Economic Development & the Census

2026 AICP Exam Prep Course

American Planning Association – Massachusetts Chapter

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Making Great Communities Happen

Overview

+ **Economic Theories**
- Economic Base Theory
- Supply & Demand Theory

+ **Basic Analytical Methods**
- Location Quotient
- Jobs/Housing Ratio
- Cost/Benefit – Fiscal Impact Analysis
- Input-Output Analysis
- Shift-Share Analysis

+ **Tools & Strategies**
- Business Clusters
- Agglomeration Economies
- Structural Unemployment
- Business Improvement District (BID)
- Tax Increment Financing (TIF)
- Economic Development Plan
- Infrastructure Tools

+ **Census**
- Decennial Census
- American Community Survey
- Other Products

You may be asked about theories…

Economic Base Theory

A framework for understanding the local economy and tools and techniques for analyzing it

Key Concepts are **Basic** Sectors and **Non-Basic** Sectors

Economic Base Theory assumes that all local economies can be classified as basic and non-basic

Economic Base Theory
Key Assertions:

Strengthening the local economy depends on increasing the **basic** sector. Basic sector examples: manufacturing and local resource-oriented firms (like car manufacturing or farming).

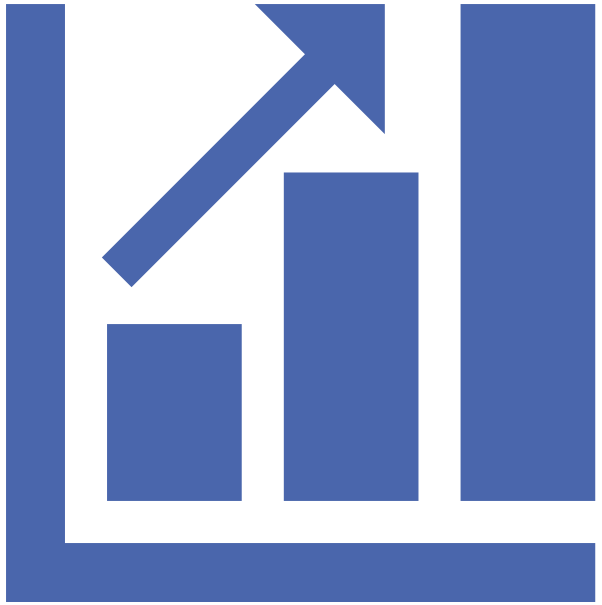
The local economy is strongest when it develops sectors that depend primarily on (export to) external markets.

By developing these sectors, the local economy can better insulate itself from economic downturns.

