

Econ 590 Regional Economics

Spring 2018

T, TH 12:00-13:50
123 David Kinley Hall

Instructor: Geoffrey J.D. Hewings
Guest Instructors: Andre Avelino
Yizhou Zhang

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Office Hours: By appointment (set up a meeting after class or via e-mail)

Text:
Regional Economics, Roberta Capello (2nd Edition, Routledge, 2015)

Webpage: Illinois Compass at <https://compass2g.illinois.edu/webapps/login/>

Regional Economics focuses on the way in which subnational economies within a country (such as states) operate and function. Attention will be focused on how the regional economy works, its dependence on local and imported goods and services, the role of regional business cycles and the ways in which regions compete. Regional analysis aims to uncover the dynamics of location decision-making of both firms and individuals and the impacts these decisions have on the structure and structural changes of regional economies. Special attention will be directed to issues surrounding the role of households as providers of labor and consumers and the way their location decisions affect the growth and development of regional economies. The final parts of the course will address regional policies and equity-efficiency trade-offs, drawing on analysis in the US, EU and selected developing economies.

Evaluation

There will be a written mid-term and a comprehensive final. In addition, students are expected to complete a paper based on empirical analysis of a regions or regions within a country of their choice. The paper should be viewed as an opportunity to explore more deeply the structure, role and function of regional economies, drawing on published data.

Mid-term: 30%
Final: 50%
Paper: 20%

Instructor

Geoffrey J.D. Hewings has been at Illinois since 1974; he holds appointments in the departments of Agricultural and Consumer Economics, Economics, Geography, Urban & Regional Planning and in the Institute of Government and Public Affairs. In addition, between 1989-2014, he was the Director of the Regional Economics Application Laboratory a unit that focuses on the development and use of models for impacts analysis, forecasting and policy decision-making. Hewings has also worked on urban and regional projects in Bangladesh, Indonesia, Japan, Korea, Canada, Australia, and most recently in Brazil, Chile, and Colombia.

Course Policies:

Disability Services: This course will accommodate students with documented disabilities. Please refer to the Disability Resource Guide (<http://www.disability.uiuc.edu/resourceguide>) for more information and inform the instructor of any requests at the beginning of the semester.

Academic Integrity: The UIUC Student Code (<http://www.admin.uiuc.edu/policy/code>) requires all students to support academic integrity and abide by its provisions, which prohibit cheating, fabrication, plagiarism, and facilitation of these and related infractions.

Course Outline

January 16

Introduction: Regional Macroeconomics, Regional Income Analysis, Regional Science, Regional Economics, Economic Geography

Intellectual underpinnings for the course

Reading

Capello: *Introduction*

January 18, 23, 25, 30

Location Theory from von Thünen to the New Economic Geography

Reading

Capello: *Chs. 1, 2 and 3*

February 1, 6

Theories of Regional Growth – From Borts & Stein to Barro & Sala-i-Martin

The perfectly competitive regional economy

Role of imperfect competition, agglomeration

Convergence/divergence – multi-level considerations (US, EU, Latin America)

Reading

Capello: *Chs 4, 5 and 6*

Sergio J. Rey and Brett D. Montouri (1999) “US Regional Income Convergence: A Spatial Econometric Perspective,” *Regional Studies*, 33 (2) 143-156

Bernard Fingleton, (2000) “Convergence: International comparisons based on a simultaneous equation model with regional effects,” *International Review of Applied Economics*, 14(3), 285-305

February 8, 15

Modeling the Regional Economy I– Two-sector to Multi-sector Models

Reading

Capello: *Ch 5*

February 13 (Mid-Term exam)

February 20, 22

Modeling the Regional Economy II– Linked Models – Demo-Economic,

Reading

Capello, *Ch 5, 6*

Kijin Kim, Kurt Kratena and Geoffrey J.D. Hewings (2015) “The extended econometric input-output model with heterogeneous household demand system” *Economic Systems Research*

Kijin Kim and Geoffrey J.D. Hewings (2018) “Bayesian estimation of labor demand by age: Theoretical consistency and an application to an input-output model,” *Economic Systems Research* (forthcoming)

February 27, March 1

From the Circular Flow of Income to CGE models, Spatial CGE, Dynamic Models

Reading

Johannes Bröcker (1998) “Operational spatial computable general equilibrium modeling,” *Annals of Regional Science*, 32, 367–387.

