## **CONTENTS OF VOLUME 3**

Chapter 34 Introduction: Applied Urban Economics PAUL CHESHIRE and EDWIN S. MILLS  PART I: SPATIALLY RELATED RESEARCH  Chapter 35 Trends in Sizes and Structures of Urban Areas PAUL CHESHIRE  1. Introduction 2. The distribution of city sizes 2.1. Is there any underlying distribution of city sizes and, if there is, what form does it take? 2.2. Explanations of the distribution 2.3. Looser definitions of urban hierarchy 3. Economic geographical approaches 4. Intraurban patterns of development and change 5. Some recent trends References  Chapter 36 Urban Areas with Decentralized Employment: Theory and Empirical Work  MICHELLE J. WHITE  1. Introduction 2. Why do firms suburbanize?  132.	Introduction to the Series	v
Introduction: Applied Urban Economics PAUL CHESHIRE and EDWIN S. MILLS  PART I: SPATIALLY RELATED RESEARCH  Chapter 35 Trends in Sizes and Structures of Urban Areas PAUL CHESHIRE  1. Introduction 2. The distribution of city sizes 2.1. Is there any underlying distribution of city sizes and, if there is, what form does it take? 2.2. Explanations of the distribution 2.3. Looser definitions of urban hierarchy 3. Economic geographical approaches 4. Intraurban patterns of development and change 5. Some recent trends References  Chapter 36 Urban Areas with Decentralized Employment: Theory and Empirical Work  MICHELLE J. WHITE  1. Introduction 2. Why do firms suburbanize? 3. Theoretical models of decentralized cities 3.1. Models with endogenously determined employment location  132.  132.  133.  134.  135.  136.  137.	Contents of the Handbook	vii
Trends in Sizes and Structures of Urban Areas  PAUL CHESHIRE  1. Introduction 2. The distribution of city sizes 2.1. Is there any underlying distribution of city sizes and, if there is, what form does it take? 2.2. Explanations of the distribution 2.3. Looser definitions of urban hierarchy 3. Economic geographical approaches 4. Intraurban patterns of development and change 5. Some recent trends References  136  Chapter 36  Urban Areas with Decentralized Employment: Theory and Empirical Work  MICHELLE J. WHITE  1. Introduction 2. Why do firms suburbanize? 3. Theoretical models of decentralized cities 3.1. Models with endogenously determined employment location  138	Introduction: Applied Urban Economics	1325
Trends in Sizes and Structures of Urban Areas  PAUL CHESHIRE  1. Introduction 2. The distribution of city sizes 2.1. Is there any underlying distribution of city sizes and, if there is, what form does it take? 2.2. Explanations of the distribution 2.3. Looser definitions of urban hierarchy 3. Economic geographical approaches 4. Intraurban patterns of development and change 5. Some recent trends References  136  Chapter 36  Urban Areas with Decentralized Employment: Theory and Empirical Work  MICHELLE J. WHITE  1. Introduction 2. Why do firms suburbanize? 3. Theoretical models of decentralized cities 3.1. Models with endogenously determined employment location  138	PART I: SPATIALLY RELATED RESEARCH	
2. The distribution of city sizes 2.1. Is there any underlying distribution of city sizes and, if there is, what form does it take? 2.2. Explanations of the distribution 2.3. Looser definitions of urban hierarchy 3. Economic geographical approaches 4. Intraurban patterns of development and change 5. Some recent trends References  Chapter 36 Urban Areas with Decentralized Employment: Theory and Empirical Work  MICHELLE J. WHITE  1. Introduction 2. Why do firms suburbanize? 3. Theoretical models of decentralized cities 3.1. Models with endogenously determined employment location  134 134 135 136 137 137 137 137 137 137 137 137 137 137	Trends in Sizes and Structures of Urban Areas	1339
1. Introduction13702. Why do firms suburbanize?13733. Theoretical models of decentralized cities13843.1. Models with endogenously determined employment location1383	<ol> <li>The distribution of city sizes         <ol> <li>Is there any underlying distribution of city sizes and, if there is, what form does it take?</li> <li>Explanations of the distribution</li> <li>Looser definitions of urban hierarchy</li> </ol> </li> <li>Economic geographical approaches         <ol> <li>Intraurban patterns of development and change</li> <li>Some recent trends</li> </ol> </li> <li>References         <ol> <li>Chapter 36</li> </ol> </li> <li>Urban Areas with Decentralized Employment: Theory and Empirical</li> </ol>	1340 1342 1348 1351 1358 1361 1366 1369
<ul> <li>2. Why do firms suburbanize?</li> <li>3. Theoretical models of decentralized cities</li> <li>3.1. Models with endogenously determined employment location</li> <li>1382</li> <li>1383</li> </ul>		
3. Theoretical models of decentralized cities 1384 3.1. Models with endogenously determined employment location 1385		1376
3.1. Models with endogenously determined employment location 1385		1378
		1384
3.2. Models with exogenously determined employment loations 1.387		
	* *	1393
		1397 1401

