



# Professor WJ (Wessel) Pienaar

## Qualifications

2000 : PhD (Engineering) in Civil Engineering (University of Stellenbosch)

1985 : DComm in Transport Economics (University of South Africa)

1983 : MS in Civil Engineering (University of California, Berkeley)

1981 : MEcon in Transport Economics (University of Stellenbosch)

### **Overview of research interests**

Logistics

Transport Economics (including also cost-benefit analysis)

Transportation Engineering

### **Publications**

### Accredited Journals

- 1. PIENAAR WJ. The road engineer and economics. *IMIESA, The official journal of the Institute of Municipal Engineers of Southern Africa.* Vol 6, No 8, pp 13-25. 1981.
- 2. PIENAAR WJ. Car fuel consumption under urban travel conditions. *Journal of the South African Institute of Civil Engineers*. Vol 24, No 8, pp 309-314. 1982.
- 3. MAY AD, PIENAAR WJ (principal author), ROSE CA. Use of the NCHRP signalized intersection capacity method a South African experience. *Transportation Research Record* 971, pp 32- 40. Transportation Research Board. National Research Council, 1984.
- 4. PIENAAR WJ. The 1985 US Highway Capacity Manual, what the South African traffic engineer can expect, with the emphasis on signalized intersections. *Journal of the South African Institute of Civil Engineers*. Vol 28, No 5, pp 175-180. 1986.
- 5. PIENAAR WJ. Fuel consumption rates of road vehicles on rural roads. *Journal of the South African Institute of Civil Engineers* 1993; 35(1):16-19.

- 6. PIENAAR WJ. The determination of economic benefits and costs of passenger transport terminals and transfer facilities. *Journal for Studies in Economics and Econometrics* 1995; 19(2):23-41.
- 7. SCHUMANN CAW, ADAMS TC, PIENAAR WJ. Road construction by contractors in South Africa. *Journal of the South African Institution of Civil Engineers* 1996; 38(2):1-11.
- 8. PIENAAR WJ. Consideration of welfare distribution in project evaluation and selection. *Journal of the South African Institution of Civil Engineering* 1997; 39(1):25-28.
- 9. VAN WALBEEK CP, PIENAAR WJ. Forecasting the demand for South African rail goods transport. *Journal for Studies in Economics and Econometrics* 1997; 21(3):25- 45.
- 10. PIENAAR WJ. Railway governance in a free-functioning transport market: the position of Spoornet. *Journal of the International Union of Railways*. 1997; 28(10):196-202.
- 11. PIENAAR WJ. How to compile a specialist report. *South African Journal of Science and Technology* 1998; 17(3):121-126.
- 12. PIENAAR WJ. How to write a specialist report. South African Journal of Science and Technology 1998; 17(4):149-154.
- 13. SPAMER JS, PIENAAR WJ. Guidelines for the implementation of an owner-driver scheme. *South African Journal of Business Management* 1998; 29(4):164-172.
- 14. PIENAAR WJ. Accommodation of welfare distribution in the economic evaluation and selection of public transport projects. *Administratio Publica* 1999; 9(2):19-35.
- 15. PIENAAR WJ, VISAGIE SE. Guidelines for the choice of economic transport infrastructure projects. *Administratio Publica* 2000; 10(1):91-107.
- NEUBRECH SE, PIENAAR WJ. Possible implications of the price, cross-price and income elasticities of the demand for public road transport in the Cape metropolitan area – a co-integration analysis. *Journal for Studies in Economics and Econometrics* 2001; 25(3):57-73.
- 17. STANDER HJ, PIENAAR WJ. Road use taxation and external costs in South Africa. *Civil Engineering* 2001; 9(1):13-16.
- 18. PIENAAR WJ, BESTER CJ. Modelling the non-monetary component of generalised travel costs for use in the cost-benefit analysis of bus transit facilities. *Journal of the South African Institution of Civil Engineering* 2002; 44(1):2-8.
- 19. PIENAAR WJ. Guidelines for the choice of public infrastructure projects. 2002; 21(2):47-55. South

