

**CARLETON UNIVERSITY
DEPARTMENT OF ECONOMICS**

ECON 3880 A

Special Studies in Economics: Transportation Economics

2015 Winter

Instructor: Attah K. Boame

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Lecture hours: Thursdays 18:05 – 20:55

Office hours: Thursdays 17:15 – 17:45, or by appointment.

COURSE DESCRIPTION

Focuses on the basic tools of economic analysis as applied to the transportation sector. Much attention is devoted to the factors affecting demand for and supply of transportation services. Elasticity of demand and the cost structures of the various modes of transport are covered. Pricing policy of transportation services is analyzed. Investment criteria, cost benefit analysis, as well as techniques of forecasting transportation demand, are analyzed. The course also examines the role played by transport in economic development.

PREREQUISITE

The prerequisite for this course is ECON 1000 or FYSM 1003.

FORMAT

This is a lecture-oriented course with strong emphasis on student participation. Students are expected to read course material in advance so as to be able to participate in class discussions.

EVALUATION

Project:	25%
Mid-term examination:	30%
Final examination:	45%

Feedback on the first graded work (the mid-term exam) will be provided by February 26, 2015. Students who can document a compelling reason for missing the mid-term will be excused and their final grade will be based on their performance in the rest of the course—i.e., the weight of each of the remaining evaluation instruments will rise by a factor of 10/7 (to $45\% \times 10/7 = 64.29\%$ for the final exam and to $25 \times 10/7 = 35.71\%$ for the project). Students *must* inform the instructor of such an absence in advance, if possible.

Both the mid-term and the final exam will consist of essay-type questions and will cover all the material discussed in class and in the required readings.

PROJECT

Students will complete a research project that involves some aspect of the role of transport in economic activity in Canada. Data for the project are available from Transport Canada “Transportation in Canada: Addendum,” various issues at their website: www.tc.gc.ca/eng/policy/anre-menu.htm.

Topics of interest might include, **but are not limited**, to the following:

- Transport in the national accounts.
- Employment in the transport sector.
- External trade and transport.
- Elasticity of transport demand (own-price, cross-price, and income elasticity).
- Government spending on transport.
- Transport and energy consumption.
- Transport and the environment.

The objective of the project is to discuss the role of transportation in Canadian economic activity.

The suggested method of analysis is **descriptive statistics**. This involves analysis of data that helps to describe, show or summarize data in a meaningful way such that patterns might emerge from the data. Descriptive statistics allow us to summarize our group of data using a combination of tabulated description (i.e., tables), graphical description (i.e., graphs and charts), and statistical commentary (i.e., a discussion of the results). Students may use the general types of statistics that are used to describe data:

- 1) Measures of central tendency – mode, median and mean.
- 2) Growth rates (percentage changes) of relevant variables over time.
- 3) Measures of spread – range, quartiles, absolute deviation, variance and standard deviation.

Sample research topic:

You must select one topic, for example, Employment in the Canadian Transport Sector. You can discuss the trends in transportation employment selecting any number of years, for example, from 1990 to 2010. Note, however, that the more years (data points) you have, the better your report since we are interested in the trend over time.

You can describe the total employment in the transport sector in Canada as one part of the report. You can also compare employment in the various modes (air, urban transit, rail, trucking, marine, etc.) of transport for the same time period. You can also draw graphs to show the trends in transportation employment. Your report must include the data you used for the analysis in a table as well as a bibliography.

You can replicate this process for any other topic discussing the role of transportation in Canadian economic activity. The research report is not a literature review of transportation economics. You must use Canadian transportation data for your analysis.

Students must not copy and paste any figures, charts, tables, etc. from Transport Canada’s Web site or any other source. Students must use data from Transport Canada’s Web site

or any other source to create their own tables or draw their own charts, figures, etc. for their report.

The report should be 8 pages, 1.5-spaced, 12-point font in Times New Roman, and must be typed or machine processed. Handwritten reports will not be accepted.

The final research project report is due at the beginning of class on March 19, 2015. Project reports that are handed in on March 19, 2015 will be graded and returned on April 2, 2015. The absolute deadline for all project reports is April 2, 2015. Any project report that is not handed in by April 2, 2015 will receive zero marks.