	Are commuting patterns in decentralized cities "wasteful"? eferences	1404 1410
	apter 37	
	uality of Life and Environmental Comparisons SEPH GYOURKO, MATTHEW KAHN and JOSEPH TRACY	1413
1.	Introduction	1414
2.	Theoretical underpinnings	1416
	Recent econometric developments in estimating the quality of life	1422
	3.1. Specification bias problems and the interpretation of capitalization results	1422
	3.2. Group effects in the wage and housing data	1424
4.	New estimates of the quality of life: results, comparisons, and	
	analysis	1429
	4.1. Blomquist et al. (1988), "New estimates of the quality of life in urban areas"	1429
	4.2. Gyourko and Tracy (1991), "The structure of local public finance and the quality of life"	1430
	4.3. Stover and Leven (1992), "Methodological issues in the determination of the quality of	
	life in urban areas"	1433
_	4.4. Conclusions	1435
5.	The value of the environment and the urban quality of life—a detailed	
	analysis	1436
	5.1. Environmental hedonic prices: cross-city and within-city data and results	1436
	5.2. Limitations of capitalization studies of environmental quality	1440
	5.3. Econometric issues	1442
	5.4. Alternative valuation methods	1443
6.	The challenge of relaxing the equilibrium assumption in quality	
	of life analyses	1446
	Conclusions	1451
Re	eferences	1451
Ch	apter 38	
Ą	gglomeration Economies and Urban Public Infrastructure	1455
RA	NDALL W. EBERTS and DANIEL P. McMILLEN	
	Introduction	1457
2.	Agglomeration economies and urban theory	1460
	2.1. Descriptive analysis	1460
	2.1.1. Internal scale economies	1461
	2.1.2. Localization economies	1461
	2.1.3. Urbanization economies	1463

Contents of Volume 3	XV

	2.1.4. Modeling implications	1464
	2.2. Theoretical models of urban areas	1464
	2.3. Microfoundations of agglomeration economies	1468
3.	Estimates of agglomeration economies	1473
	3.1. Functional form of the production function	1475
	3.2. Level of aggregation	1478
	3.3. Specification of agglomeration economies	1479
	3.4. Alternative measures of urban size	1481
	3.5. Factor prices and cost functions	1483
	3.6. Omitted variables	1483
	3.7. Wage and rent equations	1485
	3.8. Spatial arrangement of cities	- 1486
<b>4.</b> ]	Public infrastructure	1486
	4.1. Infrastructure as a public input	1487
	4.2. Estimates	1488
	4.3. Studies including both agglomeration effects and public infrastructure	1490
5. (	Conclusions	1491
Re	ferences	1492
	RT II: URBAN MARKETS	
	ban Labour Markets	1499
	AHAM R. CRAMPTON	1.,,,
1.	Definitional and introductory issues	1501
	1.1. Introduction	1501
	1.2. Local labour market: definitions and operational problems	1502
2.	Residential and workplace location	1504
	2.1. Employment subcentres and the wasteful commuting controversy	1504
	2.2. Simultaneous modelling of residential and workplace location	1504
3.	Moves and quits, using micro and subaggregate data	1507
	3.1. Empirical modelling of intraurban moves and/or quits in workplace and job-related	
	residential change	1507
4.	The role of job search	1509
	4.1. Labour market search mechanisms	1509
	4.2. Some theoretical extensions to spatial labour market search models	1513
	4.3. Racial differences in labour market search activity	1514