- African Journal of Science and Technology 2005; 24(4):108-117.
- 20. PIENAAR WJ. Logistics: its origin, conceptual evolution and meaning in modern usage. *Lexikos* 2002; 12(1):227-238.
- 21. STANDER HJ, PIENAAR WJ. Perspectives on freight movement by road and rail in South Africa. *Transport World Africa* 2002; 1(1):27-29.
- 22. LOUBSER JS, VISAGIE SE, PIENAAR WJ. Logistics planning with the aid of simulation modelling: a case study. *Orion, Journal of the Operations Research Society of South Africa*. 2002; 18(1/2):1-19.
- 23. PIENAAR WJ. Logistics management: its origin, conceptual evolution and meaning as a contemporary field of study. South African Journal of Science and Technology 2003; 22(2 & 3):52-60.
- 24. PIENAAR WJ. Rail or road? An overview. Civil Engineering 2003; 11(9):18-21.
- 25. SCHUTTE IC, VAN NIEKERK AJ, PIENAAR WJ, BESTER CJ. RED model customised for South Africa. *IMIESA, The official journal of the Institution of Municipal Engineering of Southern Africa*. 2004; 29(2): 50.
- 26. PIENAAR WJ. Operations Research: An indispensable toolkit for the logistician. *Orion, Journal of the Operations Research Society of South Africa*. 2005; 21(1): 77-91.
- 27. STANDER HJ, PIENAAR WJ. Road cost allocation in South Africa. *Civil Engineering* 2005; 13(9):16-19.
- 28. PIENAAR WJ. Estimation of increased regional income that emanates from economically justified road construction projects. *South African Journal of Science and Technology* 2005; 24(4):108-117.
- 29. PIENAAR WJ. The mathematical basis of business logistics as a field of study. *South African Journal of Science and Technology* 2006; 25(2):111-123.
- 30. BOTES FJ, JACOBS CG, PIENAAR WJ. A model to calculate the cost of logistics at a macro level: A case study of South Africa. *Southern African Business Review* 2006; 10(3):1-18.
- 31. STANDER HJ, PIENAAR WJ. Perspectives on the externalities of road usage in South Africa. *Civil Engineering* 2006; 14(9):23-26.
- 32. PIENAAR WJ. Calculating travel costs. *IMIESA, The official journal of the Institution of Municipal Engineering of Southern Africa*. 2007; 32(1):27-31.

- 33. VOGT JJ, PIENAAR WJ. The cross-dock: a new viewpoint on the definition and the design of the facility. Southern African Business Review 2007; 11(1).
- 34. SEEGMULLER DM, VISAGIE SE, DE KOCK HC, PIENAAR WJ. Selection and scheduling of jobs with time-dependent duration. *Orion, Journal of the Operations Research Society of South Africa.* 2007; 23(1).
- 35. PIENAAR WJ. Government's role in land freight transport. *IMIESA, The official journal of the Institution of Municipal Engineering of Southern Africa*. 2007; 32(7):37-41.
- 36. PIENAAR WJ. A proposed regulatory framework for road and rail freight transport in South Africa. South African Journal of Science and Technology 2007; 26(4):265-278.
- 37. PIENAAR WJ. Petroleum pipeline transport: an operational overview. *IMIESA*, *The official journal of the Institution of Municipal Engineering of Southern Africa*. 2007; 32(9):28-35.
- 38. PIENAAR WJ. The physical components of a pipeline transport system. *IMIESA, The official journal of the Institution of Municipal Engineering of Southern Africa.* 2007; 32(10):44-51.
- 39. PIENAAR WJ. Life cycle of a petroleum pipeline system.. *IMIESA, The official journal of the Institution of Municipal Engineering of Southern Africa*. 2007; 32(11):51-55.
- 40. PIENAAR WJ. Economic aspects of pipeline transport. *IMIESA, The official journal of the Institution of Municipal Engineering of Southern Africa.* 2008; 33(1):59-67.
- 41. KRYGSMAN SC, PIENAAR WJ, JACOBS CG, VAN NIEKERK AJ. Version 3.2 of the RED model. *IMIESA, The official journal of the Institution of Municipal Engineering of Southern Africa*. 2008; 33(2):48-49.
- 42. PIENAAR WJ. Logistics aspects of pipeline transport in the supply of petroleum products. *South African Journal of Science and Technology.* 2008; 27(2):102-122.
- 43. PIENAAR WJ. Economic evaluation of the proposed road between Gobabis and Grootfontein, Namibia. South African Journal of Economics. 2008; 76(4): 667-684. (This is an ISI indexed journal.)
- 44. PIENAAR WJ. Economic aspects of pipeline transport: a South African perspective. South African Journal of Science and Technology. 2009; 28(2): 119-139.
- 45. PIENAAR WJ, NEL JH. Mathematical principles of road congestion pricing. *Orion, Journal of the Operations Research Society of South Africa.* 2009; 25(1): 45-51.