Supply and Demand Theory

A framework for understanding how a good sold on the market is priced

It is the main model of price determination in economic theory



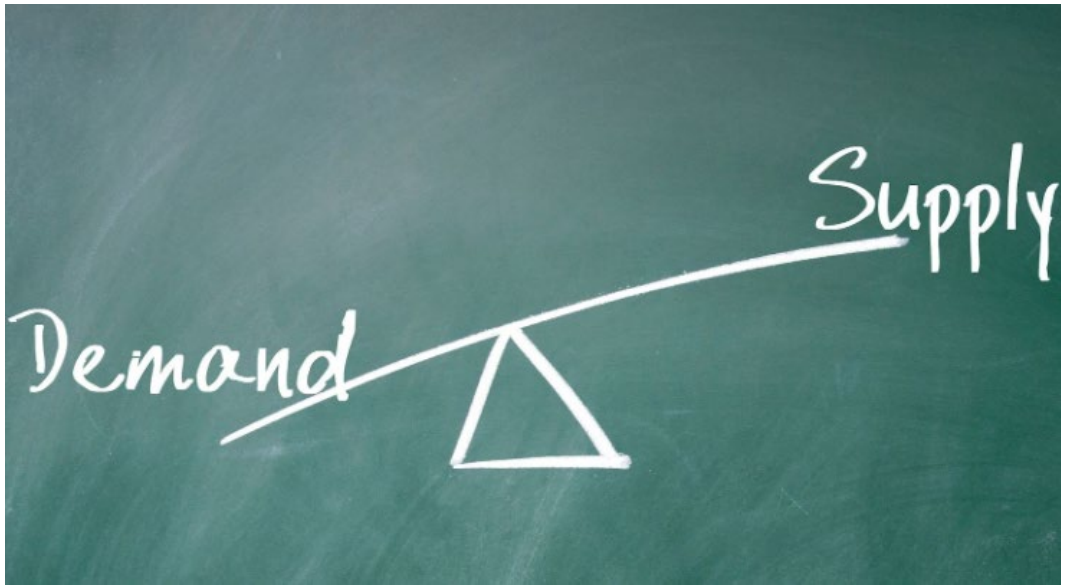
Supply and Demand Theory

+ **Key Concepts**
  - Demand: willingness and ability to pay for a good
  - Law of Demand: assuming all other demand determinants remain the same, when the price of a good increases, the quantity of the good demanded will fall
  - Supply: willingness and ability of potential sellers to produce and sell a good
  - Law of Supply: assuming all other supply determinants remain the same, when the price of a good increases, the supply increases, too

Supply and Demand Theory

Key Concepts

- Competition among and between buyers and sellers
- Equilibrium or the “perfect” level of competition
- Price controls, or government-mandated prices – not a perfect model



Influencing conditions

Supply

- Labor and materials
- Cost of capital
- Technology
- Capacity of sellers
- Taxes, regulations, government price controls

Demand

- Competing products and how those products are priced
- Seasonal variation
- Changes in consumer incomes

Econ Dev Methods

Location Quotient (LQ)

- Measures the relative significance or relative concentration of a sector's employment
- Determines industries and occupations that are specialized and unique in regional economy in comparison to national average
- LQ = the ratio between the local economy and a benchmark economy (usually compared to the national economy)
- LQ is a way to calculate the density of jobs in a particular city compared to the nation

Here is the formula:

$LQ_i = (e_i/e)/(E_i/E)$

Where e_i = local employment in industry "i"

And e = total local employment

E_i = industry i's employment in the benchmark economy

E = total employment in the national economy

If LQ is 1 is the same level as the nation

If LQ is over 1, this is a good thing and means basic jobs: exporting goods/services

Example: Viticulture (wine making)

Location Quotient (LQ)

+ Scenario:

  Region: Napa County, California

  Larger Geography (Benchmark): United States

  Industry: Wine Manufacturing / Vineyards

+ Calculation Components:

+ Local Concentration (Napa County): The percentage of all jobs in Napa County that are in the wine industry.

  (Example: 15% of all jobs in Napa County are in winemaking)

  National Concentration (U.S.): The percentage of all jobs in the entire U.S. that are in the wine industry: 0.05% of all jobs in the U.S. are in winemaking

  Result: In this hypothetical example: LQ=15%/0.05%=300

The resulting LQ of **300** is significantly greater than 1.0. This high location quotient demonstrates:

- Winemaking is a highly specialized industry
- The region produces more than it consumes – export economy
- A strong industry cluster and helps drives regional economic growth

Multiplier Effect

- Measurement of direct and indirect effects of economic activity
  - Used to estimate the economic impact of growth or change in a given sector
- **Types of economic multipliers:**
  - *Direct spending* plus *indirect spending* by businesses purchasing and selling resources to each other. The multiplier is (*direct* + *indirect*)/(*direct*).
  - *Induced spending* by consumers, derived from income earned as a result of direct and indirect effects. Induced spending adjusted for household income.

