

VU Research Portal

Information Technologies and Travel

Gubins, S.

2015

document version

Publisher's PDF, also known as Version of record

[Link to publication in VU Research Portal](#)

citation for published version (APA)

Gubins, S. (2015). *Information Technologies and Travel*. Tinbergen Institute.

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal ?

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

E-mail address:

vuresearchportal.ub@vu.nl

Contents

List of figures	iii
List of tables	v
List of abbreviations and symbols	vi
Preface	xi
1 Introduction	1
1.1 Motivation	1
1.2 Information technologies in transport	3
1.3 Road pricing	7
1.4 Overview of the thesis	10
2 Teleworking and congestion: A dynamic bottleneck model	13
2.1 Introduction	13
2.2 Teleworking within Vickrey's dynamic bottleneck model	15
2.3 Marginal willingness to pay for and externalities of teleworking technologies	21
2.4 Supply of teleworking technologies	26
2.5 Teleworking with the first-best road toll	33
2.6 Summary and conclusions	35
Appendix	38
3 Dynamic bottleneck congestion and residential land use in the monocentric city	45
3.1 Introduction	45
3.2 Model setup	48
3.3 Solution of the model	54
3.4 Unpriced market equilibrium	60
3.5 City with first-best road pricing	62
3.6 Sensitivity analysis and other policies	70
3.7 Summary and conclusions	72

4	Welfare effects of road pricing and traffic information under alternative ownership regimes	75
4.1	Introduction	75
4.2	Model	77
4.3	Pricing	82
4.4	Numerical simulations	92
4.5	Sensitivity analysis	98
4.6	Summary and conclusions	101
5	Teleworking technologies and travel	105
5.1	Introduction	105
5.2	Methodology	109
5.3	Empirical analysis	115
5.4	Sensitivity analysis	122
5.5	Conclusions	123
	Appendix	125
6	Conclusions	127
6.1	Summary	127
6.2	Policy implications	131
6.3	Future research	132
	References	135
	Nederlandstalige samenvatting (summary in Dutch language)	145