Public Transport covers the planning of all public transport systems (bus, coach, rail, taxi and domestic air travel) in Britain and other countries with similar systems. The term 'planning' is used both in the context of local authority and central government roles and in the work done by transport operators (for example, network structures, vehicle type selection).

The emphasis is primarily on the urban and regional market, with issues specific to long-distance and rural sectors considered separately. Material has been extensively updated to reflect changes in policy, recent statistical data and research outcomes. A new chapter has been added on the role of service quality and marketing. A concluding chapter examines the broader long-term policy issues.

Public Transport serves as a textbook for both specialist students in transport and those in related fields, such as planning, geography, civil engineering and business studies, who are taking optional courses in transport. It is also of interest to transport planners in local authorities and consultancies and managers in transport operations.

Peter White is Professor of Public Transport Systems, Department of Transport Studies, School of Architecture and the Built Environment, University of Westminster, UK.

TRANSPORT STUDIES / PLANNING WESTMINSTER Abbey

Trafalgar Square

The Natural and Built Environment series Series Editor: Professor John Glasson

Essential reading for undergraduate and postgraduate students, the books in **The Natural and Built Environment Series** are introductory and core texts. Each text provides a comprehensial account of a key planning topic.

Cover image: © Photolibrary

Routledge
Taylor & Francis Group

Buy tickets boarding on



Contents

	Illustrations	viii
	Preface	X
	Acknowledgements	xi
1	Organization and control of transport in the British Isles	1
	Great Britain and Northern Ireland	1
	The Irish Republic	5
	Public spending in Great Britain	6
	The operating industries in the United Kingdom	8
	Regulation	12
	Other organizations	14
2	The role of public transport	17
	The overall pattern	17
	Definitions	17
	Comparisons of bus and rail trip rates with the NTS	21
	Composition of the rail and bus markets	21
	Use of the 'trips per head' measure	22
	Variations in public transport use by age and sex	23
	Variations by time of day, and day of week	24
	The 'market gearing' concept	26
	The journey to work	27
	Other journey purposes	29
	Trip chaining	30
	Time spent in travel	30
	Changes in individuals' travel over time	31
	Taxis and private hire cars	32
	Public transport and car use	33
	The London case	34
	Aggregate forecasting of public transport demand	35

	0
V1	Contents

	Longer-term elasticities Policy implications	39 40
3	Service quality and marketing	43
	Limitations of aggregate demand forecasting	43
	Current service quality indicators	45
	User perception of service quality	48
	Quantifying the effects of service quality on ridership	49
	Marketing and quality initiatives by bus operators	50
	Marketing to the individual customer	53
	Conclusions	55
4		annami
4	The technology of bus and coach systems	57
	Design of the vehicle	57
	Buses on road networks	68
	Conclusion	
5	Urban railways and rapid transit systems	
	Early developments	
	Types of urban rail system	
		81
	Current rail developments in Britain	93
6	Network planning	97
	Typical structures	97
	Urban form and land use	98
	Design of public transport networks	100
	Park-and-ride (P&R)	113
	Public transport in low-density situations	116
	Appendix: a technique for illustrating optimal interstation spacing	
7	Costing and cost allocation methods	
	The structure of costs	121
	Cost allocation methods	127
	Rail cost allocation	131
	Examples of average costs	134
	Statistical models of cost structures	135
	Concluding observations	
8		137
	Basic concepts	137

		Contents	vii
	Peak costing		140
	Price elasticity		142
	The form of the demand curve, and its implications		146
	The travelcard concept		150
	Is there a case for premium pricing?		154
	Fare collection methods		155
	Conclusion		158
9	Rural public transport		160
	Defining 'rural'		160
	Improving 'conventional' public transport		168
	Alternative 'solutions' to the rural transport problem		170
	Impact of the 1985 Transport Act and subsequent policies		174
	Concluding observations		176
10		i inga a	178
	Introduction		178
	The present long-distance market in Britain		178
	Current patterns and recent trends within each mode		184
	Developments in technology		195
	The current network structure and policy issues		201
	Some concluding observations		202
1	Some current policy issues	diata ladw 1	205
	Long-run demand issues		205
	Population trends		205
	Car ownership		206
	Has a fundamental change occurred in the relationship between public		200
	transport use and established causal factors?		206
	Substitution for travel		207
	Capacity constraints		208
	Separation of infrastructure and operations		209
	Issues in pricing policy		210
	Issues in specific sectors		211
	The role of small vehicles		212
	Trip rates in major conurbations		212
	Environmental and sustainability issues		214
	Some concluding thoughts	delay .	215
	Index		
	THUCK	2	17