

AMERICA'S SUBURBAN CENTERS

The land use-transportation link



ROBERT CERVERO

University of California, Berkeley

Boston

UNWIN HYMAN

London Sydney Wellington

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Unwin Hyman, Inc.

8 Winchester Place, Winchester, Mass. 01890, USA

Published by the Academic Division of

Unwin Hyman Ltd

15/17 Broadwick Street, London W1V 1FP, UK

Allen & Unwin (Australia) Ltd,

8 Napier Street, North Sydney, NSW 2060, Australia

Allen & Unwin (New Zealand) Ltd in association with the

Port Nicholson Press Ltd,

Compusales Building, 75 Ghuznee Street,

Wellington 1, New Zealand

First published in 1989

Library of Congress Cataloging-in-Publication Data

Cervero, Robert.

America's suburban centers.

Bibliography: p.

Includes index.

1. Commuting—United States. 2. Choice of transportation.
3. Suburbs—United States. 4. Business parks—United States.
5. Traffic congestion—United States. 6. Land use—United States.

I. Title.

HD5717.5.U6C47 1989 388.4'13143'0973 88-37836

ISBN 0-04-445333-7 (alk. paper)

British Library Cataloguing in Publication Data

Cervero, Robert

America's suburban centers : the land use - transportation link.

1. United States. Transportation. Policies

I. Title

380.5'068

ISBN 0-04-445333-7

Typeset in 10/11 point Times
Printed in Great Britain by
Cambridge University Press

AMERICA'S
SUBURBAN
CENTERS

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Preface

After completing a book several years ago, entitled *Suburban gridlock*, I became convinced that marked changes in how suburban workplaces are designed and built are absolutely essential if regional mobility is to be safeguarded in both the US and abroad in coming years. This initial research into suburban transportation issues suggested that the low-density, single-use character of many suburban work centers was a root cause of the congestion problems being faced in suburbia. While vehicles tend to circulate almost effortlessly once inside most suburban office parks and developments, roadways leading to them are all too often jammed because of the preponderance of automobiles with a single occupant. Thus, what we have witnessed during the 1980s is the construction of spacious, nicely landscaped suburban work settings that have had the unfortunate consequence of compelling most workers to commute alone, clogging up regional thoroughfares in the process.

To explore the extent to which this is true, I sought to carry out an empirically based study of the relationship between the physical design characteristics of suburban workplaces and the commuting choices of their workforces. This work represents the results of that effort. The research would not have been possible without the generous contributions of a number of organizations and individuals. Foremost, my thanks goes to the Office of Budget and Policy of the Urban Mass Transportation Administration, US Department of Transportation for their financial backing of this study. I am particularly indebted to Kenneth Bolton and Rob Martin for their inputs in both conceptualizing this project and revising earlier drafts. I also owe a debt of gratitude to the Rice Center for Urban Mobility Research both for administering the grant for this research and furnishing me with volumes of background material that went into the analysis. Gary Brosch, Jon Martz, David Hitchcock, and Philip Loukisas of the Rice Center all provided valuable assistance during various phases of the research. I also thank Bob Dunphy of the Urban Institute for making numerous reports and data sources available to me at the outset of the study. Finally, numerous individuals associated with the case sites used in this study, including developers, business association staff, local planners, and private employers, provided data, reports, and other support materials

which allowed this research to be conducted. All were generous with their time and shared their many insights on a host of suburban mobility and growth issues. Without their assistance and interest in the topic, this work could never have been completed.

Robert Cervero
April 1988

Acknowledgments

Financial support for this study was provided by the Urban Mass Transportation Administration, US Department of Transportation. I thank the Administration, along with the many agency staff and private developers, too many to list here, for their kind assistance and applaud them for having the foresight to support basic research on land use and transportation relationships in America's suburbs. I also thank Andy Oppenheimer and Roger Jones of Unwin Hyman, London, for their assistance in seeing this work to production. I alone, however, am responsible for any errors or omissions that might remain.

