MAXIMISING THE ECONOMIC RETURNS OF ROAD INFRASTRUCTURE INVESTMENT

by

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submitted in accordance with the requirements

for the degree of

DOCTOR OF COMMERCE

in the subject

TRANSPORT ECONOMICS

at the

UNIVERSITY OF SOUTH AFRICA

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NOVEMBER 2004

SUMMARY

The aim of this study is to explore ways to maximise the economic returns of road infrastructure investment. In order to achieve this objective, the study was divided into five parts involving the following: analysing the nature of road infrastructure, determining the relationship between road infrastructure investment and economic development, considering aspects of economic modelling, developing a formula of road investment, and refocusing road investment practices.

In the first part the characteristics of road infrastructure are examined and the demand and supply approaches to road investment outlined. The focus is on the balanced approach versus the unbalanced approach to infrastructure investment. The second part analyses the causal relationship between road investment and economic development. Four components are highlighted, namely the investment component, the network-performance component, the transport economic component and the economic development component. The third part analyses the applicability of modelling techniques. In the fifth part, the formula of road investment and economic development is focused on four markets. Finally, it is argued that road infrastructure investment must be refocused.

The following was found:

Road infrastructure investment must be demand led. This is because of the characteristics of roads, namely their indivisibility, long gestation period, lumpiness and high cost.

Road infrastructure investment can only realise economic development if the four causality components are complied with simultaneously.

Input-output modelling is preferred in South Africa. The modelling strategy developed in this study is recommended for transport economic studies.

The probability of economic returns of road infrastructure investment is a function of the real estate market, the land development market, the urban economic market and the infrastructure market.

An agenda for reform in the road investment industry was also proposed.

The study clearly identifies the relationship between road infrastructure investment and economic development, and the proposed formula is an appropriate tool for a first-order priority system.

KEY TERMS

Economic returns; Road infrastructure; Land development; Real estate; Urban economics; Economic development; Road investment; Economic modelling; Causality; Demand led; Priority system; Unbalanced approach; Nature of roads; Maximising returns; Decision making.

ACKNOWLEDGEMENTS

I would like to express my gratitude to the following persons and institutions:

- Prof M Shahia, my promoter, for his advice and guidance

- Prof A Brits, for his continuous input and comments

- The University of South Africa (Department of Transport Economics and Logistics) and the National Department of Transport (Northern Centre of Development) for their financial assistance

- Ms ME Joubert from the Editorial Department of the University of South Africa for the linguistic editing

- The following colleagues at the City of Tshwane Metropolitan Municipality who assisted me with modelling, typing, editing and technical matters:

  Ms A Schoeman
  Mr K Olivier
  Mr M Babamia
  Mr H Wehmeyer
  Mr J van den Berg

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REFERENCES

ABBREVIATIONS

Anon	Anonymous
CBD	Central business district
CSIR	Council for Scientific and Industrial Research
DBSA	Development Bank of South Africa
DETR	Department of Environment, Transport and Regions
DOT	Department of Transport
DPA	Directly productive activities
DTI	Department of Trade and Industry
ER	Economic returns
GDP	Gross domestic product
GGP	Gross geographic product
GNP	Gross national product
GPMC	Greater Pretoria Metropolitan Council
ICASS	Integrated corridor assessment system
IRR	Internal rate of return
LED	Local economic development
LOS	Level of service
MCA	Multi criteria analysis
MCDC	Mabopane Centurion Development Corridor
MOTE	Model of transport and the economy
MSA	Moving South Africa

NBI	National Business Initiative
NPV	Net present value
SA	South Africa
SC	Social capital
SDI	Spatial development initiatives
SMC	Social marginal cost
SMME	Small, medium and micro enterprises
TCC	Transport Coordinating Committee
TPS	Typology and priority system
UE	Urban-Econ
USA	United States of America