- 46. PIENAAR WJ, NEL JH. Road traffic accidents: the risks of alcohol abuse. *Imiesa, The official journal of the Institution of Municipal Engineering of Southern Africa*. 2009; 34(10): 56-63.
- 47. PIENAAR WJ. The regulation of commercial petroleum pipeline operations: A South African example. *Corporate Ownership & Control* 2010; 7(3): 188-192. (This is an IBSS indexed journal.)
- 48. PIENAAR WJ. Guidelines for the investment choice of capital projects by public corporations. *Corporate Ownership & Control* 2010; 7(3): 407-415. (This is an IBSS indexed journal.)
- 49. PIENAAR WJ. Railway corporate governance in a free-functioning freight transport market: A South African position. *Corporate Ownership & Control* 2010; 7(3): 448-453. (This is an IBSS indexed journal.)
- 50. PIENAAR WJ. Efficiency and effectiveness aspects of petroleum pipeline operations. *IMIESA, The official journal of the Institution of Municipal Engineering of Southern Africa.* 2010; 35(10): 105-111.
- 51. PIENAAR WJ. Logistics aspects of petroleum pipeline operations. *Journal of Transport and Supply Chain Management*, 2010; 4(1): 224-242.
- 52. PIENAAR WJ. Logistics management aspects of planning, implementing and controlling commercial petroleum pipeline operations. *Corporate Ownership and Control* 2010; 8(1): 447-455. (This is an IBSS indexed journal.)
- 53. VOGT JJ, PIENAAR WJ. Implementation of cross-docks. *Corporate Ownership and Control*, 2010; 8(1): 474-484. (This is an IBSS indexed journal.)
- 54. LOUW JJ, PIENAAR WJ. Framework for advanced supply chain planning: Large-scale petrochemical companies. *Corporate Ownership and Control*, 2011; 8(3): 452-463. (This is an IBSS indexed journal.)
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- 56. HAVENGA JH, PIENAAR WJ, SIMPSON, Z. A case for measuring logistics costs on a national level: A South African application. *Corporate Ownership and Control*, 2011; 8(3): 622-631. (This is an IBSS indexed journal.)
- 57. VOGT JJ, PIENAAR WJ. Operational criteria for a successful cross-dock-based supply chain. Corporate Ownership and Control, 2011; 8(4): 193-200. (This is an IBSS indexed journal.)
- 58. PROPER JW, PIENAAR WJ. Resilience as an imperative in public transport organisations. *Corporate Ownership and Control*, 2011; 8(4): 373-388. (This is an IBSS indexed journal.)

