

## 11.947 Sustainable Development Planning and Practice Economic Base Analysis for Sustainability Planning

### Three Purposes for the Analysis

- Understand Composition and Role of Neighborhood Economic Activities
- Evaluate Neighborhood Performance and Well-Being
- Identify Opportunities to Advance Goals

### **Three types of data to apply:**

- Household-based
- Establishment-based
- Site-based

Finding reliable neighborhood-level data is quite challenging and requires combining secondary data sources with primary data collection

Review key questions, tools and potential data sources for each of these three goals.

## Economic Structure or Base Analysis

- Uses establishment-based data to analyze the composition, trends, and specializations within local economic base.
- Data is organized by an industry classification system that includes broad economic sectors, industries and detailed sub-industries. Two systems in now use:
  - Standard Industrial Classification System (SIC)
  - North American Industry Classification System (NAICS)
- Most recent data organized by NAICs but historic data is by SIC; some data providers still support SIC.
- Define the geography of the study area and comparison areas, e.g., city, region, other neighborhoods.
- Several secondary data series exist that use different methods and provide different geographic and temporal coverage. Greatest data availability exists for states, counties and MSAs. Some series supply city or town level data.
- County Business Patterns is the only government source that supplies sub-city level establishment data: *Establishment counts by zip code and size class*
- Private directories, publications, and databases are another data source, e.g, Reference USA, Demographics USA, Dun & Bradstreet, etc.
- Primary data collection via inventory, surveys, interviews and focus groups
- Guide to secondary data sources:  
<http://www.eda.gov/Research/ResearchReports.xml>

## Key Issues for Economic Base Analysis

- What are the neighborhood's largest sectors and industries? How do these differ from the city, region and other neighborhoods?
- Which industries are growing, stable and declining? How do these trends compare to other areas?
- What are the trends for the neighborhood's largest industries, within the neighborhood, city and region?
- What are the wage levels, occupations and quality of jobs for key industries?
- What does the industry mix suggest about the neighborhood's economic role and markets served:

Traded (export) vs. non-traded (local)?

Government, service, retail or manufacturing center?

Convenience (very local) vs. comparison (larger area) retail?

Special product or service niches?

- Which industries are concentrated or under-represented?  
Location quotient: ratio of the share of an industry's employment (or other measure) for an area to its share for the nation:

$$LQ_i = (e_{i,r}/e_r)/(E_{i,n}/E_n)$$

$(e_{i,r}/e_r)$  = share of region's employment in industry i

$(e_{i,n}/e_n)$  = share of national employment in industry I

- What benefits and impacts are generated for the neighborhood?

Jobs and income for residents

Local ownership and profits

Local goods and services

Environmental impacts: resource use, waste streams, traffic

## Economic Performance and “Livability” Analysis

- Use of indicators to gauge community well being. How successful is a community accessing and using natural, economic, social and political resources to achieve “good” quality of life?
- Indicators are a valuable “diagnostic” tool to identify problems and causes, build awareness and measure progress.
- Tie measures to community goals and visions and to the expected pathways to these goals (are we on the right track?)
- Focus on both traditional economic measures and indicators for residents’ social and environmental quality of life
- Track measures for overall neighborhood and different demographic groups (age, racial/ethnicity, sex, immigrant status)
- Requires creativity, “mining” of available data sources, some primary data collection and creative construction of new indicators.
- Census household-based data is a rich data source, especially for neighborhood-level analysis. But it is quickly outdated.

## 2000 Census Data

Measure-Aggregate	Jamaica Plan	South Dorchester
Median Household Income	41,524	36,193
Poverty Rate	21%	17.3%
Unemployment Rate	5.5%	8.9%
% College Grads	47%	19%

## Jamaica Plan

Measure	White	Black	Asian	Hispanic
MHI	46,886	29,346	44,110	27,893
Poverty Rate	18%	27%	18%	29%
Unemployment Rate	3.8%	9.6%	3.4%	11.6%
% College Grads	59%	24%	50%	17%

## South Dorchester

Measure	White	Black	Asian	Hispanic
MHI	45,588	36,148	38,407	33,125
Poverty Rate	10.3%	18.5%	27.2%	26.8%
Unemployment Rate	4.3%	7.2%	10.5%	15.7%
% College Grads	28%	15%	10%	15%

Traditional economic and social performance measures:

- Population growth
- Employment growth
- Unemployment rate
- Median Household Income
- Per Capita Income
- Wage levels of existing and new jobs
- Poverty rate
- Labor force participation rate
- Educational attainment
- Firm births, deaths, and relocations
- New development and investment
- Property values and tax revenues
- Crime rates
- Infant mortality rates

What do these measures omit?

What are alternative or additional indicators can overcome these limitations?

What is your view of the sustainability indicators created for Devens?

# Joint Venture Silicon Valley Index

## Indicators Based on 17 Goals in 4 Areas

### 1. Innovative Economy That Increases Productivity and Broadens Prosperity

#### Indicators for Goal 3: Broadened Prosperity

- Income levels for low-income households
- Extent of concentrated Poverty

### 2. Protect the Natural Environment and Promote Livability

#### Indicators for Goal 7: Efficient Land Use

- Growth in urbanized land relative to population growth
- Average number of new approved housing units per acre

### 3. Inclusive Society that Connects People to Opportunity

#### Indicators for Goals 11: Transportation Choices

- Public transit ridership levels
- Number of miles in the rail network

### 4. Regional Stewardship that Develops Shared Solutions

#### Indicators for Goal 15: Civic Engagement

- Percent of households contributing and volunteering for non-profit or charitable organizations
- Voter registration and turnout rates
- Share of non-profit contributions from corporations

## Using Analysis to Identify Key Issues and Opportunities

- Finding good targets that advance goals, leverage economic opportunities and fit local conditions and advantages
- Segments of the population with poor economic outcomes and/or face greater risks=> target groups to serve
- Areas of highly concentrated poverty
- Industries and occupations that are accessible and can provide living wage jobs for residents
- Potential industries or type of businesses to attract to area
  - Gaps in locally-oriented goods and services (low LQ)
  - Expand on significant local specialization (High LQ)
  - Attract important citywide or regional industries
  - Do location, real estate, and employment needs fit local goals and conditions?
  - Will their environmental practices and impacts advance sustainability goals?
- Local industries/firms to create, support and retain
  - Important source of “good” jobs and income for residents
  - Large existing local industries
  - Emerging industries or business concentrations
  - Innovative and growth-oriented entrepreneurs
  - Opportunities to serve new or expanded markets
  - Formalizing informal economic activity