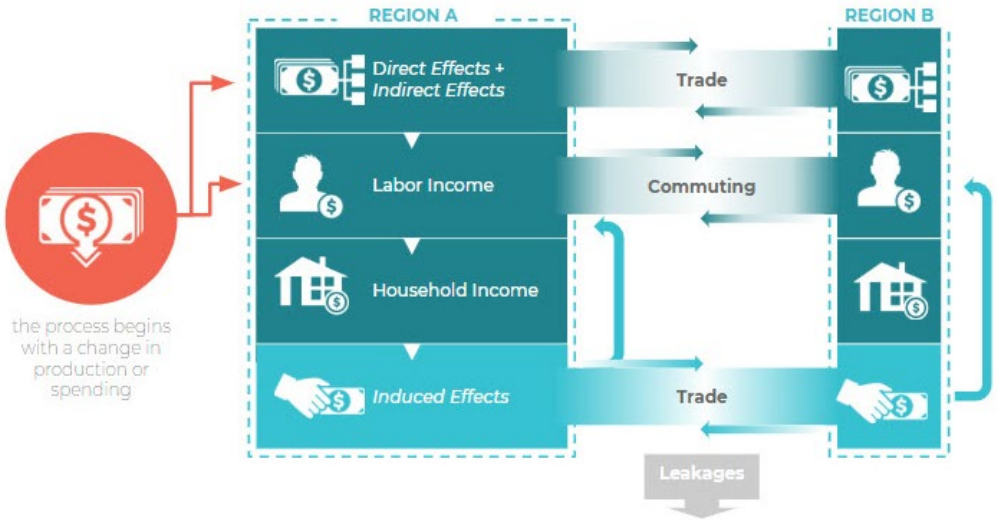
Equation: **Multiplier is (*direct* +*indirect* + *induced*)/(*direct*).**

Multiplier Effect Example: Bad Bunny 2025 Residency in Puerto Rico

- **Economic multipliers:**
  - *Direct spending*: increased hotel bookings; car rentals; concert tickets; restaurant meals
  - *Indirect*: food produced for additional restaurants/meals; equipment & goods bought by tourists.
  - *Induced*: employees in tourism sector have additional wages to purchase more goods & services further stimulating local economy

https://www.billboard.com/pro/bad-bunny-puerto-rico-residency-help-local-economy/

Input Output Analysis



Describes a local economy and estimates the impacts of change in economic activity by measuring the *inter-industry structure* of a regional economy

- Used to predict the direct and indirect effects of new industries (or loss of existing industries)
- A methodology for establishing economic multipliers

[MRIO: Introduction to Multi-Regional Input-Output Analysis – IMPLAN - Support]

Shift Share Analysis

Economic analysis that is used for understanding how much job growth is due to:

A. Changes in the national economy: The portion of local growth attributed to the overall growth of the national economy.

B. To the region's mix of industries: The expected growth or decline based on the performance of specific industries at the national level. It highlights if the region is concentrated in fast- or slow-growing sectors.

C. To the region's particular competitiveness. The remaining growth, indicating a local competitive advantage or disadvantage for specific industries relative to the national average

Agglomeration Economies

Nashville, TN aka **Capital of Country**
Example of Healthcare, Music and Higher Education agglomeration

