-