

BUSI 300 Urban and Real Estate Economics

PURPOSE AND SCOPE

The *Urban and Real Estate Economics* course provides an in-depth review and analysis of the principles and techniques of urban land economics. It assumes that you have a basic understanding of microeconomic principles and will build on this background with applications to urban issues.

After reading the text and proceeding through this workbook, the reader should have the basic foundation necessary for further study in real estate, particularly for appraisal and valuation issues. Just as a pilot needs some background in engineering, a real estate professional needs some background on the basic principles that guide the operation of property markets. To provide such a foundation is the overall objective of this course. Each individual lesson in the course is listed below with general objectives for what a student should learn:

- X Introduction to urban real estate economic principles.
- X Understand the basic principles of microeconomics.
- X Understand the key variables that influence the growth and development of regions.
- X Develop a simple model of the relationship between the performance of a region's basic industries and the growth of its labour force through migration.
- X Introduce the most important economic forces that influence the location of firms.
- X Understand how scale economies lead to the formation of cities.
- X Understand the nature and sources of agglomeration economies and the concepts of optimum and equilibrium city sizes.
- X Explain the influence of developers on city formation.
- X Understand the basic principles that govern the operation of a land market.
- X Develop the concept of bid rent and how it determines land use, price, and the pattern of land use over space.
- X Develop the economic model of the monocentric city and its applications in order to explain the following phenomena within a city:
 - X property value variations;
 - X land use variations;
 - X geographic size; and
 - X property market's response to the economic environment.
- X Understand how well the monocentric city approximates reality, and discuss ways that the model has been refined, extended, and applied.
- X Analyze and examine the economic and urban forces that have transformed the relatively compact cities of the past into the expansive and multi-centred cities of the present.
- X Understand how time, history, and the durability of capital affect the spatial growth of a city, property development patterns, and prices of urban land and housing.
- X Understand the nature and significance of the problem of road congestion, policies that may reduce congestion, and the effects of congestion on land markets and cities.
- X Discuss the unique features of housing and analyze the operation of housing markets.

- X Analyze housing consumption decisions, the demand and supply of housing, and spatial aspects of the housing market.
- X Examine the unique characteristics of real estate and analyze how these characteristics impact the performance of a real estate market.
- X Understand the effects of local government taxes, spending policies, and land use regulations on land values and land development.

LESSON 1 – Themes, Variations, and Microeconomic Analysis

1. Understand some of the history of urban and real estate economics.
2. Understand the importance of location and markets in urban and real estate economics.
3. State the key questions that make up the fields of urban and real estate economics.
4. Understand the basic principles of market areas, and how the size of market area is determined.
5. Explain the basic ideas behind "central place theory" and its implications for the sizes and functions of cities.
6. Explain what demand and supply curves represent, and draw and manipulate simple demand and supply functions.
7. Solve for equilibrium in a competitive market and describe how prices and quantities react to changes in the economic environment.
8. Understand the definitions of consumers' surplus, producers' surplus, and welfare.
9. Explain the characteristics of an efficient allocation of resources, and show that the outcome of a competitive market maximizes welfare.
10. Analyze the welfare effects of price changes, price ceilings, and specific taxes.
11. Understand the concept of market failure and the problems that can make market outcomes inefficient.
12. Explain the tax and subsidy policies that can be used to correct market failures arising from externalities.

LESSON 2 – The Structure and Growth of Regional Economies

1. Understand how economies of scale, the costs of transportation, and the location of resources influence the location of economic activities.
2. Use a demand and supply model to analyze how changes in the performance of a region's basic industries lead to changes in its population and labour force.
3. Explain the connection between labour market conditions in a region and the product markets in which the region has a significant presence.
4. Understand how multipliers are used to evaluate regional economic events.
5. Understand the basic economic factors that influence firm location.
6. Use the "gravity law" of market potential to determine the best location for a firm serving several markets.
7. Understand the process of "cumulative causation" and its impact on business location and regional development.

LESSON 3 – Urban Development

1. Understand the economic, popular, political, and statistical definitions of the term "city".
2. Understand how increasing returns to scale causes the formation of economic cities.
3. Explain the likely sources of agglomeration economies and how they affect productivity.
4. Understand the benefits and costs of large cities.
5. Understand the characteristics of equilibrium and optimum city sizes.
6. Explain why land developers have an incentive to correct inefficiencies in city sizes.
7. Understand the concept of a system of cities and explain why cities tend to specialize in the production of a few basic goods.

LESSON 4 – Land Market Fundamentals

1. Understand the relationship between rent and economic profit and how the "leftover principle" is used to determine land value.
2. Explain how bid rents enforce a spatial equilibrium and define the highest and best use of the land.
3. Understand how land is allocated among competing uses.
4. Derive and plot a bid rent function for land.
5. Use von Thunen's model of spatial land market to compute land rent and land use, and examine how a land market responds to changes in the economic environment.
6. Explain why firms use land less intensively as their distance from the market increases, and why input substitution makes the bid rent curve convex.
7. Compute the size and structure of a von Thunen region.

LESSON 5 – A Monocentric City

1. Understand the basic assumptions of the monocentric city model.
2. Use the indifference curves and budget lines of a household to determine its optimum location.
3. Explain how the bid rent function ensures that identical households are indifferent among locations.
4. Understand the conditions that determine the level of equilibrium land rents and the size of the city.
5. Understand how a reduction in transportation cost affects land rents at different locations in a city.
6. Understand how the location of different economic activities within a city is determined.
7. Understand the model's implications for the location of rich and poor households.
8. Understand the determinants of a firm's bid rent function and how a commercial district arises from competition between firms and households for land.

