ANALYZING AND ACCOUNTING FOR REGIONAL ECONOMIC GROWTH

Last revised on December 27, 2012

Department of Urban Studies and Planning
Massachusetts Institute of Technology
Tuesdays and Thursdays, 9:30-11:00am
First Class: Tuesday, February 5, 2013
Room: 1-371
Credit Units: 3-0-9 H-LEVEL Grad Credit
Prerequisites: Introductory economics class or permission of professor

CLASS DESCRIPTION

In this class, we focus on alternative ways in which the issues of growth, restructuring, innovation, knowledge, learning, and accounting and measurements can be examined, covering both industrialized and emerging countries.

We survey neoclassical as well as some of the latest theories of regional growth, factor mobility, clustering, agglomeration and dispersal economies, industrial and spatial networks, industrial and regional restructuring, globalization, supply chains, learning regions, and regional centers of innovation from a political-economy perspective. For each, we cover the basic conceptual frameworks, main assumptions, and arguments for and against the use by scholars and practitioners. We give special emphasis to recent transformations in regional economies throughout the world and to the implications these changes have for the theories and research methods used in spatial economic analyses.

We examine and evaluate critically the accounting frameworks used to measure regional economic growth and review multipliers, backward and forward linkages, supply chains, and other measures. We discuss how these concepts can be used to assess employment and environmental impacts and infrastructure investments, accounting for measurement problems, such as the underground economy and green accounting. We review price indices, employment and industrial location measures, and shift-share analyses, discussing both U.S. and foreign applications of the theories, accounts, and techniques.

Students are expected to have had a thorough introduction to the relevant microeconomic, macroeconomic, and political economy theories prior to taking this class, and/or to learn them during the semester. Half of the problem sets are short essays or literature reviews on specific regional theories, and the other half cover important quantitative techniques used in the regional planning field.

Readings will relate mainly to the United States, but we cover pertinent material on foreign countries in lectures. In cases where other classes are available in our department that cover the material in more depth, such as project evaluation, benefit-cost analysis, urban economics, and municipal and public finance, we have either covered the topic only briefly here or omitted it entirely. These are important areas of study, and students interested in specializing in regional and urban economics should take an entire class in them.
CLASS REQUIREMENTS

1. **Weekly Readings**—Students are expected to do the required readings listed in the class outline prior to attending a lecture and are urged to raise opposing points of view in class as well as in person with the staff. Required readings are on the class Stellar website. Some of the readings can be skimmed; others should be read with care. Guidance on this will be provided as the semester proceeds. Suggested readings are only for reference; they are not required during the semester. Because many of the suggested readings are intended only for advanced students, they are not available in the reader. Ph.D. students expecting to take general exams in Regional and Urban Economics should refer to the exam syllabus for any additional readings they need to cover.

Students specializing in regional economics may want to buy one or more of the following books (those marked with an * are suggested and can be ordered at the MIT Coop or downloaded from the website provided below).


2. **Problem Sets**—Students are required to complete five problem sets. The grade for the class will be based upon the problem set scores (85 points) and upon two short presentations each student will give in class (15 points total). Students will receive up to a total of 85 points for the problem sets: receiving up to 15 points on each of the first four problem sets and 25 points for the last problem set. The first two problem sets will be short essays or book reviews concerning major regional theories. The next two problem sets will involve working with regional-accounting data using EXCEL spreadsheets. For the final problem set, students will divide themselves into several groups. Each group will choose a region and discuss a relevant issue for that region, select a theoretical perspective, and present an analysis to the class.

The following scores, which will be weighted and averaged for the term, will be given on the problem sets:

- 95-100  A
- 90-94   A-
- 85-89   B+
- 80-84   B
- 75-79   B-
- 70-74   C+
- 65-69   C

Students will be introduced to any special computer techniques prior to their use for a problem set. Problem sets must be submitted on the day specified. Five points will be deducted for each day a problem set is late.

Please note that students are encouraged to work together on thinking about each problem set; however, each member of the group must do a fair share of the work, and for the first four problem sets, each student in the group must submit a separate answer that represents her/his own thinking. The names of the students in the group must be indicated on the answer.

There will be no midterm or final exam.

3. **Disabilities**—If you have a documented disability, or any other problem you think may affect your ability to perform in class, please see us early in the semester so that arrangements may be made to accommodate you.