5.	Implications of the changing structure of skill and status	151
	5.1. Variation in labour market behaviour with respect to skill, status and income	151
	5.2. Dual urban labour markets, the urban underclass, and the changing structure of labour	
	demand	1513
6.	Impact of gender, family structure and demographic factors on	
	urban labour market behaviour	152
	6.1. Theoretical contributions	152
	6.2. Empirical research on gender, family structures and urban labour markets	1522
7.	Spatial mismatch—residential segregation by race in cities, and	
	its implications for earnings and employment differences by race	1528
	7.1. Original formulation	1528
	7.2. More detailed research on racial segregation in urban residential models	1530
	7.3. Reviews and descriptive evidence lying behind spatial mismatch studies	1531
	7.4. Empirical research on the spatial mismatch	1533
	7.5. Some recent research using microsamples	1538
8.	Interurban differentials in labour market outcomes	1540
	8.1. Interurban variation in unemployment rates and durations	1540
	8.2. Wage rates—interurban differentials	1542
	8.3. Quality of life indicators	1544
9.	Intraurban wage and unemployment differences	1544
	9.1. Wage gradient estimation	1544
	9.2. Intraurban differentials in unemployment	1546
	Conclusions	1548
Ref	erences	1549
-	oter 40	
Urb	oan Housing Markets: Theory and Policy	1559
CHR	ISTINE M.E. WHITEHEAD	
1. ]	Introduction	1560
2. 7	The basic market relationships	1564
	2.1. What is housing?	1564
	2.2. The demand for housing	1566
2	2.3. Housing supply	1569
	2.3.1. The supply of new housing	1569
	2.3.2. Investment in the existing stock	1572
2	2.4. Housing markets	1573
	2.4.1. Aggregate models of the housing market	1573
	2.4.2. Urban housing models	1575

Contents of Volume 3	xvii
3. Urban housing policy	1577
3.1. Market versus administrative provision	1579
3.2. Housing and labour markets	1581
3.3. The impact of local taxation	1581
3.4. Rent control and its impact on the provision of rented housing	1582
4. Conclusions	1583
References	1585
Chapter 41	
Hedonic Analysis of Housing Markets	1595
STEPHEN SHEPPARD	
1. Introduction	1596
2. Theoretical foundation	1598
2.1. Implicit markets	1598
2.2. Hedonic price functions	1599
2.3. Structure of demand and welfare evaluation	1603
2.3.1. Properties of attribute demand	1604
2.3.2. Welfare analysis	1610
2.4. Hedonic price indices	1613
3. Implementation	1613
3.1. Estimation of hedonic price functions	1613
3.1.1. Parametric approaches	1614
3.1.2. Nonparametric approaches	1619
3.2. Estimation of demand for housing attributes	1619
3.2.1. Identification and endogeneity	1621
3.2.2. Specification	1630
3.2.3. Comparison with discrete choice approaches	1631
4. Conclusion	1631
References	1632
Chapter 42	
The Land Market and Government Intervention	1637
ALAN W. EVANS	
1. Introduction	1638
2. Zoning	1641
3. Conservation areas and historic districts	1647
4. Growth controls	1649
5. Planning gain and impact fees	1653