Contents

Preface	<i>page</i> vii
Acknowledgments	ix
List of tables	xv
List of figures	xvii
1 Introduction: suburban office growth and congestion	1
1.1 The suburban mobility crisis	1
1.2 Study purpose	2
1.3 Hypotheses	3
1.4 Suburban growth and congestion	4
1.5 International context	10
1.6 Study outline	12
Notes	14
2 Probing the suburban land use–transportation link: definitions and research methodology	15
2.1 Defining terms	15
2.2 Methodology	18
Notes	28
3 Land use, employment, and transportation characteristics of America’s SECs	29
3.1 Characterizing SECs in the United States	29
3.2 Scale, locational, and employment characteristics of SECs	30
3.3 Density, site design, and property ownership characteristics	33
3.4 Land uses and mixed-use activities	40
3.5 Jobs–housing balancing and on-site housing provisions	46
3.6 Transportation facilities and services in SECs	54
3.7 SEC commuting and traffic conditions	61
3.8 Summary	68
Notes	69
4 Classifying suburban employment centers	72
4.1 Forms of suburban growth	72
4.2 Factors for classifying SECs	74
4.3 Classification of case sites into SEC groups	78

4.4	Brief case summaries of SEC groups	86
4.5	Summary	101
	Notes	102
5	Comparison of land use and transportation characteristics among SEC groups	104
5.1	Introduction	104
5.2	Differences in size, location, and employment among SEC groups	105
5.3	Comparisons of densities, lotting, and ownership patterns among SEC groups	108
5.4	Comparison of land use compositions among SEC groups	113
5.5	Transportation facilities and services	120
5.6	Comparison of commuting choices and local traffic conditions among SEC groups	124
5.7	Summary: policy inferences	131
	Notes	132
6	Land use and work site factors influencing commuting choices in SECs	134
6.1	Introduction	134
6.2	Factors influencing mode choices in SECs	135
6.3	Factors influencing traffic conditions around SECs	142
6.4	Factors related to parking standards at SECs	147
6.5	Factors related to jobs-housing levels around SECs	151
6.6	Factors related to property ownership patterns in SECs	153
6.7	Case summary of work site factors influencing commuter choices in Pleasanton, California	154
6.8	Summary of hypothesis tests	164
	Notes	167
7	Case studies of land-use transportation issues in SECs in greater Seattle, Chicago, and Houston	168
7.1	Introduction	168
7.2	Seattle area case study	169
7.3	Chicago area case study	176
7.4	Houston area case study	184
7.5	Summary	193
	Note	194
8	Linking land use and transportation in SECs	195
8.1	Overview of research findings	195
8.2	Institutional responses	196
8.3	Legislative and regulatory responses	198
8.4	Density initiatives	201

<i>America's Suburban Centers</i>	xiii
8.5 Site design initiatives	202
8.6 Parking considerations	205
8.7 Mixed-use and jobs-housing initiatives	206
8.8 Closing remarks	209
Appendix 1 National survey on land use and travel characteristics of major suburban employment centers	211
Appendix 2 Cluster analysis summary	217
Bibliography	219
Index	226

List of tables

1.1	Ranking of the 20 US metropolises with the most traffic congestion in 1984.	<i>page</i> 9
2.1	Listing of case sites by state, metropolitan area, and jurisdiction.	22–3
3.1	Size, locational, and workforce characteristics of 57 large SECs in the US (1987).	31
3.2	Density, lotting, and land ownership characteristics of SECs.	34
3.3	Land use and mixed-use characteristics of SECs.	45
3.4	Housing provisions within and near SECs.	52
3.5	Transportation facilities and services.	55
3.6	Travel characteristics of workforce and areawide traffic conditions.	62
4.1	Factor loading and summary statistics for SECs.	76
4.2	Listing of cases within the six SEC groups.	80
4.3	Low-to-high thresholds for six SEC groups.	81
5.1	Comparison of size, location, and employment among SEC groups.	106
5.2	Comparison of density, lotting and ownership patterns among SEC groups.	108
5.3	Comparison of land use compositions and housing provisions among SEC groups.	115
5.4	Comparison of transportation facilities and services among SEC groups.	121
5.5	Comparison of workforce travel characteristics and areawide traffic volumes among SEC groups.	126
6.1	Stepwise regression results on factors influencing percentage of work trips (drive-alone mode).	136
6.2	Stepwise regression results on factors influencing SEC drive-alone commuting relative to regional averages.	137
6.3	Stepwise regression results on factors influencing percentage of work trips, by rideshare modes.	139
6.4	Stepwise regression results on factors influencing percentage of work trips, by walking and cycling modes (1).	140
6.5	Stepwise regression results on factors influencing percentage of work trips, by walking and cycling modes (2).	141
6.6	Stepwise regression results of factors influencing average commuting speeds.	143

