
Better Traffic And Revenue Forecasting

hearings before a subcommittee of the Committee on Appropriations, House of Representatives, One Hundredth Congress, second session

Railway Age

Improved Operation, Maintenance, and Financing of the Nation's Water

Transportation System, Including Coastal and Great Lakes Ports, the St. Lawrence

Seaway, and the Inland and Intracoastal Waterways

The Econometrics of Major Transport Infrastructures

Traffic Forecasting Accuracy Assessment Research

Forecast of Airline Passenger Traffic in the United States, 1959-1965

Policy, Management & Decision Making

Better Traffic and Revenue Forecasting

18th IFIP WG 6.11 Conference on e-Business, e-Services, and e-Society, I3E 2019, Trondheim, Norway, September 18-20, 2019, Proceedings

Monroe Connector/Bypass from Near I-485 at US 74 to US 74 Between the Towns of Wingate and Marshville, Mecklenburg and Union Counties

Report of the Annual Meeting

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Passenger Mile and Revenue Forecasting Practices

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Hearings Before the Subcommittee on Water Resources of the Committee on Public Works and Transportation, House of Representatives, Ninety-seventh Congress, Second Session, March 2, 3, 9, 10, 11, 16, 17, 18, 23, and 24, 1982

Land Use-Transport Interaction Models

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Interstate Commerce Commission Reports

Summary of Required Data for Revenue Forecasting and Potential Data Sources

Available at the Bureau of Corporate Planning of PT Garuda Indonesia : Final Report to PT Garuda Indonesia

Environmental Impact Statement

Information Requirements for Transportation Economic Analysis

Pseudo-probabilistic User Equilibrium Assignment in Travel Corridor Networks Containing Managed Facilities

Department of Transportation and related agencies appropriations for 1989
Forecasting of Highway Revenues Under Various Options
Pseudo-probabilistic User Equilibrium Assignment in Travel Corridor Networks
Containing Managed Facilities
Methods of Environmental and Social Impact Assessment
Hearings Before Subcommittee on Roads of the Committee on Public Works, House
of Representatives. Eighty-eighth Congress, First Session, on Section 134 of Title 23,
United States Code
Proceedings of a Conference, Irvine, California, August 19-21, 1999
Final System Plan for Restructuring Railroads in the Northeast and Midwest Region
Pursuant to the Regional Rail Reorganization Act of 1973: Part 1. Introduction and
summary. Part 2. Designations
Digital Transformation for a Sustainable Society in the 21st Century
Forecasts of Passenger Traffic of the Domestic Trunk Air Carriers, Domestic
Operations, Scheduled Service, 1965-1975
Environmental Impact Statement
Panama Canal finances
A Case Study of Two Toll Roads, One Public, One Private

*Better Traffic And
Revenue Forecasting*

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LLOYD CARNEY

hearings before a subcommittee of the Committee on Appropriations, House of Representatives, One Hundredth Congress, second

session Transportation Research Board
Demand and revenue forecasting for
transport concessions has an
inconsistent track record. There are
several reasons for this: a possible
optimism bias, the inherent uncertainty
in any forecast, limited data and a poor
choice of modelling tools. Therefore any
better approach must acknowledge
these constraints from the outset and be
adapted to deal with revenue risk. This
book addresses these issues on the basis
of 20 years of international experience
producing Traffic and Revenue
projections for a range of transport
concessions: Toll Roads, Managed Lanes,
LRT, BRT, Metro and Rail projects with
involvement of the private sector. It
includes an additional chapter on

Congestion Charging. The book is
divided into three parts. Part I covers the
context for the participation of the
private sector and the requirements
posed for demand forecasting. Part II is
more technical and describes the
strengths and limitations of the
modelling tools used in both
conventional and Traffic and Revenue
forecasting models; it deals with issues
like induced traffic, destination, mode
and time of travel choice and, of course,
discusses assignment in detail;
willingness to pay is central to this part.
Part III covers the practice of producing
forecasts for different types of
concessions: sound assumptions,
modelling price and means of payment,
growth models, treatment of congestion
and travel time reliability, optimal
pricing, annualisation, inflation and tariff
escalation. This part also deals with the
critical issue of future uncertainty with
suggestions for peer reviews, sensitivity
test, risk analysis and scenario planning.
The book should be of interest to
professionals working in procuring

authorities preparing a transport concession, consortia bidding for such projects and financial specialists seeking to get a better understanding of the techniques used for Traffic and Revenue forecasting. Planners developing projects where price and revenue risk are important will also gain useful insights. The text contains a large number of tables and figures, all in colour, and suggestions on writing a good Final Report. A website, www.bettertandr.com, complements the book. About the author Dr. Luis (Pilo) Willumsen has 15 years of experience in transport teaching and research plus two decades producing traffic and revenue projections for more than 50 different private sector projects in over 30 countries. He is co-author of *Modelling Transport*, a Wiley text describing the state of the art in the field and now in its fourth edition; he has also made some helpful contributions to modelling and forecasting techniques. He is currently an independent consultant and a Visiting Professor at University College London. *Railway Age* Transportation Research Board