Euijune Kim, Geoffrey Hewings and Hidayat Amir, “Economic Evaluation of Transportation Projects: an Application of Financial Computable General Equilibrium Model,” *Research in Transportation Economics*, (forthcoming 2017)

Yizhou Zhang, “Economic impact of the Illinois tax increase on employment and migration,”

March 6

Equilibrium, Disequilibrium – modeling unexpected events

Reading

Yasuhide Okuyama, Geoffrey J.D. Hewings and Michael Sonis, (2004) “Measuring the Economic Impacts of Disasters: Interregional Input-Output Analysis using the Sequential Interindustry Model,” In Y. Okuyama and S. Chang (Eds.), *Modeling Spatial and Economic Impacts of Disasters* Heidelberg, Springer.

Jungyul Sohn, Geoffrey J.D. Hewings, Tschangho John Kim, Jong Sung Lee and Sung-Gheul Jang, (2004) “Analysis of Economic Impacts of an Earthquake on Transportation Networks,” In Y. Okuyama and S. Chang (Eds.), *Modeling Spatial and Economic Impacts of Disasters* Heidelberg, Springer.

March 8, 13

Regional Labor Markets: Competing Theories and Empirical Applications

Reading

Figueroa: (part of doctoral dissertation – to be posted on website)

Kijin Kim and Geoffrey J.D. Hewings (2015) “Heterogeneity in local labor markets: Bayesian estimation of labor demand by age.”

March 15, 27

Demographic Challenges: Migration, Ageing and OLG Modeling, Endogenous Growth, Occupational Challenges

Reading

Geoffrey J.D. Hewings and Euijune Kim (2014) “Demographic Challenges to Regional Development,” in Peter Nijkamp, Adam Rose and Karima Kourtit (eds) *Regional Science Matters*, Heidelberg, Springer, pp. 187-219

Seryoung Park and Geoffrey J.D. Hewings (2009) “Immigration, ageing and the regional economy,” *Cityscape: A Journal of Policy Development and Research*, 11, 59-80

Tae-Jeong Kim and Geoffrey J.D. Hewings (2013) “Inter-Regional Endogenous Growth under the Impacts of Demographic Changes,” *Applied Economics* 45, 3431-49

Tae-Jeong Kim and Geoffrey J.D. Hewings (2013) “Endogenous Growth in an Ageing Economy: Evidence and Policy Measures,” *Annals of Regional Science*, 50:705–730

Tae-Jeong Kim and Geoffrey J.D. Hewings (2015) “Aging Population in a Regional Economy: Addressing Household Heterogeneity with a Focus on Migration Status and Investment in Human Capital,” *International Regional Science Review*

Euijune Kim, Geoffrey J.D. Hewings and Changkeun Lee (2017) “Dynamic Impact of Population Aging on Regional Economies in Korea Using a Recursive-Dynamic Interregional CGE-Population Model,” in A.A. Batabyal, P. Nijkamp (eds.), *Regional Growth and Sustainable Development in Asia*, New Frontiers in Regional Science: Asian Perspectives volume 7 (Heidelberg, Springer) Capello, ch 10, 11

March 20, 22 Spring Break (no class)

March 29, April 3

Regional Economic Models: Applications using the REAL Systems

Forecasting the regional economy

Impact Analysis: environmental accounting

Unraveling the heterogeneity of household demand

Interregional Trade

Environmental Analysis

Reading

Karen Turner, Cathy Xin Cui, Soo Jung Ha & Geoffrey Hewings (2012): Input–output analyses of the pollution content of intra- and inter-national trade flows, *Contemporary Social Science: Journal of the Academy of Social Sciences*, DOI:10.1080/21582041.2012.692808

Laura Atuesta and Geoffrey J.D. Hewings (2013) “Economic welfare analysis of the legalization of drugs: A CGE microsimulation model for Colombia,” *Economic Systems Research* 25, 190-211

M. Alejandro Cardenete and Geoffrey J.D. Hewings (2011) “Water price and water sectoral allocation in Andalusia. A computable general equilibrium model approach,” *Environmental Economics*, 2, 17-27

Zhining Tao, Allen Williams, Kieran Donaghy, Geoffrey J.D. Hewings (2007) “A Socio-economic Method for Estimating Future Air Pollutant Emissions - Chicago Case Study,” *Atmospheric Environment* 41 (2007) 5398–5409

Kieran P. Donaghy, Clufford R. Wymer, Geoffrey J.D. Hewings and Soo Jung Ha (2017) “Structural change in the Chicago region and the impact on emission inventories in a continuous-time modeling approach,” *Journal of Economic Structures*

Jan Oosterhaven and Geoffrey J.D. Hewings (2013) “Interregional input-output models,” in M.M. Fischer and P. Nijkamp (eds.) *Handbook of Regional Science*, Heidelberg, Springer, pp 875-901.