4. **Academic Misconduct**—Plagiarism and cheating are both academic crimes. Cite others’ work or idea appropriately. Never (1) turn in an assignment that you did not write yourself, (2) turn in an assignment for this class that you previously turned in for another class, or (3) cheat on an exam. If you do so, it may result in a failing grade for the class, and possibly even suspension from the college. Please see us if you have any questions about what constitutes plagiarism. Anyone caught cheating on an exam will be reported to the provost in line with recognized university procedures.

5. **Class Evaluation**—Students will be required to fill out a class evaluation during the last day of the class.

### Office Hours

<table>
<thead>
<tr>
<th>Instructor</th>
<th>Room</th>
<th>Phone</th>
<th>E-mail</th>
<th>Days</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karen R. Polenske</td>
<td>9-535</td>
<td>617-253-6881</td>
<td><a href="mailto:krp@mit.edu">krp@mit.edu</a></td>
<td>Thursday</td>
<td>11:00-12:30</td>
</tr>
<tr>
<td>Feng Fu</td>
<td>9-423</td>
<td>617-642-0380</td>
<td><a href="mailto:fufeng@mit.edu">fufeng@mit.edu</a></td>
<td>By appointment</td>
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Hours other than those listed may be arranged by appointment.
### CLASS SCHEDULE

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Reading List Section</th>
<th>Problem Set Due</th>
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<tbody>
<tr>
<td>2/07</td>
<td>Introduction</td>
<td>I</td>
<td></td>
</tr>
<tr>
<td>2/12</td>
<td>Historical View of Regional Economics</td>
<td>I</td>
<td></td>
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</tbody>
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**REGIONAL ECONOMIC THEORIES**

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Reading List Section</th>
<th>Problem Set Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/14</td>
<td>Neoclassical Regional Growth and Location Theories, Part I</td>
<td>II.A</td>
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<tr>
<td>2/19</td>
<td>Neoclassical Regional Growth and Location Theories, Part II</td>
<td>II.A</td>
<td></td>
</tr>
<tr>
<td>2/21</td>
<td>No Class—Monday class held on Tuesday—President's Day—Holiday</td>
<td>I</td>
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<tr>
<td>2/26</td>
<td>Alternative Regional Growth and Location Theories</td>
<td>II.B</td>
<td></td>
</tr>
<tr>
<td>2/28</td>
<td>Accounting for the Economic Base of a Region</td>
<td>II.C</td>
<td></td>
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<tr>
<td>3/05</td>
<td>Influence of Globalization on Factor Mobility</td>
<td>II.D</td>
<td>1 [3/01]</td>
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<tr>
<td>3/07</td>
<td>Deindustrialization and Restructuring</td>
<td>II.E</td>
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<tr>
<td>3/12</td>
<td>Agglomeration and Dispersal Economies, Part I</td>
<td>II.F</td>
<td></td>
</tr>
<tr>
<td>3/14</td>
<td>Agglomeration and Dispersal Economies, Part II</td>
<td>II.G</td>
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<tr>
<td>3/19</td>
<td>Spatial Dispersal of Innovation, (Theories of Information Technology</td>
<td>II.H</td>
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<td></td>
<td>and Communication) Part I</td>
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<tr>
<td>3/21</td>
<td>Spatial Dispersal of Innovation (Measurement Issues), Part II</td>
<td>II.I</td>
<td>2</td>
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<td>3/26</td>
<td><strong>SPRING VACATION</strong></td>
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<tr>
<td>3/28</td>
<td><strong>SPRING VACATION</strong></td>
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<tr>
<td>4/02</td>
<td>Spatial Dispersal of Innovation (Measurement Issues, continued), Part II</td>
<td>II.I</td>
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**REGIONAL, INTERREGIONAL, AND MULTIREGIONAL INPUT-OUTPUT ACCOUNTS**