Major transport infrastructures are increasingly in the news as both the engineering and financing possibilities come together. However, these projects have also demonstrated the inadequacy of most existing approaches to forecasting their impacts and their overall evaluation. This collection of papers from a conference organised by the Applied Econometric Association represents a state of the art look at issues of forecasting traffic, developing pricing strategies and estimating the impacts in a set of papers by leading authorities from Europe, North America and Japan.

Improved Operation, Maintenance, and

Financing of the Nation's Water Transportation System, Including Coastal and Great Lakes Ports, the St. Lawrence Seaway, and the Inland and Intracoastal Waterways The Stationery Office

Better Traffic and Revenue Forecasting *The Econometrics of Major Transport Infrastructures* Springer

Accurate traffic forecasts for highway planning and design help ensure that public dollars are spent wisely. Forecasts inform discussions about whether, when, how, and where to invest public resources to manage traffic flow, widen and remodel existing facilities, and where to locate, align, and how to size new ones. The TRB National Cooperative Highway Research Program's NCHRP Report 934: Traffic Forecasting Accuracy Assessment Research seeks to develop a process and methods by which to analyze and improve the accuracy, reliability, and utility of project-level traffic forecasts. The report also includes tools for engineers and planners who are involved in generating traffic forecasts, including: Quantile Regression Models, a Traffic Accuracy Assessment, a Forecast Archive Annotated Outline, a Deep Dive Annotated Outline, and Deep Dive Assessment Tables.

Traffic Forecasting Accuracy Assessment Research Routledge

Throughout the years, transportation organizations and agencies have been unable to keep up with increasing demand for roadway facilities. Similarly, traditional public-sector funding such as motor fuel taxes is falling short in meeting the growing demand for new transportation infrastructure. With deficit financing and congestion problems common to many highways throughout the United States, DOTs are turning to tolling the roadway facilities as a means of financing transportation

improvements for inter-urban and urban facilities. In turn, in order for managed facilities such as toll roads or managed lanes to be attractive and viable for the potential investors, the facilities must be predicted to generate sufficient revenue to cover the costs and also provide reasonable rates of return for debt servicing. This requires accurate revenue forecasting, which itself largely is based on an accurate traffic demand forecast. Therefore, the performance and reliability of models that forecast traffic demand for toll roads are critical, and the likelihood that forecasted revenue matches the actual revenue is solely based on the performance and reliability of these travel demand models. The purpose of this research is to evaluate the application of a pseudo-probabilistic route assignment method within a travel demand forecast model in order to forecast the diversion rate for a proposed tolled facility. This will result in an estimation of the future traffic of the tolled facility and its share of the total corridor demand. In addition, throughout this study, effort has been made to explore the existing toll road travel demand forecasting methods and address the technical modeling issues that affect the performance of such methods.

Forecast of Airline Passenger Traffic in the United States, 1959-1965 Better Traffic and Revenue Forecasting Demand and revenue forecasting for transport concessions has an inconsistent track record. There are several reasons for this: a possible optimism bias, the inherent uncertainty in any forecast, limited data and a poor choice of modelling tools. Therefore any better approach must acknowledge these constraints from the outset and be adapted to deal with revenue risk. This

book addresses these issues on the basis of 20 years of international experience producing Traffic and Revenue projections for a range of transport concessions: Toll Roads, Managed Lanes, LRT, BRT, Metro and Rail projects with involvement of the private sector. It includes an additional chapter on Congestion Charging. The book is divided into three parts. Part I covers the context for the participation of the private sector and the requirements posed for demand forecasting. Part II is more technical and describes the strengths and limitations of the modelling tools used in both conventional and Traffic and Revenue forecasting models; it deals with issues like induced traffic, destination, mode and time of travel choice and, of course, discusses assignment in detail; willingness to pay is central to this part. Part III covers the practice of producing forecasts for different types of concessions: sound assumptions, modelling price and means of payment, growth models, treatment of congestion and travel time reliability, optimal pricing, annualisation, inflation and tariff escalation. This part also deals with the critical issue of future uncertainty with suggestions for peer reviews, sensitivity test, risk analysis and scenario planning. The book should be of interest to professionals working in procuring authorities preparing a transport concession, consortia bidding for such projects and financial specialists seeking to get a better understanding of the techniques used for Traffic and Revenue forecasting. Planners developing projects where price and revenue risk are important will also gain useful insights. The text contains a large number of tables and figures, all in colour, and suggestions on writing a good Final

