University of OEB **Academic Year: 2024/2025**

Department of Economic Sciences

Third Year Licence Quantitative Economics

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Lecture 03: Economic Modeling

Economic modeling is a crucial tool used by economists to analyze and predict economic behavior. It involves creating simplified representations of real-world economic processes using mathematical equations, graphs, or computer simulations. These models help policymakers, businesses, and researchers understand how different factors interact within an economy and make informed decisions.

There are several types of economic models, each serving a specific purpose. **Descriptive models** focus on explaining economic phenomena without making predictions. **Predictive models**, on the other hand, estimate future trends based on past data. **Normative models** suggest policies to achieve specific economic goals.

One widely used economic model is the **supply and demand model**, which explains how prices are determined in a market. When demand increases and supply remains constant, prices tend to rise. Conversely, if supply grows while demand remains unchanged, prices typically fall. Another important model is the **Keynesian economic model**, which emphasizes the role of government spending in stabilizing the economy during recessions.

Economic models rely on assumptions, which may simplify reality. For instance, some models assume that individuals always make rational decisions, but in real life, emotions and external influences often affect choices. Despite these limitations, economic modeling remains essential for forecasting inflation, employment rates, and economic growth.

With the rise of technology, **computational economic models** have become more sophisticated, using big data and artificial intelligence to improve accuracy. These advancements allow economists to test various scenarios and assess the potential impact of economic policies before implementation.

In conclusion, economic modeling is a powerful tool that helps economists and decision-makers analyze complex economic systems. While models have limitations, they provide valuable insights into economic trends and policy-making, shaping the way governments and businesses respond to financial challenges

Reading Comprehension Questions

1. What is economic modeling, and why is it important?
2. How do economic models help policymakers and businesses?

3. What are the three main types of economic models mentioned in the passage?
4. How do **descriptive models** differ from **predictive models**?

5. What does the **supply and demand model** explain?
6. How does the **Keynesian economic model** suggest stabilizing the economy?

7. Why do economic models make assumptions, and how can this be a limitation?
8. What is one example of an unrealistic assumption in economic models?

9. How has technology improved economic modeling?
10. Why are computational models becoming more important in economics?

Vocabulary Section

Match the words to their correct definitions.

1. **Computational modeling**
2. **Assumption**
3. **Predictive model**
4. **Keynesian economics**
5. **Policymaker**

A. A simplified representation of an economy using data and simulations.

B. A belief or condition accepted as true without proof in a model.

C. A model used to estimate future economic trends.

D. A person who makes decisions regarding economic policies.

E. An economic theory that emphasizes government spending to manage economic fluctuations.