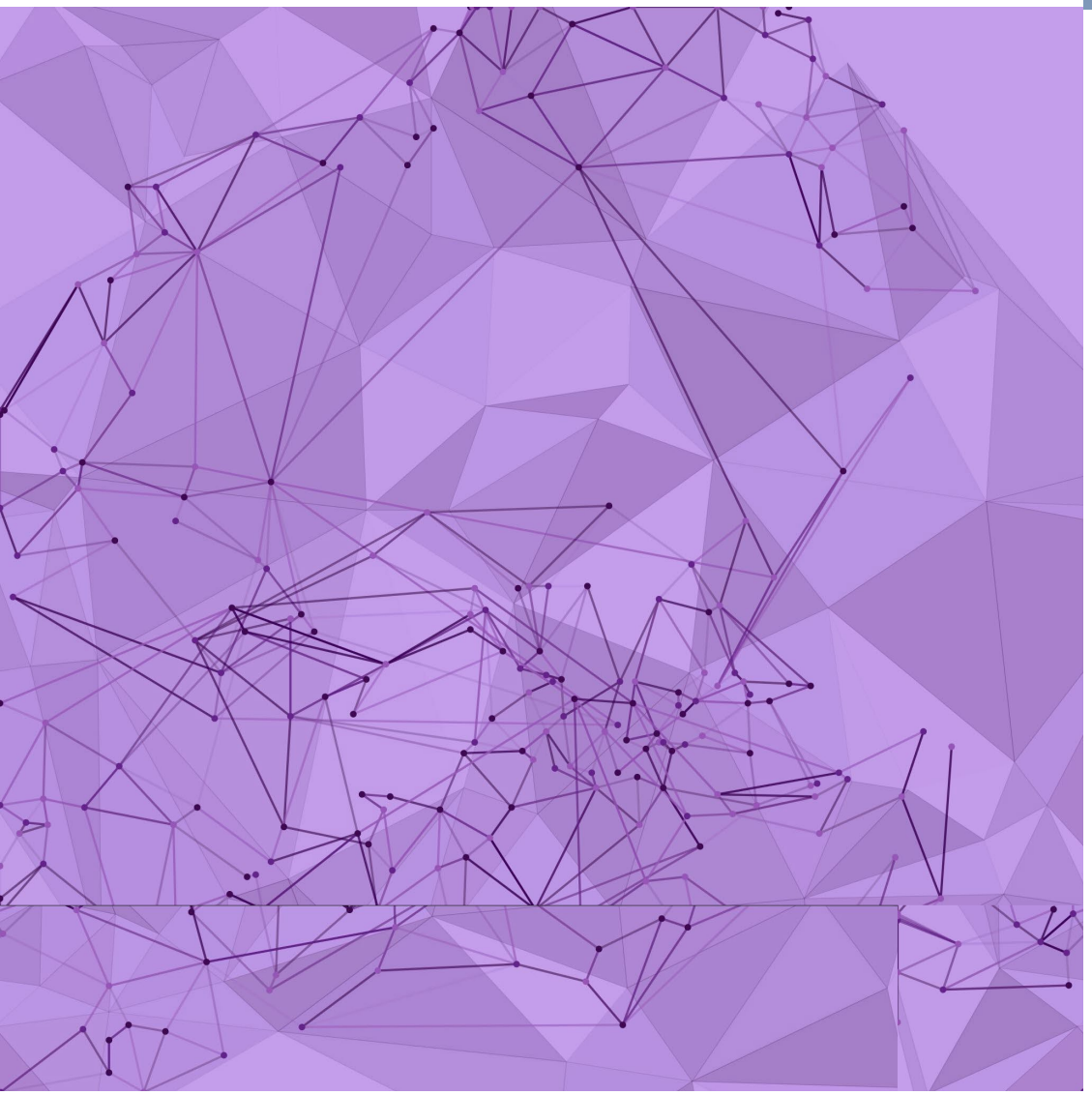
Agglomeration economies: the benefits that result from geographic clustering of people or activities.

Agglomeration effects:

- Urbanization: benefits of agglomeration of people
- Industrialization: benefits of agglomeration of industry
- Localization: benefits of agglomeration of activities near a particular facility

Jobs-to-Housing Ratio

- Measures the relationship between employment and housing in a given community
- Typically used as an indicator of balance in community development. Imbalance suggests longer commutes, negative impacts on the physical and mental health of a community, disproportionate allocation of social resources.
- A ratio of 1.0 – 1.6 implies balance*
  - Imbalance; more jobs than housing: >1.6
  - Imbalance; more housing than jobs: < 1.0



Jobs-to-Housing Ratio Issues

- Balance does not guarantee adequate employment for a community's (or region's) population. Imbalances may still exist between job quality and wages and the education and skills of the labor force.
- Traditional methods and data sources for calculating the jobs-to-housing ratio do not account adequately for remote work, home-based employment, and self-employment.