<table>
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<th>Topic</th>
<th>Reading List Section</th>
<th>Problem Set Due</th>
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<tr>
<td>4/04</td>
<td>Overview of Regional Economic Accounting Structures</td>
<td>III.A</td>
<td></td>
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<tr>
<td>4/09</td>
<td>Regional and Multiregional Accounting Structures, Part I</td>
<td>III.B</td>
<td></td>
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<tr>
<td>4/11</td>
<td>Regional and Multiregional Accounting Structures, Part II</td>
<td>III.B</td>
<td></td>
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<tr>
<td>4/15-16</td>
<td><strong>Patriot's Day—holiday</strong></td>
<td></td>
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<tr>
<td>4/18</td>
<td>Uses of Accounts: Linkage Analyses</td>
<td>III.C</td>
<td>3</td>
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### CLASS SCHEDULE (Continued)

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<th>Topic</th>
<th>Reading List Section</th>
<th>Problem Set Due</th>
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<tbody>
<tr>
<td>4/23</td>
<td>Social Accounting Matrices: Environmental and Social Multipliers</td>
<td>III.D</td>
<td></td>
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<tr>
<td>4/30</td>
<td>Price Indices and Shift-Share Analyses</td>
<td>III.F; IV.A</td>
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**ANALYTICS OF REGIONAL ECONOMICS**

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Reading List Section</th>
<th>Problem Set Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/02</td>
<td>Determinants of City and Regional Growth</td>
<td>IV.B</td>
<td>4</td>
</tr>
<tr>
<td>5/07</td>
<td>Regional Economics and Energy</td>
<td>IV.C</td>
<td></td>
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<tr>
<td>5/09</td>
<td>Regional Economics Disasters</td>
<td>IV.D</td>
<td></td>
</tr>
<tr>
<td>5/14</td>
<td>Student Presentations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5/16</td>
<td>Student Presentations LAST DAY OF CLASSES</td>
<td></td>
<td>5</td>
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**NOTE:** on the day of the student presentations, all students are required to attend. Those not presenting will be required to submit a brief critique of the presentations given.
This class provides an extensive survey of the field of regional economic theories, accounts, and techniques. Readings covered in complementary classes are excluded from the list of readings. Required readings and books marked with an * on page 2 are on reserve at Rotch Library. Suggested readings are for your information only.

I. INTRODUCTION—Part I

Required Readings


Suggested Readings


I. INTRODUCTION—Part II


Suggested Readings


II. REGIONAL ECONOMIC THEORIES

II.A. Neoclassical Regional Growth and Orthodox Location Theories—Part I

Required Readings


Suggested Readings


II.A Neoclassical Regional Growth and Orthodox Location Theories--Part II

Required Readings


Suggested Readings


II.B. Alternative Regional Growth and Location Theories

Required Readings


Suggested Readings


II.C. **Accounting for the Economic Base of a Region**

**Required Readings**


**Suggested Readings**


II.D. **Influence of Globalization on Factor Mobility**

**Required Readings**


Suggested Readings


II.E. Deindustrialization and Restructuring

Required Readings


Suggested Readings


II.F Agglomeration and Dispersal Economies, Part I

Required Readings


Suggested Readings


II.G. **Agglomeration and Dispersal Economies, Part II**

**Required Readings**


**Suggested Readings**


II.H. **Spatial Dispersal of Innovation, (Theories of Information Technology and Communication) Part I**

**Required Readings**


Suggested Readings


II.I. Spatial Dispersal of Innovation (Measurement Issues), Part II

Required Readings


Suggested Readings

III REGIONAL, INTERREGIONAL, AND MULTIREGIONAL INPUT-OUTPUT ACCOUNTS

III.A. Overview of Economic Accounts

Required Readings


Suggested Readings


III.B. Regional and Multiregional Accounting Structures: Parts I and II

Required Readings


Suggested Readings


III.C. **Uses of Accounts: Linkage Analyses and Forecasting**

**Required Readings**


**Suggested Readings**


III.D **Uses of Accounts: Social Accounting Matrices, Social and Environmental Multipliers**

**Required Readings**


**Suggested Readings**


III.E. Accounting Issues and Boundaries: Imputations and Underground Economy

Required Readings


Suggested Readings


III.F. Price Indices

Required Readings


Suggested Readings

IV. ANALYTICS OF REGIONAL ECONOMICS

IV.A. Shift-Share Analysis

Required Readings


Suggested Readings


IV.B. Determinants of City and Regional Growth

Required Readings


Suggested Readings


IV.C. Regional Economics and Energy

Required Readings


Suggested Readings


IV.D. Regional Economic Disasters

Required Readings