6	. Growth controls matter	1655
7	. The supply of land	1657
8	. Conclusions	1665
R	References	1667
P	ART III: URBAN DEVELOPMENT AND DEVELOPING COUNTRI	ES
~	J	
	hapter 43	
	Irbanization in Transforming Economies	1673
	HARLES M. BECKER and ANDREW R. MORRISON	
1.	. Patterns of urbanization in developing countries	1675
	1.1. Urbanization patterns and data issues	1675
	1.2. The great fertility deceleration and components of urban growth	1678
_	1.3. Survey themes	1681
2.	Models of city growth and empirical estimates	1682
	2.1. Urban labor markets: empirical microfoundations	1682
	2.1.1. Inequality in urban labor markets: segmentation and discrimination	1682
	2.1.2. Education and labor market outcomes	1687
	2.1.3. Economic crisis, adjustment and urban labor markets	1690
	2.2. Aggregate partial equilibrium migration models	1691
	2.3. Analytical general equilibrium models	1699
	2.4. Computable general equilibrium (CGE) models	1703
	2.5. Demo-economic approaches	1707
2	2.6. Migration of women and families	1712
3.	Impacts of public policy on urban growth	1718
	3.1. Structural adjustment	1718
	3.1.1. The structure of structural adjustment	1718
	3.1.2. Impacts of SAPs on urbanization	1719
	3.2. The urban bias thesis	1721
	3.3. Special problems of (ex)-socialist countries	1723
	3.3.1. Urbanization in the former USSR	1723
1	3.3.2. Urbanization in the People's Republic of China	1727
4.	Selected urban challenges: land use, transportation, public finance and	
	environment	1732
	4.1. Urban land use and land markets	1732
	4.2. Urban transport	1741
	4.3. Public finance and service provision	1745
	4.4. Environment	1748

Co	ontents of Volume 3	xix
5.	Macroeconomic impacts of urbanization and internal migration	1752
	5.1. Urbanization, poverty and income distribution	1752
	5.2. Demand patterns and economic structure	1757
	5.3. Efficiency impacts	1759
	5.3.1. Mega-city problems vs. agglomeration economies	1759
	5.3.2. Microeconomic and macroeconomic measures of urbanization's efficiency	1766
Re	eferences	1768
	apter 44	
E	conomic Analysis of Housing Markets in Developing and Transition	
E	conomies	1791
ST	EPHEN MALPEZZI	
1.	Introduction	1793
	1.1. Conceptual Framework	1794
2.	Housing markets: The basics	1795
	2.1. Property rights	1795
	2.2. Housing demand	1798
	2.2.1. Early literature	1798
	2.2.2. Recent literature	1802
	2.2.3. Cross-country demand models	1804
	2.3. Housing supply	1805
	2.3.1. Early cross-country research	1806
	2.3.2. Market wide effects on supply	1808
	2.3.3. Supply from the existing stock of housing	1809
	2.3.4. Housing upgrading	1810
	2.4. Tenure choice, tenure security, and mobility	1812
	2.4.1. Forms of tenure	1812
	2.4.2. Tenure choice	1813
	2.4.3. Mobility	1814
	2.5. Housing and the aggregate economy	1815
3.	Related markets	1817
	3.1. Housing finance	1817
	3.1.1. Housing finance and financial development	1817
	3.1.2. Housing finance and housing	1818
	3.1.3. Institutional and systemic issues	1819
	3.1.4. Mortgage design, and other technical details	1820
	3.2. Urban land markets	1821
	3.2.1. How land markets work	1822

3.2.2. Land prices across markets and over time	182
3.2.3. Prices within cities	182
3.3. Infrastructure	182
3.3.1. Water and sanitation	182
3.3.2. Urban transport	182
4. Housing policy	182
4.1. "Industrial organization" of the housing market	1830
4.1.1. Public housing	1830
4.1.2. Privatization of public housing	183
4.2. Subsidies	1832
4.3. Housing market regulation	1835
4.3.1. Subsidies, taxes, regulation, and other interventions: A simple model	1835
4.3.2. Rent control	1836
4.3.3. Is overregulation systematic?	1839
5. Current issues and research	1840
5.1. Taxonomy of countries and stylized "issue triage"	1840
5.2. Modes of analysis/data sources	1842
5.2.1. Recent research on housing indicators	1843
5.3. A general research agenda	1843
References	1845
Chapter 45	
Poverty in Developing Countries	1865
ERNESTO M. PERNIA and M. G. QUIBRIA	1005
1. Introduction	1866
2. Conceptual and measurement issues	1869
2.1. What is poverty?	1869
2.2. Poverty line	1870
2.3. Unit of analysis	1873
2.4. Equivalence scales	1874
2.5. Measurement of poverty	1876
2.5.1. Cardinal measurement	1876
2.5.2. Ordinal measurement	1879
2.5.3. Caveats on international comparisons	1880
3. Nature, characteristics and correlates of poverty	1881
3.1. Rural poverty	1882
3.2. Urban poverty	1886