Structural Unemployment

- Occurs in areas where the supply of labor is not compatible with the current demand for labor.
- Changes may be within defined areas – such as plant closings or the demise of a geographically concentrated industry
- Does not respond to economic recovery (i.e., is not “cyclical”) and requires a different approach

Structural Unemployment Example: AI

- Structural unemployment due to **Artificial Intelligence (AI)**
  - AI technology automates tasks
  - Skills of certain workers become obsolete
  - Mismatch between the skills workers possess and the new skills required by the labor market

Cost-Benefit Analysis (CBA)

Measures the costs and direct/indirect benefits of an activity

Typically used to compare two or more ways to address a need – usually (but not always) capital improvements

Expressed in a **ratio of benefits to costs**

Cost-Benefit Analysis (CBA) Issues

- Benefits and costs must discounted to present value (PV). The time value of money to calculate what that might be worth today for future benefits and costs.
- Some benefits are difficult to quantify (express in dollars) – health, safety, wellness

Fiscal Impact Analysis (FIA)

- **Key Terms:**
  - Revenues Sources: dollars received by a unit of government:
    - Real and personal property taxes
    - Other taxes (varies by state)
    - State aid to cities and towns
    - Fees and other non-tax receipts
  - Expenditures: dollars spent by a unit of government to provide services
    - Salaries and other operating expenses – fire, police, other support
    - Debt service

Fiscal Impact Analysis (FIA)

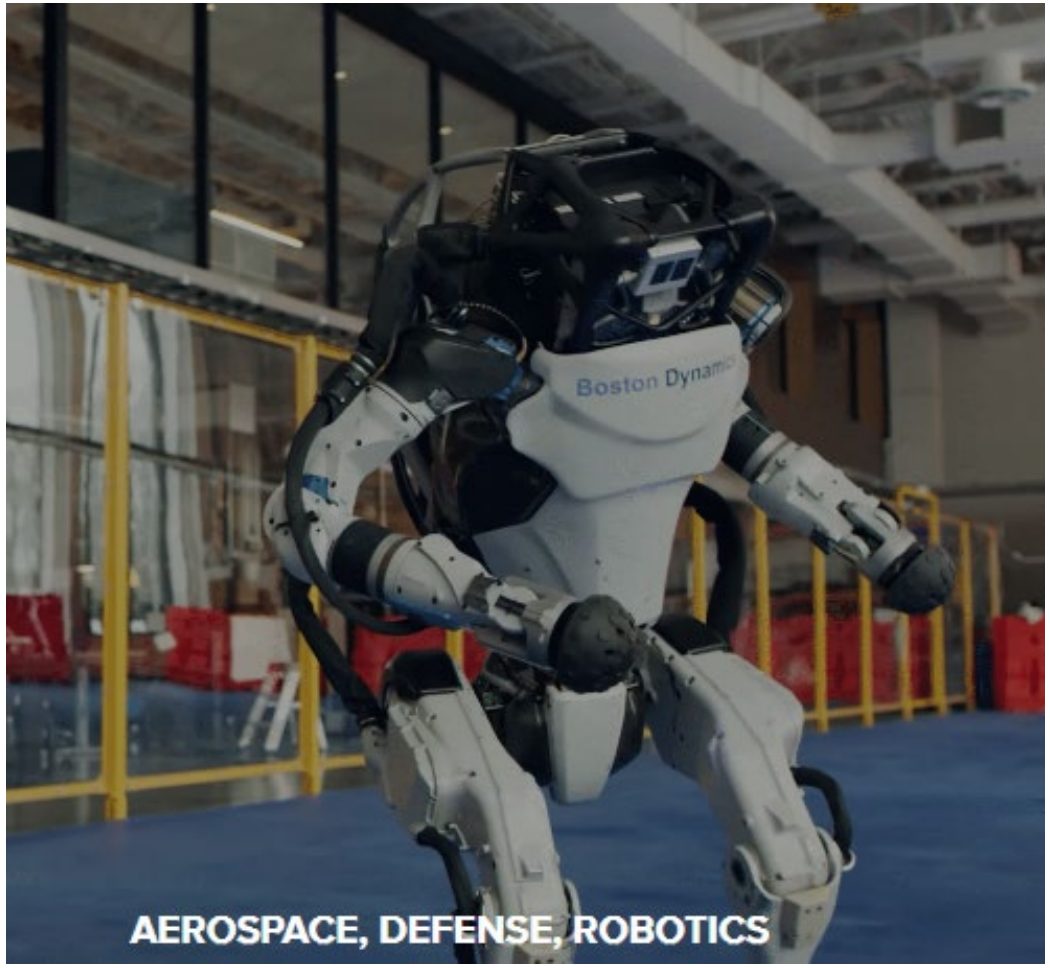
- Analysis of the government revenues and costs associated with a given activity
- Typically used to evaluate how much new revenue a community will receive and how much it will spend to provide services to a proposed development or future development under a proposed rezoning
- Calculates public services costs such as police, fire, school costs
- Results can be expressed different ways
  - Per population net fiscal impact, ratio of cost/benefit, etc.