LESSON 6 – Suburbanization, Subcentres, and Sprawl

1. Understand how the basic predictions of the monocentric model C that land rent and population density decline with distance from the city centre C accord with reality.
2. Discuss how well the monocentric model predicts the amount of commuting that occurs in cities.
3. Examine the nature and extent of suburbanization in the 19th and 20th centuries within major cities.
4. Explain how natural evolution and fiscal and social problems have contributed to the rapid decentralization of cities.
5. Compare and contrast suburbanization in Canadian and American cities.
6. Discuss trends in the location of employment in metropolitan areas.

7. Understand the definitions of urban subcentres and their tendency to form along major suburban highways.
8. Use the bid rent function of a firm that uses a central transportation terminal versus that of a firm that exports via a highway, to solve and plot where subcentres tend to arise.
9. Understand the model depicting the formation of subcentres as part of the natural evolution of the urban area.
10. Explain how positive externalities, property taxes, and the inefficiently low cost of commuting by car can cause urban sprawl, and the steps that can be taken to control development.

LESSON 7 – Time and Urban Growth

1. Explain the incremental nature of the spatial growth of a city, and the implications of incremental growth for population density patterns.
2. Understand the impact of income and commuting costs on the process of urban growth.
3. Understand the rule that governs whether and when a particular property should be redeveloped.
4. Understand the concept of perfect foresight development and how it explains different land uses at different points in time.
5. Explain why discontinuous development or "leapfrogging" can be efficient.
6. Explain the economic factors accounting for differences in land prices between metropolitan areas, especially, city size and population growth.
7. Understand the components of rents and land prices in a growing city, and how these components vary with location.

LESSON 8 – Transportation and Congestion

1. Explain why the private auto dominates other transit methods and what inherent disadvantages are associated with transit travel.
2. Understand the components of the full cost of auto use.
3. Discuss how road congestion is measured, and discuss recent trends in congestion in cities.
4. Understand the "peak-load problem" in road use.
5. Understand the relationship between traffic volume, traffic speed, and travel time.
6. Understand the distinctions between the private, marginal, and external costs of road use, and how equilibrium and optimum traffic volumes are determined.
7. Understand what an efficient congestion toll is, and how efficient congestion tolls are calculated.
8. Understand the environmental costs of auto use.
9. Explain the different solutions to the congestion problem including capacity expansion and road pricing, parking pricing, gasoline taxes, and the advantages and disadvantages of each.
10. Understand how road pricing has been implemented in practice.
11. Understand how unpriced congestion affects the land market and the size and spatial structure of a city.

LESSON 9 – Housing and Housing Markets

1. Understand the concepts of housing submarkets and housing services.
2. Understand how individual housing consumption decisions are made.
3. Understand the user cost of housing and how the underlying components affect the choice between owning and renting.
4. Explain the factors influencing housing demand.
5. Explain the effect of the baby boom on housing markets and housing prices.
6. Explain how housing maintenance decisions are made by property owners.
7. Draw and explain the short-run and long-run supply curves for housing.
8. Understand how housing can be incorporated into the monocentric city model.
9. Understand why housing prices vary with location within a city.
10. Understand the components of the bid rent function for residential land and the relationship between the housing and residential land price functions.
11. Explain how the model of hedonic pricing takes into consideration the contribution of each characteristic to property value.
12. Understand the filtering process and its implications.

LESSON 10 – Real Estate Markets

1. Explain the unique characteristics of the real estate market.
2. Explain how imperfect competition gives rise to brokerage.
3. Explain the inverse relationship between vacancy rates and rents.
4. Define the term rent, and explain the differences between residential and commercial rent.
5. Understand the sources of market demand for a particular type of real estate space.
6. Calculate the value of an asset as the present value of the stream of future rents that the asset will provide.
7. Understand the components of a capitalization rate for real estate.
8. Understand how the stock of real estate evolves as a result of builders' production decisions.
9. Understand the DiPasquale and Wheaton model with its four sectors (space market, asset market, new construction, and stock adjustment) and the four quadrant diagram.
10. Use the model to explain how a real estate market responds to changes in the economic environment.

LESSON 11 – Local Government and Land Use Regulation

1. Understand, from an economic perspective, the justifications for the existence of governments.
2. Explain the right level of government at which to provide a particular good or service, and the advantages of providing public services in smaller jurisdictions.
3. Explain the "suburban exploitation" hypothesis and the advantages and disadvantages of metropolitan consolidation.
4. Describe local government expenditures and revenue sources.
5. Understand the economic effects of property tax.
6. Understand the Tiebout model of local public finance.
7. Explain the fiscal motivations for zoning laws.
8. Explain how zoning limits or prevents negative externalities between conflicting land uses.

9. Understand the evidence of the effects of externalities and zoning laws on land values.
10. Understand the Coase theorem: private bargaining for the efficient allocation of resources in the presence of externalities.
11. Explain the use of growth controls in urban areas by analyzing fees, urban growth boundaries, and urban service boundaries.
12. Understand the motivations behind growth controls, the different types of controls, and their effects on housing prices.