- 59. HAVENGA JH, PIENAAR WJ, Framework for rail freight transport revival in South Africa. *Corporate Ownership and Control*, 2011; 8(4): 451-461. (This is an IBSS indexed journal.)
- 60. DE BOD A, HAVENGA JH, PIENAAR WJ, Potential impact of traffic densification on rail freight transport cost in Sub-Saharan Africa. *Corporate Ownership and Control*, 2011; 8(4): 508-513. (This is an IBSS indexed journal.)
- 61. PIENAAR WJ. Application of systems analysis and operations research methodology in the execution and control of business logistics processes. *Corporate Ownership and Control* 2011; 9(1): 196-202. (This is an IBSS indexed journal.)
- 62. HAVENGA JH, PIENAAR WJ, The creation and application of a national freight flow model for South Africa. *Journal of the South African Institution of Civil Engineering* 2012; 44(1): 2-13. (This is an ISI and IBSS listed journal.)
- 63. PIENAAR WJ, HAVENGA JH, SIMPSON, Z. VAN EEDEN J. Long term container volume forecasting: Decoupling gross domestic product and container movements. *Corporate Ownership and Control* 2012; 9(3): 217-229. (This is an IBSS indexed journal.)
- 64. PIENAAR, W. J., DE BOD, A. and HAVENGA, J.H. Economies of density in rail freight transport: potential for utilisation in Southern Africa. *Risk governance and control: financial markets and institutions* 2012; 2(1): 16-21. (This is an IBSS indexed journal.)
- 65. PIENAAR, W.J. Overview of salient economic features of the modes of freight transport for use in the formulation of national transport policy in South Africa. *Risk governance and control: financial markets and institutions* 2012; 2(2): 33-47. (This is an IBSS indexed journal.)
- 66. PIENAAR, W.J. Overview of business procurement processes in South Africa. *Corporate Ownership and Control* 2012; 10(1): 311-316. (This is an IBSS indexed journal.)
- 67. PIENAAR, W.J. Quantifying freight transport volumes in developing regions: Lessons learnt from South Africa's experience during the 20<sup>th</sup> century. *Economic History of Developing Regions* 2012; 27(2): 87-113. (This is an ISI and IBSS listed journal.)
- 68. PIENAAR, W.J. The likely role of an executive logistics and supply chain management portfolio on the boards of private industrial corporations. *Corporate Board: Role, Duties and Composition* 2013; 9(1): 18-25. (This is an IBSS indexed journal.)
- 69. VOGT, J.J., PIENAAR, W.J. Choosing a logistics supply chain on the basis of opportunity cost. *Corporate Ownership and Control* 2013; 10(4): 291-296. (This is an IBSS indexed journal.)
- 70. PIENAAR, W.J. Opportunities for the achievement of economies of scale in freight transport. *Corporate Ownership and Control* 2013; 11(1): 161-174. (This is an IBSS indexed journal.)

- 71. HAVENGA, J.H., SIMPSON, Z., DE BOD, A., PIENAAR, W.J. Rail Benchmarking new paradigms: a South African position. *Corporate Ownership and Control* 2013; 11(1): 233-242. (This is an IBSS indexed journal.)
- 72. PIENAAR, W.J. Comparative economic efficiency, operating costs and fuel consumption rates of freight transport modes between the largest industrial cities and seaports in South Africa. *Risk Governance and Control* 2013; 3(3): 16-27. (This is an IBSS indexed journal.)
- 73. HAVENGA, J.H., VAN EEDEN, J., PIENAAR, W.J. Supply chain cost improvement opportunities through streamlining cross-border operations. *Risk Governance and Control* 2013; 3(3): 28-34. (This is an IBSS indexed journal.)
- 74. PIENAAR, W.J. Practical road cost recovery methods. *Imiesa, The official journal of the Institution of Municipal Engineering of Southern Africa* 2013; 38(11): 64-70.
- 75. PIENAAR, W.J. Overview of procurement need specification and the organisation of supply chain processes to fulfil customers' needs in South Africa. *Corporate Board: Role, Duties and Composition* 2013; 9(2): 12-21. (This is an IBSS indexed journal.)
- 76. PIENAAR, W.J. Inclusion of welfare distribution objectives in the evaluation and selection of transport infrastructure projects. *Risk Governance and Control* 2013; 3(4): 54-60. (This is an IBSS indexed journal.)
- 77. PIENAAR, W.J. Road cost allocation and recovery: criteria, objectives and principles. *Imiesa, The official journal of the Institution of Municipal Engineering of Southern Africa* 2014; 39(2):55-63.
- 78. PIENAAR, W.J. The application of systems analysis to enhance the performance of logistic systems in supporting economic growth and development. *Corporate Ownership and Control* 2014; 11(2):485-495. (This is an IBSS indexed journal.)
- 79. PIENAAR, W.J. Planning of road construction projects with a view to stimulating economic growth and Development. *Journal of Governance and Regulation* 2014; 3(3): 61-67. (This is an IBSS indexed journal.)
- 80. PIENAAR, W.J. Die uitbreiding van kostevoordeelontleding met sosiale evaluering in die beplanning van openbare padbouprojekte: voorstel ter ondersteuning van die skep van 'n ontwikkelingstaat.