Question: It is estimated that Boston-Cambridge-Nashua MSA has a Location Quotient of 12.9 for Biochemists and Biophysicists? Which of the following is true?

(A) Share of Boston biotech employment is greater than the national average
(B) Share of Boston biotech employment is lower than the national average.

Business Cluster

- Geographic concentration of related or specialized businesses, institutions, suppliers, and service providers
  - Shared labor and technology requirements
  - Shared customers
  - Shared competitive strengths
  - Shared needs
- Some Massachusetts examples:
  - Boston Life Sciences
  - Tourism
  - Defense & Robotics



Geographically-targeted Tax Incentives

+ Business Improvement District
+ Tax Increment Financing (TIF)
+ Enterprise Zones

Example: Amherst, MA Business Improvement District

Business Improvement District (BID)

- Partnership between businesses & government to provide services in exchange for an extra tax paid by the businesses
- Typically:
  - Used for capital improvements, beautification, additional public safety/security, economic development initiatives, and/or transportation & parking.
  - Branding, Marketing and Events
  - Operated as a non-profit

Tax Increment Financing (TIF)

- In these districts, often administered at the local level, the area's tax revenue (or the increase in property tax revenues due to higher value) does not go into the general fund but rather remains with the district to pay off redevelopment costs or to pay for more investments.
- In most cases, local property taxes are diverted to the TIF district, but a few states, including New Mexico and Kentucky, have also allowed state sales taxes to be diverted.

Enterprise Zones

- Enterprise zones (also sometimes called empowerment zones) are designated areas to offer tax incentives and other regulatory relief at the local and state level.
- The federal, state, and local governments offer various incentives targeted at these zones to encourage economic activity in areas of high unemployment or declining property values.

Economic Development Plan

+ Guides a local or regional effort to stimulate economic growth and preserve existing jobs and create new ones
+ Can be community-wide or specific to a downtown or other business district
+ Job creation and retention and provision of land and infrastructure for business
+ Plan can include:
  - Economic base and shift-and-share analyses
  - Job composition and growth or decline by industry sector on a national, statewide, or regional basis
  - Existing labor force characteristics and future labor force requirements
  - Locational characteristics of the community
  - Available land for commercial, industrial, mixed use
  - Regulations and permitting procedures
  - Existing businesses
  - Plan also includes: Goals, Locations, Strategies and Implementation

Economic Development Plan Strategies

- Setting aside or making available, through clearance and land assembly, land for business and industry through zoning
- Grants, loans, and tax abatement
- Providing amenities and infrastructure through a variety of capital investments
- Quality-of-life and other factors such as colleges and universities, local schools, and environmental, recreational, and cultural amenities
- Attracting "creative economy"—painters, writers, sculptors, musicians and related businesses—to encourage a diverse cultural scene
- Instituting job training and placement
- Streamlining local, regional, or state permitting procedures and regulations to make them "friendlier" to business
- Establishing programs that monitor the needs of existing businesses and institutions, to ensure their retention
- Branding, marketing, identification of business clusters

