PUBP 811 – Applied Methods in Regional Development and Transportation Analysis

SYLLABUS – Spring 2017

(Last update: Dec. 1, 2016)

Basic Course Information

| Time:          | Monday, 7:20 p.m. – 10:00 p.m. |
|               | 312 Founders Hall (Arlington Campus) |
| Instructor:   | Jonathan L. Gifford |
| Telephone     | 703-993-2275 |
| Fax:          | 801-749-9198 |
| E-mail:       | jgifford@gmu.edu |
| Office location | 527 Founders Hall |
| Office hours  | Monday, 4-5 p.m. I am usually in the office Monday through Thursday. I strongly recommend an appointment. |

Course Description

This course is a doctoral seminar on applied methods regional development and transportation policy. The course focuses broadly on infrastructure and regional development policy. The topic of infrastructure is particularly salient of late. Both presidential candidates placed strong emphasis on infrastructure improvement in the last cycle, and president-elect Trump’s infrastructure policy – whatever it turns out to be – will likely begin to emerge in the spring 2017 semester.

Scholars are divided on infrastructure and regional development. Certainly investments such as the railroads in the nineteenth century and highways in the twentieth century had impacts at the continental scale. But it is less clear if a major infrastructure investment in the U.S. today would have a significant impact. The service economy is less dependent on transportation infrastructure for supplying inputs, but telecommunications infrastructure plays a critical role in the digital economy. In developing markets, infrastructure appears to play a much clearer role.
In both developed and developing economies – and in fact, in declining economies, too – the institutional context conditions how infrastructure is delivered, and how firms and households use it to create economic and social wellbeing. What is a wise infrastructure policy for the city of Detroit? Or London? Or Jakarta? For a country like Vietnam, China, or the United States? How does trade policy (and practice) interact with infrastructure and regional development? Is it wise to invest billions of dollars in new infrastructure megaprojects like the Panama Canal at a time when trade volumes may be declining?

Each class meeting will consist of a discussion of readings on selected themes in infrastructure and regional development policy.

The course organization will in part reflect the interests of the students enrolled. The first class meeting will be used to assess student research interests and a set of topics and readings will be set in week two.

**Learning Objectives**

Students completing this course should be able to:

- Describe and evaluate major issues in infrastructure and regional development policy.
- Frame and write an original research paper suitable for submission as an article in a refereed journal or to be presented at an academic conference.

**Course Schedule**

**Week 1 (January 23) – Course Organization and Strategic Focus**

**Assignment:** for this first class, students should bring a 1- to 2-page statement outlining their top 3-4 thematic interests for the semester.

The first class session will be devoted to discussion of thematic focal points for the semester.

The domain of infrastructure and regional development policy is quite broad. The following topics are in no way exhaustive, but suggest the breadth of the subject and the range of potential readings:

1. Interregional travel and demand analysis (i.e., long-distance travel analysis and forecasting);¹
2. Infrastructure investment and economic productivity;²

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¹ National Research Council (U.S.), Transportation Research Board, Committee for a Study of Intercity Passenger Travel Issues and Opportunities in Short-Haul Markets, *Interregional Travel*; U. S. Congress, House, Committee on Roads, “Interregional Highways.”
3. Infrastructure investment and urban form, including transit oriented development (TOD), and the impact of interstate highways;

4. Mode-specific inquiries (e.g., airports, maritime ports, canals and waterways, high speed rail);

5. Measuring the impact of transportation continental-scale system innovations, such as the development of railroads in the 19th century, highway and air transport systems in the 20th century, and the potential for new systems in the 21st century;

6. Behavioral economics, infrastructure and regional development – how does human behavior affect infrastructure and regional development;

7. Infrastructure investment in developing countries;

8. Infrastructure, employment and fiscal policy;

9. Project finance and infrastructure development;

10. Regulation and industrial organization of infrastructure;

11. Assessing megaprojects, such as the interstate highway system, the Channel Tunnel, and other interventions that introduce major structural changes;

12. Forecasting, especially optimism bias.

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6 National Research Council (U.S.), Transportation Investments in Response to Economic Downturns.


13. The impact of federal regional policy in the 20\textsuperscript{th} century, through such programs as the Appalachian Regional Commission, Bonneville Power Administration, and Tennessee Valley Authority; 

14. Governance and infrastructure, including the role of national, international, subnational and regional governments;\textsuperscript{9} 

15. Robert Moses and his critics;\textsuperscript{10} 

16. Analyzing the persistence of infrastructure;\textsuperscript{11} 

17. Econometric analysis 12 [possible guest lecturer: Prof. Koizumi]; 

18. Computable general equilibrium, CGE 13 [possible guest lecturer: Prof. Haynes]; 

19. Agent-based modeling;\textsuperscript{14} 

20. Network analysis/location-sharing data analysis\textsuperscript{15} [possible guest speaker: Prof. Schintler];

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Misrepresentation in Rail Transit Promotion and Evaluation”; Wachs, “When Planners Lie With Numbers.” 


\textsuperscript{11} Hommels, \textit{Unbuilding Cities}; Rosen, \textit{The Limits of Power: Great Fires and the Process of City Growth in America}; Konvitz, \textit{The Urban Millennium: The City-Building Process from the Early Middle Ages to the Present}. 


21. Discrete choice modeling\textsuperscript{16} [possible guest lecturer: Prof. Schanjiang Zhu (GMU Department of Civil, Environmental and Infrastructure Engineering)];

\textbf{Bibliography}


\textsuperscript{15} Chen and Schintler, “Sensitivity of Location-Sharing Services Data: Evidence from American Travel Pattern.”


National Research Council (U.S.), Transportation Research Board, Committee for a Study of Intercity Passenger Travel Issues and Opportunities in Short-Haul Markets. *Interregional Travel: A New Perspective for Policy Making.*