  Tydskrif vir Geesteswetenskappe 2014; 54(4): 1-18. (This is an ISI listed journal.)

### **Proceedings**

- 1. PIENAAR WJ. Road user benefits in evaluation studies. Annual Transport Research Conference, Vol 1(1):1-14, CSIR, Pretoria, 1980.
- PIENAAR WJ. Measuring car user benefits associated with South African urban freeways. Sixty second annual conference of the Transportation Research Board, National Research Council, Vol 62:D.1-D18, Washington, D.C., USA, 1983.
- PIENAAR WJ, MAY AD. Use of the NCHRP signalized intersection capacity method A South African experience. Sixty third annual conference of the Transportation Research Board, National Research Council, Vol 63:B.1-B.22, Washington, D.C., USA, 1984.
- 4. PIENAAR WJ. Right of way demands and effectiveness of possible solutions to the urban transportation problem in South Africa. International Symposium on Urban Transportation. Vol 1(II):254-273. China Road Federation/ International Road Federation/Road Engineering Association of Asia and Australasia, Taipei, Taiwan, 1986.
- 5. PIENAAR WJ. Possible solutions to urban transport problems in Southern Africa. World Highways: Traffic & Transport Solutions Conference. Vol 2:26-34. Amsterdam, Netherlands, 1992.
- 6. PIENAAR WJ. Resolving urban transport problems and conflicts in South Africa. International Road Federation Conference, Vol 1:A.21-A.36, Calgary, Canada, 1994.
- PIENAAR WJ. Economic evaluation of passenger transport terminals and transfer facilities.
   Proceedings of the Australasian Transport Research Forum Conference. 1996:2.1-2.20. Auckland,
   New Zealand.
- PIENAAR WJ. Modelling generalised transit commuter costs for use in urban transport planning. Proceedings of the Third International Conference on Urban Transport and the Environment for the 21st Century. 1997:307-315. Acquasparta, Italy.
- 9. PIENAAR WJ. Railway governance in a free-functioning transport market: the position of Spoornet. Proceedings of the World Railway Congress. 1997:196-202. Marrakech, Morocco.

