

UCLA
School of Public Policy & Social Research
Department of Urban Planning

REGIONAL ECONOMIC IMPACT ANALYSIS
Winter, 2007

UP 239
Tuesday and Thursday 10:30-11:50
PPB 4357B

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Course Description

A central concern of practicing planners and economic development professionals is how different events or “shocks” affect the regional economy of concern. By ‘affect’ is meant changes in output, employment, income and population. Some events or shocks are the result of policy choices, such as the closing of a military base or an increase in the local sales tax. Some are the result of exogenous economic forces such as out-migration of population. Some are disasters, natural—floods and hurricanes—and man-made—the destruction of the twin towers of the World Trade Center. This course defines the context, a regional economy, for such analysis, and then presents analytical tools for estimating economic impacts. The major tool covered in depth is regional input-output. Most of the course is devoted to understanding and applying IMPLAN, a software and data system for performing regional input- output analysis at the county level.

Required Texts

Minnesota IMPLAN Group, Inc., *IMPLAN Pro*, Version 2.0, 2nd Edition, June 2000. Two copies are on reserve at the Young Research Library. It is also available on-line at www.implan.com. Other assigned readings are either on reserve or in the reader for this course.

Course Requirements

A number of short problems involving use of the IMPLAN software and data for Los Angeles will be assigned (50% of grade). A final project in which each student evaluates the economic impact of some significant shock (positive or negative) of their own selection to the Los Angeles metropolitan economy, or one of the five counties of the metropolitan area, using IMPLAN (50% of grade)..

Course Outline

I. Conceptualizing a Regional Economy.

What is and what is not a regional economy. Labor market areas, Metropolitan areas. Location of economic activities and land use. Bid rent functions. Land and structure values. Centrality of trade in regional or sub-national economies. Economic base model and traded goods and services model. Transfer costs: transportation of goods and people, and communication of information. External benefits of industry concentration and

density: agglomeration economies. External costs of industry concentration and density: congestion, pollution, producer and consumer costs.

Readings: Wilbur R. Maki and Richard W. Lichty, *Urban Regional Economics*, Iowa State University Press, 2000. Chapters 1, 4, and 6. On reserve at YRL.

II. Regional Input-Output Systems: One Tool for Regional Analysis.

A. Understanding input-output analysis

Readings: Ronald E. Miller, "Regional and interregional input-output analysis," pp 41-70 in *Methods of Interregional and Regional Analysis*, Walter Isard et al, Ashgate, 1998. On reserve at YRL.

IMPLAN Pro, Chapter 7-16.

B. The IMPLAN input-output model .

Readings: *IMPLAN Pro*, Chapters 1-2.

III. Applications of the IMPLAN Model: The Los Angeles metropolitan area.

Readings: *IMPLAN Pro*, Chapters 3-6, and Chap. 17.

IV. Estimating economic impacts of unimaginable events with and without models.

A. The first (1993) and second (2001) World Trade Center attacks.

B. The SARS epidemic

C. Earthquakes: Northridge and others

D. Massive urban bombing in World War II.

E. Hurricane Katrina.

Readings: Jason Bram, Andrew Haughwout, and James Orr, "Has September 11 Affected New York City's Growth Potential?" *Economic Policy Review*, Federal Reserve Bank of New York, 2002. Reader.

Jason Bram and James Orr, "New York City Two Years After 9/11: Economic Impact and Policy Response," Federal Reserve Bank of New York, 2003. Reader.

Andrew Haughwout, "Evidence from Real Estate Markets of the Long-Term Impact of 9/11 on the New York City Economy," in *The Resilient City*, Howard Chernick, ed. New York: Russell Sage. 2005. Reader.

Tadayuki Hara, "Estimating the Economic Impacts of an Unexpected Event," Regional Science Program, Cornell University, 2003. Reader

Marlon G. Boarnet, "Business Losses, Transportation Damage, and the Northridge Earthquake," *Journal of Transportation and Statistics*, May 1998, pp 49-62. Reader.

Adam Rose, *et al*, "The Regional Economic Impact of an Earthquake: Direct and Indirect Effects of Electricity Lifeline Disruptions," *Journal of Regional Science*, Vol. 37, No. 3, Aug. 1997, pp 437-458. Reader.

S. Cho, P. Gordon, J.E. Moore, II, H.W. Richardson, M. Shinozouka, and S. Chang, "Integrating Transportation Network and Regional Economic Models to Estimate the Costs of a large Urban Earthquake," *Journal of Regional Science*, Vol. 41, No. 1, February 2001, pp 39-66. Reader.

Davis, R, & Weinstein, E., "Bones, Bombs, and Break Points: The Geography of Economic Activity," *American Economic Review* 2002, Vol. 92, No. 5. Reader

Matthew P. Drennan, "The Economic Cost of Disasters- Permanent or Ephemeral?" in *Economic Costs and Consequences of a Terrorist Attack*, Peter Gordon and Harry Richardson, eds, Edward Elgar, forthcoming May 2007. Reader.

S. Brown, S. Mason, and R.Tiller, "The Effect of Hurricane Katrina on employment and unemployment." *Monthly Labor Review*, August 2006.