

University of OEB

Academic Year : 2025-2026

Department of Economic Science.

Third year licence

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Unit one : Introduction To Quantitative Economics.

1- Definition of Economics :

Economics is the social science that studies how people businesses and governments make choices about using limited resources to satisfy unlimited wants and needs .

In simple words : Economics is about how people produce, distribute, and consume goods and services to meet human needs with the resources available.

2- Definition of Quantitative :

Means related to numbers, amounts, or measurable data .

In simple words : something that can be measured, counted or expressed in numbers (incomes, outcomes, price) .

Ex : Quantitative : This class has 30 students.

Non-quantitative : This class is big.

3-Defintion of Quantitative Economics :

Is a branch of Economics that applies mathematical models, statistics and computational methods to analyse Economics problems and test Economics theories . It focuses on turning abstract ideas in economics into measurable testable and predictive frame works .

In simple words : Quantitative Economics = Mathematics + statistics of Economics .

4-Main tools in Quantitative Economics :

1-Mathematics : formulas, equation, optimization .

Ex : supply and demand equation.

2-statistics : collecting and analysing data .

Ex : serving house holds about incomm .

3-economics : applying statistical methods to test Economics theories

Ex : testing wether education really increase income

5- Why it is important :

- Help governments design policies (taxes, interest, rates).
- Help companies plan production, pricing, and investment.
- Help predictive future economic trends .
- Make the Economics Scientific : moves from words to numbers .