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11.482J / 1.825J / ESD.193J Regional Socioeconomic Impact Analyses and Modeling  
Fall 2007

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## Proposed Projects List

Fall 2007

The BRA (Boston Redevelopment Authority) will be the client for our 11.482, Regional Socioeconomic Impact Modeling, seminar. They would like students to select 3-5 of the following 8 tentative projects. Each student only works on one project as a group. Each group consists of 3-4 students. The BRA and we are especially keen to tie at least one or two of the projects into the Boston green-technology initiative. The BRA has provided us with the latest version of the macroeconomic model (REMI) they use to help assess the economic and environmental impacts. Students will use REMI model to conduct the economic impact analysis.

HERE ARE THE PROPOSED PROJECTS FROM WHICH STUDENTS WILL SELECT.

1. "Green Buildings." The city of Boston has been making striking efforts to promote green building development. Green building development refers to the adoption of green building techniques to increase the efficiency of the usage of energy, water, and materials within the building. These techniques include installing renewable energy systems, such as solar, and geothermal heating and cooling, wind turbines, bio-diesel combined heat and power system, and using of recycled building materials. The city of Boston and the BRA have provided \$100,000 in funding for new construction, historic restoration, and building renovation, in order to facilitate the exploration of green technology. They expect that green buildings decrease expenses on energy bills and maintenance cost for building owners and tenants, reduce building impacts on human health, promote worker productivity, and ultimately help to lessen Bostonian's dependency on imported energy. One task for us might be to analyze and forecast the impacts of green building investment on Boston's economy.

2. "Urban Ring." The New Urban Ring is an MBTA (Massachusetts Bay Transportation Authority) public transportation project, which is to provide a circumferential transportation system to link the existing radial subway and transit lines between downtown Boston and its suburban communities. (<http://www.theurbanring.com/>). The project has three phases: Phase 1 improves bus service in the Urban Ring corridor; Phase 2 would principally consist of bus rapid transit (BRT) service in the corridor; and Phase 3 would add rail rapid transit for a portion of the corridor. The MBTA is currently in Phase 2. We expect that the project would improve access and economic development in the Urban Ring corridor, relieve congestion in the downtown core subway stations, and reduce vehicle miles traveled by car, and meet the rapidly growing demand for public transit. One task might be to analyze the long-term impact of this improved transit system.

3. "Immigration." The rise of foreign-born population in Massachusetts has continued despite the slowed state's economy since 2000. Between 2000 and 2005, around 100 thousand immigrants have taken jobs in Massachusetts. The US Census 2000 shows that 26% of Boston's population was foreign-born. Boston, as a large component of the state's economy, has absorbed the majority of this foreign-born labor force. Without those immigrants, the city's population and its labor force would have shrunk. What would happen if immigrants had not come? Which

industry benefits most from these immigrants? Which social group is significantly affected? How much do they contribute to the Boston economy? What are their educational, medical, and housing needs?

4. "Affordable Housing." Affordable housing will be in high demand in Boston. In the 1980's, the Boston housing stock increased by 11,353 units, but in the 1990's, only 1,586 additional units were added. Since 1995, housing prices have increased at twice the rate of income growth in the Boston metropolitan area. Many new and old residents find it difficult to stay in neighborhoods where they used to live. Boston is facing a serious mismatch between housing value and household income. The city's housing authorities plan to encourage new construction with several million dollars of City funds. What would be the impact of such public spending? Who would benefit from the new construction?

5. "Boston Waterfront Revitalization." One of the symbols of Boston is the waterfront. Revitalizing the business environment is one of the targets of the development plan of Boston waterfront. Several large retail projects were recently undertaken. How would these retail projects add value to the city's economy? \* \*

6. "Bio-tech, Bio-science." Great Boston has many bio-tech and bio-science research firms, but few manufacturers of these products. \* \*

7. "Education and Medical." This project could be linked with the immigration project or several of the others.