Со	entents of Volume 3	xxi
4.	Gender and poverty	1890
	4.1. Access to land and employment	1894
	4.2. Access to capital and other related inputs	1896
5.	Poverty and population growth	1898
6.	Poverty and economic growth	1902
7.	Strategies and policies	1910
	7.1. Macroeconomic policies	1912
	7.2. Trade and industrialization policies	1914
	7.3. Land reform	1916
	7.4. Infrastructure	1917
	7.4.1. Human infrastructure	1918
	7.4.2. Physical infrastructure	1919
	7.5. Credit	1920
	7.6. Special employment programs	1922
	7.7. Targeting	1923
8.	Concluding remarks	1924
Aţ	ppendix	1927
Re	eferences	1928
PA	ART IV: URBAN SECTORS	
Che	apter 46	
Uı	ban Transportation	1937
KE	NNETH A. SMALL and JOSÉ A. GÓMEZ-IBÁÑEZ	
1.	Introduction	1939
2.	Highway infrastructure costs and congestion	1940
	2.1. Congestion severity and growth	1940
	2.2. Financing new infrastructure	1944
	2.3. Other supply-side measures	1946
	2.4. Demand-side measures for congestion relief	1948
	2.4.1. Land use controls	1949
	2.4.2. Public transit	1950
	2.4.3. Transportation demand management (TDM)	1951
	2.4.4. Pricing measures	1952
	2.5. Private toll roads	1955
	2.6. Conclusion	1957
3.	Motor vehicle air pollution	1958
	3.1. Damage estimates	1958

XXII Contents of Volume 3

	3.2. The relationship between congestion and pollution	1960
	3.3. Technological controls	1960
	3.4. Transportation control measures	1962
	3.5. Pricing policies	1963
	3.6. Conclusion	1964
4	. Motor vehicle accidents	1965
	4.1. Magnitude of accident costs	1965
	4.2. Issues in valuation	1966
	4.3. The demand for safety	1967
	4.4. Externalities	1968
_	4.5. Conclusion	1971
5.	Public transportation	1972
	5.1. Trends in ridership and subsidy	1972
	5.2. Explaining ridership trends and patterns	1974
	5.3. The pros and cons of subsidy	1976
	5.4. Rail versus bus	1978
	5.5. Privatization and deregulation	1981
	5.6. Paratransit and unconventional services	1986
	5.7. Conclusion	1988
	Conclusions	1989
Re	eferences	1990
Ch	apter 47	
So	orting and Voting: A Review of the Literature on Urban Public Finance	2001
ST	EPHEN ROSS and JOHN YINGER	2001
	Introduction	2003
2.	Positive theory	2003
	2.1. The impact of local fiscal variables on housing prices and community choices	2004
	2.2. The impact of bidding and sorting on public service levels and property tax rates	2019
	2.2.1. Key questions in models of public service determination	2019
	2.2.2. Examples of voting models	2023
	2.3. Models in which both housing and fiscal variables are endogenous	2026
	2.3.1. Epple, Filimon and Romer	2026
	2.3.2. Other equilibrium proofs	2029
3.	Empirical research	2030
	3.1. The impact of public services on housing market outcomes	2030
	3.1.1. Property tax capitalization	2030
	3.1.2. Public service capitalization	2030

Contents of Volume 3	xxiii
3.1.3. Heterogeneity	2035
3.1.4. Zoning	2036
3.2. The impact of bidding and sorting on public	service outcomes 2037
3.2.1. Income and price elasticities	2037
3.2.2. Population and community characteri	stics 2038
3.2.3. Tiebout bias	2040
4. Normative analysis	2042
4.1. The efficiency of a system of local government	ent 2042
4.1.1. Efficiency in a Tiebout/Hamilton mod	del 2042
4.1.2. The efficient allocation of people to c	communities 2043
4.1.3. The efficient selection of local public	services 2045
4.1.4. Conclusion	2048
4.2. The fairness of local public spending	2049
4.2.1. Sorting and equity	2049
4.2.2. Capitalization and equity	2050
4.3. Welfare analysis	2051
5. Conclusions	2052
Pafarences	2053

Author index

Subject index