- PIENAAR WJ. Railway regulatory reform pre-requisites in a free-functioning transport market: the position of Spoornet. Papers of the 21st Australasian Transport Research Forum Conference. 1997:407-418. Adelaide, Australia.
- 11. PIENAAR WJ, SPIES PH. The future of rail transport in Southern Africa. Proceedings of the World Congress on Railway Research. 1997:363-368. Florence, Italy.
- 12. PIENAAR WJ. Preconditions to keep rail transport viable in a future South Africa. Proceedings of the First International Conference on Traffic and Transportation Studies, American Society of Civil Engineers. 1998:60-68. Beijing, China.
- PIENAAR WJ, HEYNS GJ. Cost-benefit analysis of passenger transport terminals. Proceedings of the Fifth International Conference on Urban Transport and the Environment for the 21st Century. 1999:471-480. Rhodes, Greece.
- 14. PIENAAR WJ, VAN RENSBURG RAJ. Modelling generalised rail commuter costs for use in urban transport planning. Book of Paper Summaries of the World Congress on Railway Research. 1999:55 pp. and CD-Rom. Tokyo, Japan.
- PIENAAR WJ. Inclusion of welfare distribution objectives in the economic evaluation and choice of urban transport projects. Proceedings of the Eighth Regional Seminar for labour Based Practitioners. The Egyptian Social Fund For Development and International labour Organisation. 2000:1-13. Cairo, Egypt.
- 16. STANDER HJ, PIENAAR WJ. Do South African road users receive a fair deal? Proceedings of the Annual South African Transport Conference. 2000: CD-Rom, 10 pp. Pretoria.
- STANDER HJ, PIENAAR WJ. Road use taxation and external costs in South Africa. Proceedings of the South African Road Federation 50th Anniversary conference. 2000: CD-Rom, 10 pp. Cape Town.
- 18. PIENAAR WJ. Business Logistics Management as academic discipline a South African perspective. Proceedings of the First International Conference on Integrated Logistics, 2001:313-316. Singapore.
- 19. STRYDOM G, PIENAAR WJ. The development of logistics in the military. Proceedings of the War and Society in Africa Conference of the Faculty of Military Science, University of Stellenbosch. 2001: CD-Rom, 12 pp. Saldanha.

- 20. STANDER HJ, PIENAAR WJ. Perspectives on freight movement by road and rail in South Africa. Proceedings of the Annual South African Transport Conference. 2002: CD-Rom, 13 pp. Pretoria.
- 21. BOTES FJ, PIENAAR WJ. A Methodological Framework for Measuring the Economic Benefits of Generated Traffic by means of an Increase in Economic Land Value. Transportation Research Board of the National Academies, 83<sup>rd</sup> Annual Meeting. 2004: CD-Rom, 14 pp. Washington.
- 22. STANDER HJ, PIENAAR WJ. Road Congestion and the Alleviation of Poverty. Proceedings of the Quadrenial Conference of the South African Institute of Civil Engineers, 2004: CD-Rom, 13 pp. Pilanesberg, South Africa.
- 23. PIENAAR WJ. Logistics: Its origin, conceptual evolution and meaning as a contemporary management discipline. Proceedings of the International Logistics Congress 2004: "Developing Value Networks Through Logistics and Transport." Dokuz Eylul University. Izmir, Turkey. 2004.
- 24. STANDER HJ, PIENAAR WJ. The future movement of freight by road and rail in South Africa. Proceedings of the Annual South African Transport Conference. 2005: CD-Rom, 11 pp.
- 25. PIENAAR WJ. Economic evaluation of the proposed road between Gobabis and Grootfontein, Namibia. European Transport Conference. Palais de la Masique et des Congres, Strasbourg, France, Association for European Transport 2005: pp. 1-19.
- 26. STANDER HJ, PIENAAR WJ. Perspectives on the externalities of road usage in South Africa.
  Proceedings of the Third International Road Federation Regional Conference for Africa. Durban.
  2006: CD-Rom, 8 pp.
- PIENAAR WJ. Economic planning and analysis of commercial petroleum pipeline transport.
   Proceedings of the European Transport Conference 2009. Leeuwenhorst Conference Centre,
   Leiden, Netherlands. Association for European Transport 2009: pp. 1-13. ISBN 9781 905 701 049.
- PIENAAR WJ. Salient economic features of the modes of freight transport for consideration in the formulation of national transport policy. Proceedings of the European Transport Conference 2013. Goethe University, Frankfurt, Germany. Association for European Transport 2013: pp. 1-11. ISBN 978 1 905 701 087.

 PIENAAR WJ. Application of systems analysis to enhance the performance of new road networks in supporting economic growth and development. Proceedings of the European Transport Conference 2014. Goethe University, Frankfurt, Germany. Association for European Transport 2014: pp. 3.1-3.13. ISSN 2313-1853.