Report. A website, www.bettertandr.com, complements the book. About the author Dr. Luis (Pilo) Willumsen has 15 years of experience in transport teaching and research plus two decades producing traffic and revenue projections for more than 50 different private sector projects in over 30 countries. He is co-author of *Modelling Transport*, a Wiley text describing the state of the art in the field and now in its fourth edition; he has also made some helpful contributions to modelling and forecasting techniques. He is currently an independent consultant and a Visiting Professor at University College London. *Toll Road Traffic and Revenue Forecasts*

The Department for Transport received a further 52 representations between 10 June 2005 and 8 August 2007. This publication lists the significant issues raised in the consultation exercise followed by the detailed responses. *Policy, Management & Decision Making* Lulu.com

Environmental and social impact assessment (ESIA) is an important and often obligatory part of proposing or launching any development project. Delivering a successful ESIA needs not only an understanding of the theory but also a detailed knowledge of the methods for carrying out the processes required. Riki Therivel and Graham Wood bring together the latest advice on best practice from experienced practitioners to ensure an ESIA is carried out effectively and efficiently. This new edition:

- explains how an ESIA works and how it should be carried out
- demonstrates the links between socio-economic, cultural, environmental and ecological systems and assessments
- incorporates the World Bank's IFC performance standards, and best

practice examples from developing as well as developed countries • includes new chapters on emerging ESIA topics such as climate change, ecosystem services, cultural impacts, resource efficiency, land acquisition and involuntary resettlement. Invaluable to undergraduate and MSc students of ESIA on planning, ecology, geography and environment courses, this internationally oriented fourth edition of *Methods of Environmental and Social Impact Assessment* is also of great use to planners, ESIA practitioners and professionals seeking to update their skills.

[Better Traffic and Revenue Forecasting](#)
Routledge

Transport and the spatial location of population and activities have been important themes of study in engineering, social sciences and urban and regional planning for many decades. However, an integrated approach to the modelling of transport and land use has been rarely made, and common practice has been to model both phenomena independently. This book presents an introduction to the modelling of land use and transport interaction (LUTI), with a theoretical basis and a presentation of the broad state of the art. It also sets out the steps for building an operational LUTI model to provide a concrete application. The authors bring extensive experience in this cross-disciplinary field, primarily for an academic audience and for professionals seeking a thorough introduction.

18th IFIP WG 6.11 Conference on e-Business, e-Services, and e-Society, I3E 2019, Trondheim, Norway, September 18-20, 2019, Proceedings Springer
Nature

This title was first published in 2003. Airline operating profits are well

known to be volatile, and the global industry aggregate figures conceal wide differences in performance between carriers. The fundamental reasons for the poor performance of the industry as a whole were in the early 1990's that output ran too far ahead of demand, and the yield earned on output sold was insufficient to cover costs. In strategic context, this second edition uses a simple yet powerful model to explore linkages between the fundamentals of airline economics and the volatility of industry results at the operating level. Its five parts look in turn at strategic context, supply side, demand side, network management and a general conclusion.

Monroe Connector/Bypass from Near I-485 at US 74 to US 74 Between the Towns of Wingate and Marshville, Mecklenburg and Union Counties CRC Press

Conference participants sought to identify gaps in the data and analytic tools needed to support economic analysis as related to transportation investment and to develop research proposals designed to fill those gaps. The opening day of the conference featured presentations by economists, transportation analysts, and policy makers on the theory and practice of economic analysis and its usefulness to decision makers. The second and third days of the conference revolved around participatory workshops. Six separate working groups deliberated over three questions: (1) What is the appropriate level of investment in transportation to encourage economic health? (2) How should projects be prioritized within a multimodal transportation program? (3) How much revenue is likely to flow from user charges, tolls, and other sources? At the conclusion of its deliberations,

each working group developed a list of research proposals, which it then presented to the conference as a whole. Report of the Annual Meeting Kogan Page Publishers

This book constitutes the proceedings of the 18th IFIP WG 6.11 Conference on e-Business, e-Services, and e-Society, I3E 2019, held in Trondheim, Norway, in September 2019. The total of 61 full and 4 short papers presented in this volume were carefully reviewed and selected from 138 submissions. The papers were organized in topical sections named: e-business; big data analytics, open science and open data; artificial intelligence and internet of things; smart cities and smart homes, social media and analytics; digital governance; digital divide and social inclusion; learning and education; security in digital environments; modelling and managing the digital enterprise; digital innovation and business transformation; and online communities.