Geoffrey J.D. Hewings and Jan Oosterhaven (2013) “Interregional trade models,” in M.M. Fischer and P. Nijkamp (eds.) *Handbook of Regional Science*, Heidelberg, Springer, pp. 903-925.

Euijune Kim, Geoffrey Hewings and Hidayat Amir, (2017) “Economic Evaluation of Transportation Projects: an Application of Financial Computable General Equilibrium Model,” *Research in Transportation Economics*

April 5, 10

Structural Changes in the Regional Economy: Measurement and Interpretation

Theory

Role of interregional trade: testing the New Economic Geography (US, China, Japan)

Reading

Erik Dietzenbacher and Bart Los (1998) “Structural Decomposition Techniques: Sense and Sensitivity,” *Economic Systems Research*

Geoffrey J.D. Hewings and Jan Oosterhaven (2015) “Interregional input–output modeling: spillover effects, feedback loops and intra-industry trade” in Charlie Karlsson, Martin Andersson and Therese Norman (eds.) *Handbook of Research Methods and Applications in Economic Geography*, Elgar

Jee-Sun Lee and Geoffrey J.D. Hewings, “Exploring the Spatial Connectivity of US States, 1993–2007,” in A. Batabayal and P. Nijkamp (eds.) *The Region and Trade: New Analytical Directions* World Scientific, 91-136

Meng, B., & Yamano, N. (2017). Compilation of a regionally-extended inter-country input-output table and its application to global value chain analysis. *Journal of Economic Structures*

April 12, 17

Regional Business Cycles*Reading*

Yangsung Park and Geoffrey J.D. Hewings (2012) “Does Industry Mix Matter in Regional Business Cycles?” *Studies in Regional Science*, 42, 39-60.

Sungyup Chung and Geoffrey J.D. Hewings (2015) “Competitive and Complementary Relationship between Regional Economies: A Study of the Great Lake States,” *Spatial Economic Analysis*, 10, 205-229

Motonari Hayashida and Geoffrey J.D. Hewings (2009) “Regional business cycles in Japan,” *International Regional Science Review*

Ana Gomez-Loscos M. Dolores Gadea-Rivas and Eduardo Bandres (2017) “Regional Business Cycles in Europe. Dating and clustering,” Madrid, Banco de España

April 19, 24

Regional Development Policy – Growth Poles, Clusters, Smart Specialization, Fiscal Decentralization*Reading*

Capello Ch 7, 8

Geoffrey J.D. Hewings (2015) “Spatially Blind Trade and Fiscal Impact Policies and their Impact on Regional Economies,” *The Quarterly Review of Economics and Finance* (forthcoming)

April 26

New Initiatives: Linking Regional Macro Models with Network Systems; Capturing Spillover Effects from Public Investment (SpVAR Modeling)

Regional economic analysis of unexpected events (hurricanes, floods, earthquakes)

Port efficiency and regional development in Brazil

Austerity: Impacts of public investment in

BREXIT

Readings

Capello *Ch 9, 10, 11*

Miguel Marquez, Julian Ramajo and Geoffrey J.D. Hewings (2015) "Regional growth and spatial spillovers: Evidence from an SpVAR for the Spanish regions," *Papers in Regional Science*.

Miguel Marquez, Julián Ramajo and Geoffrey J.D. Hewings (2017) "Regional Public Stock Reductions in Spain: Estimations from a Multiregional Spatial Vector Autorregressive Model," *Region*, 4, 129-146. <https://openjournals.wu-wien.ac.at/ojs/index.php/region/article/view/146>

Eduardo A. Haddad, Geoffrey J. D. Hewings, Fernando S. Perobelli, Raul A. C. dos Santos, (2011) "Regional Effects of Port Infrastructure: A Spatial CGE Application to Brazil," *International Regional Science Review*, 12, 207-226.

Jungyul Sohn, Tschangho John Kim, Geoffrey J.D. Hewings, (2003) Jong Sung Lee and Sung-Gheel Jang "Retrofit Priority of Transport Network Links under an Earthquake," *Journal of Urban Planning and Development* 129 195-210.

Thomas Sampson (2017) "Brexit: The Economics of International Disintegration," *Journal of Economic Perspectives*

Wen Chen, Bart Los, Philip McCann, Raquel Ortega-Argilés, Mark Thissen and Frank van Oort (2017) "The Continental Divide? Economic Exposure to Brexit in Regions and Countries on both Sides of the Channel," (forthcoming)

May 1

Paper/Project Presentations

May (date to be confirmed)

Final Examination