### **Books**

- 1. PIENAAR WJ. How to write a technical transportation report, pp 67. Stellenbosch: Transportia, 1994. ISBN 0 620 17662 8.
- PIENAAR WJ & VOGT JJ. Business logistics management: A value chain perspective. 4<sup>th</sup> edition, pp
   Cape Town: Oxford University Press. ISBN 978 0 19 905713 9.

### Chapters in books

- 2. PIENAAR WJ. Traffic flow on signalized networks and at signalized intersections, 2.1-2.19. Chapter 2 in: Guidelines for the application of traffic signal phasing and control equipment. Kruger P, Stander HJ, Pienaar WJ & Lombard JH. Manual PG 1/87. Pretoria: National Transport Commission, 1987. ISBN 0 908381 700.
- PIENAAR WJ. Application of phasing strategies, 4.1-4.10. Chapter 4 in: Guidelines for the application of traffic signal phasing and control equipment. Kruger P, Stander HJ, Pienaar WJ & Lombard JH. Manual PG 1/87. Pretoria: National Transport Commission, 1987. ISBN 0 908381 700.
- 4. PIENAAR WJ. How to write a technical transportation report, pp 67. Stellenbosch: Transportia, 1994. ISBN 0 620 17662 8.
- PIENAAR WJ. Basic principles and background information with respect to the cost-benefit analysis
  of urban transport projects, 2.1-2.23. Chapter 2 in: Guidelines for conducting the economic
  evaluation of urban transport projects. Hromic M, Botes FJ, (eds). Cape Town: Municipality of
  Cape Town, 1994. ISBN 1 874924 392.
- PIENAAR WJ. Basic principles and background information with respect to the economic evaluation of urban transport projects, 2.1-2.26. Chapter 2 in: Guidelines for conducting the economic evaluation of urban transport projects. Second edition. Hromic M, (ed). Cape Town: Municipality of Cape Town, 1995. ISBN 1 874924 627.
- PIENAAR WJ. The economic evaluation of passenger transport terminals and transfer facilities, 5.1-5.15. Chapter 5 in: Guidelines for conducting the economic evaluation of urban transport projects. Second edition. Hromic M, (ed). Cape Town: Municipality of Cape Town, 1995. ISBN 1 874924 627.

- 8. PIENAAR WJ. Consideration of income distribution in project evaluation. Appendix in: Guidelines for conducting the economic evaluation of urban transport projects. Second edition. Hromic M, (ed). Cape Town: Municipality of Cape Town, 1995. ISBN 1 874924 627.
- 9. PIENAAR WJ. Basic principles of the economic evaluation and choice of urban transport projects, 2.1-2.40. Chapter 2 in: Guidelines for conducting the economic evaluation of urban transport projects. Third edition. Pienaar WJ, (ed). Cape Town: Municipality of Cape Town, on behalf of the Committee of Urban Transport Authorities (CUTA), 2001.
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- PIENAAR WJ. Income distribution considerations, A.1-A.12. Appendix A in: Guidelines for conducting the economic evaluation of urban transport projects. Third edition. Pienaar WJ, (ed). Cape Town: Municipality of Cape Town, on behalf of the Committee of Urban Transport Authorities (CUTA), 2001.
- PIENAAR WJ. Regional developmental benefits, B.1-B.14. Appendix B in: Guidelines for conducting the economic evaluation of urban transport projects. Third edition. Pienaar WJ, (ed). Cape Town: Municipality of Cape Town, on behalf of the Committee of Urban Transport Authorities (CUTA), 2001.
- 13. PIENAAR WJ. Competitive advantage created by logistics, 18-31. Chapter 2 in: Business Logistics Management: Theory and Practice. Vogt JJ, Pienaar WJ, De Wit PWC, (eds). Cape Town: Oxford University Press, 2002, ISBN 019 578011 6.
- PIENAAR WJ. The transport system, 156-175. Chapter 11 in: Business Logistics Management: Theory and Practice. Vogt JJ, Pienaar WJ, De Wit PWC, (eds). Cape Town: Oxford University Press, 2002, ISBN 0 19 578011 6.
- PIENAAR WJ. Transport management, 176-205. Chapter 12 in: Business Logistics Management: Theory and Practice. Vogt JJ, Pienaar WJ, De Wit PWC, (eds). Cape Town: Oxford University Press, 2002, ISBN 0 19 578011 6.
- PIENAAR WJ. International logistics, 206-231. Chapter 13 in: Business Logistics Management: Theory and Practice. Vogt JJ, Pienaar WJ, De Wit PWC, (eds). Cape Town: Oxford University Press, 2002, ISBN 0 19 578011 6.
- 17. PIENAAR WJ. E-business in logistics, 254-269. Chapter 16 in: Business Logistics Management: Theory and Practice. Vogt JJ, Pienaar WJ, De Wit PWC, (eds). Cape Town: Oxford University Press, 2002, ISBN 0 19 578011 6.