6.7	Stepwise regression results of factors related to average journey-to-work travel time.	144
6.8	Stepwise regression results on factors related to level of service on main freeways serving SECs.	145
6.9	Stepwise regression results on factors related to level of service on main surface arterials serving SECs.	146
6.10	Stepwise regression results of factors related to parking per employee standards.	148
6.11	Stepwise regression results of factors related to parking per square footage standards.	149
6.12	Stepwise regression results of factors related to on-site jobs-housing ratios in SECs.	151
6.13	Stepwise regression results of factors related to ration of jobs to nearby housing units.	152
6.14	Stepwise regression results on factors related to property ownership patterns.	153
6.15	Stepwise regression results on factors related to developer land ownership shares.	154
6.16	Binomial logit results on likelihood of selecting share-ride modes.	159
6.17	Binomial logit results on whether employee commutes outside of both peak hours.	162
A.2	Dendrogram of cluster analysis of 57 SECs.	218

List of figures

1.1	Comparison of office growth in Boston area suburbs and central city, 1979–86	<i>page</i> 6
2.1	Location of 57 case sites in the United States.	24
2.2	Los Angeles–Orange County cases.	24
2.3	San Francisco–San Jose cases.	24
2.4	Denver cases.	24
2.5	New York–New Jersey–Connecticut cases.	24
2.6	Miami–Ft. Lauderdale–Palm Beach cases.	25
2.7	Atlanta cases.	25
2.8	Chicago cases.	25
2.9	Baltimore cases.	25
2.10	Washington, DC cases.	25
2.11	Boston cases.	25
2.12	Detroit cases.	26
2.13	Minneapolis–St. Paul cases.	26
2.14	Philadelphia cases.	26
2.15	Cleveland cases.	26
2.16	Dallas cases.	26
2.17	Houston cases.	26
2.18	Seattle cases.	27
3.1	Distribution of job classifications in SECs.	32
3.2	Alternative configurations of a 500-acre parcel.	38
3.3	Percentage of SECs in three growth categories, exclusive of corridors.	40
3.4	Percentage of floorspace in land use categories.	44
3.5	Percentage of work trips to SECs, by mode.	63
3.6	Percentage breakdown of average level of service on main roadways serving SECs.	67
4.1	New England Executive Park site plan.	89
4.2	The sub-city of Tysons Corner.	98
5.1	Share of workforce in professional job categories, by SEC type.	107
5.2	Plot of FAR versus employment size, by three SEC groups.	109
5.3	Average stories of lowest and highest buildings, by SEC groups.	110
5.4	Average building square footage per employee in five SEC groups.	111
5.5	Average setbacks for front and sides of buildings, by SEC groups.	111

5.6	Percentage of floorspace in retail and office uses, by SEC groups.	113
5.7	Percentage of floorspace in retail versus office use, by three SEC groups.	114
5.8	Comparison of land use entropy index among five SEC groups.	116
5.9	Average number of retail centers with floorspace over 50,117 square feet.	117
5.10	Plot of number of retail centers versus FAR, by three SEC groups.	117
5.11	Average jobs–housing ratios for five SEC groups.	119
5.12	Plot of dwelling units versus employment, by three SEC groups.	119
5.13	Average number of companies sponsoring vanpools and vans operating in SECs.	123
5.14	Average per cent of SECs with rideshare coordinators and offices.	124
5.15	Average per cent of work trips made to SECs, by drive alone versus ridesharing.	127
5.16	Average traffic volumes as per cent of capacity on main roadways serving SECs.	130
6.1	Plot of parking supply versus FAR, by three SEC groups.	149
6.2	Plot of percentage of floorspace in retail use versus supply, by SEC groups.	150
6.3	Location of Pleasanton in the San Francisco Bay Area.	157
6.4	Probability of shared-ride commute, by one-way trip length for employees of Pleasanton, California.	160
6.5	Probability of shared-ride commute, by number of employees at work sites in Pleasanton, California.	161
6.6	Probability of travel outside of a.m. and p.m. peak hours, by number of employees at work sites in Pleasanton, California.	163
7.1	Location of Bellevue CBD.	170
7.2	Residential locations of Oak Brook, Illinois employees.	182
7.3	Residential locations of Schaumburg, Illinois employees.	183
7.4	Major activity centers in Houston.	185
7.5	West Houston Energy Corridor.	189
8.1	Alternative road layouts within an office development.	203
8.2	Separate pedestrian and cyclist path system.	204