Infrastructure Tools:

- Tools for providing infrastructure to attract and support economic development
  - Capital Improvements Program (CIP)
  - Special Assessment Districts
  - "Lease/purchase" – infrastructure improvements paid for by private developer and leased to municipality
  - Impact fees – fees that developers pay to community based on impacts
  - Federal and state grants, e.g., Community Development Block Grant
  - Example in Massachusetts is MassWorks grants toward infrastructure investments

Decennial Census and American Community Survey (ACS)

- The Decennial Census is administered every 10 years (last one in 2020)
- Since 2005, in order to provide communities, businesses and the public with detailed information more frequently, data that were historically collected only once every 10 years by the decennial census long form have been collected monthly (and released annually) through the ACS.

How do we use the Decennial Census?

- Population growth trends
- Changes in population characteristics (age, race, sex)
- Household formation rates (= demand for housing)
- Household sizes and composition
- “Group Quarters” population
- Housing inventory
  - Tenure
  - Vacant
  - Householder race

American Community Survey

+ Rolling data releases

  One-year data: geographies 65,000+

  Five-year data: census tracts +

+ Population, social, economic, housing estimates

+ Based on population sample (about 3 million people/year)

How do we use ACS?

Track changes such as …

+ Educational attainment
+ Foreign born populations by place of origin, language
+ Housing costs, housing availability, housing affordability
+ Commuting patterns
+ Home-based employment
+ Household and family incomes
+ Dependent populations
+ Essential data for many economic development models

Question: Your fast growing county has just completed a major revision to your general plan, including a new capital improvements program. The new CIP would likely address:

(1) Land purchases, jails, tennis courts

(2) Same timeframes as the budget

(3) Pothole repairs, library books, fire hoses

(4) Concurrency

Choices:

(A) 2, 3

(B) 1, 2, 3.

(C) 1,4.

(D) 1, 2, 3, 4

Question: Listed below are local and national employment percentages for industries x, y, and z in a metro area. The local employment for each industry represents a percent of total local employment, and the national employment in each industry represents the total national employment. Under the Location Quotient method, an economic planner can assign which of these industries to the export sector of the metropolitan area?

Industry	Local Employment	National Employment
X	3%	6%
Y	10%	7%
Z	11%	3%

(A) X only

(B) Y only.

(C) Z only.

(D) Y and Z only.

Question: The mayor ask the Planning Director to make planning decisions that promote job growth in the local economy. A metric that you plan to use to forecast the resulting economic growth in your community for specific planning decisions is a:

(A) Location Quotient

(B) Benefit-Cost Analysis

(C) Multiplier

(D) Cost Effectiveness analysis

Question: Which economic development program would be most successful?

(A) Attracting big business with greater than 300 employees.
(B) Working with existing business owners to expand their businesses.
(C) Facilitating the location of state and/or federal government offices in your CBD.
(D) Working toward the development of a research and technology park.

Other terms to be familiar with…

- GANNT chart - project management tool that illustrates work completed over a period of time
- Marginal costs analysis - examination of the additional benefits of an activity when compared with the additional costs of that activity
- SIC Code – Standard Industrial Classification "SIC" is a classification system that uses a four-digit code for classifying a company's primary industry (established in 1930s)
- NAICS - The North American Industry Classification System (NAICS) is the standard used by Federal statistical agencies in classifying business establishments, developed in 1997 to replace SIC.
- Net present value - Net present value (NPV) is the difference between the present value of cash inflows and the present value of cash outflows over a period of time.
- Business incubator - facilities that provide small, entrepreneurial businesses with affordable space, shared support and business development services, e.g. local economic development incubators; academic/institutional incubators; and corporate incubators

Questions?

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