- 18. PIENAAR WJ, BOTES FJ, JACOBS CG. Macro-economic perspective, 12-16. Chapter 6 in: The first State of Logistics Survey in South Africa 2004. Pretoria: CSIR, 2004.
- PIENAAR WJ. Introduction to business logistics, 1-18. Chapter 1 in: Business Logistics Management: Theory and Practice. Second edition. Vogt JJ, Pienaar WJ, De Wit PWC, (eds). Cape Town: Oxford University Press, 2005, ISBN 019 578850 8.
- PIENAAR WJ. Competitive advantage created by logistics, 19-33. Chapter 2 in: Business Logistics Management: Theory and Practice. Second edition. Vogt JJ, Pienaar WJ, De Wit PWC, (eds). Cape Town: Oxford University Press, 2005, ISBN 019 578850
- PIENAAR WJ. Tactical logistics management, 59-77. Chapter 4 in: Business Logistics Management: Theory and Practice. Second edition. Vogt JJ, Pienaar WJ, De Wit PWC, (eds). Cape Town: Oxford University Press, 2005, ISBN 019 578850 8
- 22. PIENAAR WJ. The transport system, 185-204. Chapter 11 in: Business Logistics Management: Theory and Practice. Second edition. Vogt JJ, Pienaar WJ, De Wit PWC, (eds). Cape Town: Oxford University Press, 2005, ISBN 019 578850 8
- PIENAAR WJ. Transport cost and pricing principles, 205-223. Chapter 12 in: Business Logistics Management: Theory and Practice. Second edition. Vogt JJ, Pienaar WJ, De Wit PWC, (eds). Cape Town: Oxford University Press, 2005, ISBN 019 578850 8
- PIENAAR WJ. Transport management, 224-244. Chapter 13 in: Business Logistics Management: Theory and Practice. Second edition. Vogt JJ, Pienaar WJ, De Wit PWC, (eds). Cape Town: Oxford University Press, 2005, ISBN 019 578850 8
- PIENAAR WJ. International logistics, 245-275. Chapter 14 in: Business Logistics Management: Theory and Practice. Second edition. Vogt JJ, Pienaar WJ, De Wit PWC, (eds). Cape Town: Oxford University Press, 2005, ISBN 019 578850 8
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- 10. PIENAAR WJ. Role and place of Operations Research in the education of logisticians at the University of Stellenbosch. Annual Conference of the Operations Research Society of South Africa. Bellville, 2000.

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### Membership and committees

1983 - 2003 : American Society of Civil Engineers

1983 - 2003: Institute of Transportation Engineers (ITE)

1992 - 2003: Transportation Educators Council of the ITE

1997 - : South African Academy for Science and Arts (Chairman of the Council of the South African

Academy for Science and Arts since September 2014.)

1999 - : Operations Research Society of South Africa

# **Postgraduate students**

### **DOCTORAL DISSERTATIONS SUPERVISED (Sole supervisor)**

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