1

Introduction: suburban office growth and congestion

1.1 The suburban mobility crisis

Suburban America today finds itself in the throes of a mobility crisis. In greater Atlanta, Boston, Los Angeles, and at least a dozen other metropolitan areas around the country, bumper-to-bumper conditions are as common on cross town routes and outlying beltloops as on major downtown connectors. Along the Katy Freeway in suburban Houston, on Route 101 south of San Francisco, and along sections of Interstate 25 southeast of Denver, traffic crawls at under 12 m.p.h. during much of the morning and evening commute hours. Getting stuck in traffic jams, once a dubious distinction of downtown commuters, today affects nearly all Americans.

By and large, the suburbanization of congestion in America has paralleled the suburbanization of jobs throughout the 1980s. Surges in suburban office employment over the past ten years have fundamentally altered commuting patterns, giving rise to far more cross-town, reverse-direction, and lateral movements than in years past. The dispersal of both jobs and commuting has been a mixed blessing. While on the one hand it has relieved some downtowns of additional traffic and brought jobs closer to some suburbanites, on the other hand it has flooded many outlying thoroughfares with unprecedented volumes of traffic which they are incapable of handling and seriously threatened the very quality of living that lured millions of Americans to the suburbs in the first place.

The way suburban workplaces are being designed no doubt bears some of the blame for worsening congestion. Many suburban offices

have been built at densities far below those of their downtown counterparts, rendering mass transit an impractical travel option. The scaling of offices on a lateral rather than a vertical plane has spread out most buildings, creating a form of horizontal skyscraper, and made walking, cycling, and most forms of group travel far less convenient than (and less competitive with) the private automobile. Many suburban job centers, moreover, have a single dominant use, usually as offices; traditional downtown centers, by contrast, tend to have a rich variety of offices, shops, restaurants, banks, theaters, and other activities which intermingle. While downtown workers can easily walk to a restaurant or a merchandise store during lunch, those who work in many campus style office parks are virtually stranded in the midday if they do not drive their own car to work. If these kinds of built environments continue to evolve, the suburban workplace of tomorrow will become one which is hostile to commuting and circulating by almost any means other than the private automobile. This is the crux, it is believed, of the mobility crisis which is fast enveloping America's suburbs. The intent of the study which follows is to explore whether indeed this is the case and, if so, what can be done about it.

1.2 Study purpose

Suburbia's traffic problems have received considerable attention during the 1980s. A flurry of articles, research reports, and media accounts has identified suburban congestion as one of the most pressing problems in the transportation field today and, most probably, one that will hold center stage in the transportation policy arena for years to come (Cervero 1984, 1986b, Dunphy 1985, Leinberger & Lockwood 1986, Orski 1986a, 1987). To date, most research on the topic has focused on the economic and demographic forces that have given rise to suburban congestion as well as the most promising approaches to managing travel demand and financing infrastructure improvements.

The one area where there has been far less research and where a considerable knowledge gap remains is the relationship between suburban development patterns and mobility. More specifically, how the size, density, and land use make-up of suburban office and commercial centers affect the travel choices of their tenants' employees as well as areawide traffic conditions remains unclear and, at best, is treated in the literature mainly through anecdotes. Since transportation is a derived demand, i.e., people travel in order to access activities occurring in different places, transportation scholars have long argued that coordinated land use planning offers the most effective and enduring basis for improving mobility over the long run. And since