SATISFACTORY PERFORMANCE CRITERIA

Students must fulfil all of the preceding course requirements in order to achieve a passing grade (D- or higher). Failure to submit the research project or failure to write the mid-term examination (without a documented compelling reason) will result in a grade of FND (“Failure with No Deferred final examination allowed”). Failure to write the final examination when the student has achieved satisfactory performance during the term will result in a grade of ABS (“ABSEnt from a required final examination”). See Academic Regulation 2.3 for the official meanings of these grades, and note that it stipulates that no course grades are final until approved by the Faculty Dean. Note also that course grades may be scaled upwards or downwards in a rank-preserving manner to better fit the relevant departmental distributional norm. Application to write a deferred final examination must be made at the Registrar’s Office.

cuLearn

All relevant course material and announcements will be available on cuLearn under ECON 3880A, which can be accessed at carleton.ca/culearn. Students are responsible for checking cuLearn regularly to ensure that they are up to date with any announcements.

PLAGIARISM

Please be aware that plagiarism is serious offence at Carleton and should be recognized and avoided. For further information on how to do so, please see “Pammett on Plagiarism and Paraphrasing” at www.carleton.ca/economics/courses/writing-preliminaries.

ACADEMIC ACCOMMODATION REQUESTS

Students may need special arrangements to meet their academic obligations during the term because of disability, pregnancy, or religious obligations. Please review the course outline promptly and write to the instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.

Students with disabilities requiring academic accommodations in this course must register with the Paul Menton Centre for Students with Disabilities (PMC) for a formal evaluation of disability-related needs. Documented disabilities could include, but are not limited to, mobility/physical impairments, specific Learning Disabilities (LD), psychiatric/psychological disabilities, sensory disabilities, Attention Deficit Hyperactivity Disorder (ADHD), and chronic

medical conditions. Registered PMC students are required to contact the PMC (telephone: 613-520-6608) every term to ensure that their instructors receive their Letter of Accommodation no later than two weeks before the first assignment is due or the first in-class test/midterm requiring accommodations. Students requiring accommodations for their formally scheduled exam only in this course must submit their requests for accommodations to the PMC by March 6, 2015 for the Winter term.

See the Equity Services Web site at www.carleton.ca/equity/accommodation to obtain more detailed information on academic accommodation to view the associated policies.

TEXTBOOKS

Required:

Cole, Stuart. (2005), Applied Transport Economics: Policy, Management & Decision Making, Kogan Page, London, 3rd Edition.

Transport Canada (2012), Transportation in Canada 2012: Overview, Ottawa, www.tc.gc.ca/media/documents/policy/Transportation_in_Canada_2012_eng_ACCESS.pdf.

Transport Canada. (2011), Transportation in Canada 2011: Statistical Addendum, Ottawa, www.tc.gc.ca/media/documents/policy/Stats-Addend-2011-eng.pdf.

Recommended:

Boyer, Kenneth D. (1998), Principles of Transportation Economics, Addison-Wesley, New York.

McCarthy, Patrick S. (2001), Transportation Economics Theory and Practice: A Case Study Approach, Blackwell Publishers, Malden, Massachusetts.

Quinet, E. and Vickerman, R. (2005), Principles of Transport Economics, Edward Elgar, Northampton, Massachusetts.

TENTATIVE LECTURES OUTLINE

I. Introduction: Transport and Economic Activity

II. Transportation Demand

- Transport as a derived demand; factors determining demand.
- Price, income, and service elasticity of demand.

III. Transportation Supply and Cost Structures

- Source of transport supply; elasticity of supply.
- Cost levels and structure of transport modes (road, rail, and airline).

IV. Transport Pricing

- Price discrimination; pricing of transport modes (bus, railway, and airline).

V. Forecasting Transport Demand, Revenue and Expenditure

- Traffic forecasting models; forecasting of transport modes (airlines).

VI. Economic Appraisal and Transportation investment

- Cost Benefit Analysis (CBA); and transportation investment.

TENTATIVE SCHEDULE OF LECTURES

DATE	CHAPTER/PROJECT/EXAM/EVALUATION
January 8, 2015	Introduction - Transport and economic activity
January 15, 2015	1, transport demand
January 22, 2015	2, elasticity of transport demand
January 29, 2015	3, transport supply and cost functions
February 5, 2015	5, 6, cost levels and structure – road and railways
February 12, 2015	In-class mid-term examination (Introduction, 1, 2, 3, 5, 6)
February 16 – 20, 2015	Winter Break, classes suspended
February 26, 2015	7, airlines cost levels and structure
March 5, 2015	4, pricing policy
March 12, 2015	8, forecasting transport demand
March 19, 2015	9, cost benefit analysis, research project report due in class
March 26, 2015	Transportation investment
April 2, 2015	Review and course evaluation
April 11 – 23, 2015	Final exam (covers all chapters after mid-term)—scheduled by the University