Hearings Before a Subcommittee of the Committee on Appropriations, United States Senate, Ninety-third Congress, Second Session, on H.R. 15405 ...

Introduction: One of the most important strategic planning capabilities for an airline is the development of a good working understanding of the markets it serves in its network. These capabilities will include extensive market share and trend analysis, route development and expansion analysis, and long-term fleet planning, just to name a few topics. The bureau of Corporate Planning at Garuda has identified the need to significantly improve its analytical abilities in the area of traffic forecasting, in order give Garuda an effective advantage in the increasingly competitive airline industry within Indonesia and in South East Asia. In an effort to establish a comprehensive

set of computer databases for passenger traffic forecasting at Garuda, a team of researchers from the MIT Flight Transportation Laboratory and Garuda personnel from the bureau of Corporate Planning (DQ) has started the process of collecting data from several sources both within the Garuda airline organization, and also external entities to the company. At present, the initial database includes limited information from the Indonesian Airport Authorities, the Tourism Ministry, the OAA Orient Airline Association, the ICAO International Civil Aviation Organization, IATA International Air Transport Association, and Garuda's Information Systems (DX). The following list outlines the desirable data for passenger revenue and demand forecasting at Garuda. It incorporates data sources currently available in Corporate Planning, as well as sources that have been identified as being necessary for the successful development of robust demand and traffic forecasting methodologies at Garuda. The current status and progress in the data collection is then given, for each individual data source. Further action items are identified, and recommendations are made for future activity in the research program.

Passenger Mile and Revenue Forecasting Practices

Revised and updated to cover developments and thinking in transport economics, the book examines the application of economics techniques first, to commercial transport operations, second, to public policy issues and third, to the role of transport in its wider economic context.

Reports and Decisions of the Interstate Commerce Commission of the United States

Throughout the years, transportation organizations and agencies have been unable to keep up with increasing demand for roadway facilities. Similarly, traditional public-sector funding such as motor fuel taxes is falling short in meeting the growing demand for new transportation infrastructure. With deficit financing and congestion problems common to many highways throughout the United States, DOTs are turning to tolling the roadway facilities as a means of financing transportation improvements for inter-urban and urban facilities. In turn, in order for managed facilities such as toll roads or managed lanes to be attractive and viable for the potential investors, the facilities must be predicted to generate sufficient revenue to cover the costs and also provide reasonable rates of return for debt servicing. This requires accurate revenue forecasting, which itself largely is based on an accurate traffic demand forecast. Therefore, the performance and reliability of models that forecast traffic demand for toll roads are critical, and the likelihood that forecasted revenue matches the actual revenue is solely based on the performance and reliability of these travel demand models. The purpose of this research is to evaluate the application of a pseudo-probabilistic route assignment method within a travel demand forecast model in order to forecast the diversion rate for a proposed tolled facility. This will result in an estimation of the future traffic of the tolled facility and its share of the total corridor demand. In addition, throughout this study, effort has been made to explore the existing toll road travel demand forecasting methods and address the technical modeling issues that affect the performance of such methods.

Construction Into the Powder River Basin, Powder River Basin Expansion Project

Toll roads, bridges and tunnels represent the most popular class of infrastructure attracting international private finance today. Many deals, however, expose financiers, insurers and other project counterparties to demand risk. This moves traffic and revenue forecasts centre-stage in terms of being able to understand and test the investment proposition - yet the forecasting process itself often remains a mystery.

Additionally, there are frequent concerns about predictive reliability. Written specifically for credit analysts, investors and other professionals whose primary expertise lies outside transportation, this book lifts the lid on the 'black box' of traffic and revenue forecasting. The

author, Robert Bain (ex-S&P and a civil engineer with 20+ years of forecasting experience) has prepared a straightforward guide which highlights key issues to watch for and suggests ways in which the forecasts can be analysed to improve transparency and investor understanding.

Hearings Before a Subcommittee of the Committee on Appropriations, House of Representatives, Ninety-seventh Congress, First Session

Transportation Planning in Certain Urban Areas

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