# uc3m Universidad Carlos III de Madrid

#### **Public Economics**

Academic Year: (2023 / 2024) Review date: 24-05-2023

Department assigned to the subject: Economics Department Coordinating teacher: ORTUÑO ORTIN, IGNACIO ISIDRO

Type: Electives ECTS Credits: 6.0

Year : Semester :

## REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

- 1. BASIC MATHEMATICAL ANALYSIS, INCLUDING AN INTRODUCTION TO CONSTRAINED OPTIMIZATION
- 2. INTERMEDIATE MICROECONOMICS, INCLUDING AN INTRODUCTION TO GENERAL EQUILIBRIUM

#### TO DISPELL ANY DOUBTS:

- 1. THE FIRST DAYS OF CLASS YOU WILL BE GIVEN A SET OF REVIEW PROBLEMS,
- 2. STUDENTS ARE SUPPOSED TO BE FULLY ACQUAINTED WITH THE FOLLOWING TOPICS:

#### I. GENERAL EQUILIBRIUM

Economies with a single productive factor, two goods, and two consumers

- 1. Feasible allocations. Production possibilities set. Marginal Rate of Transformation.
- 2. The Pareto criterion. Efficient allocations. Necessary conditions for efficiency in regular economies.
- 3. Resource allocation mechanisms. Private ownership of the only production factor and the two firms. Price systems and general equilibrium allocations under price-taking behavior at perfectly competitive markets. The First Welfare Theorem.

# II. COST MINIMIZATION WITH A SINGLE PRODUCTIVE FACTOR

Properties of the total, average and marginal cost functions when under decreasing, constant and increasing returns. Graphic illustration.

# III. INDIVIDUAL CONSUMER BEHAVIOR

- 1. Consumer demand functions.
- 2. Leisure and consumption demand functions and labor supply function.
- 3. Current and future consumption demand functions and savings supply function in a two-periods world.
- 4. Equivalent Variation when good price changes.
- 5. Consumer surplus.

#### IV. INDIVIDUAL FIRM BEHAVIOR

- 1. Economic profits (rents): definition. Capital opportunity cost.
- 2. Supply curve. Producer surplus.

### V. PARTIAL EQUILIBRIUM

1. Industry supply curve under freedom of entry and access to the best available technology. The constant returns case. The case with first constant and then decreasing returns. The elimination of

profits in competitive equilibrium.

- 2. Industry equilibrium with positive profits (economic rents).
- 3. Industry equilibrium in an open economy. Imports and exports.
- 4. Consumers, and producers, surplus. Maximization of the total surplus under perfect competition.

#### **OBJECTIVES**

The student in this course will acquire the following knowledge capacities that we divide into these sections:

- I State intervention in the economy.
- II The basic concepts of budgetary policy
- II The problem of aggregating individual preferences, the criteria of efficiency and equity and their integration in social welfare functions
- III To become familiar with the idea that the economic agent that suffers the burden of the tax does not have to coincide with the taxable person of the same. To explain that any tax policy that alters the relative price of economic activities causes an impoverishment of economic agents and a distorting change in their behavior that involves a loss of well-being known as deadweight-loss. Analyze the deadweight-loss in three basic cases: the choice of a consumer good or service over all other goods, the choice between consumption and leisure, and the choice in an intertemporal consumption model.
- iV Fundamental problems in the empirical measurement of the reactions of economic agents to taxes. For example, how to measure elasticities in consumption, labor supply, and elasticities of total taxable income.
- V. The structure of the tax system. We study the structure and basic problems that plague the income tax of individuals, corporation tax, social security contributions, value-added tax and tax on inheritance and transfers inter vivos, and taxes to globalized companies.
- VI. Study of the basic ideas about fiscal decentralization and the fundamental ideas about the economic policy of taxes Finally, attitudes will be promoted such as: The ability to defend and justify certain attitudes about public policy in tax matters. Ability to maintain a critical attitude and distinguish the positive and normative aspects of an argument

## **DESCRIPTION OF CONTENTS: PROGRAMME**

In the first part of the course, the basic ideas and magnitudes of state intervention in the economy and budget tools are discussed. In the next part, an introduction to the Theory of Taxation is presented, where the incidence of taxes and their effects on behavior are analyzed. The excess tax created by choice of a good over other goods, the choice between leisure and consumption, and the choice in an intertemporal consumption model are studied in detail. Basic ideas about empirical estimates of elasticities are also raised. The following part presents some fundamental ideas about equity, well-being, and redistribution. The fundamental ideas about optimal taxation, and the basic aspects of the central tax figures are discussed next. It ends with a discussion of the main issues of fiscal decentralization and the economic policy of taxation.

### LEARNING ACTIVITIES AND METHODOLOGY

The course follows several books, a selection of academic papers, class notes and handouts. Classroom lessons are combined with hours of student work on public economics issues and specific cases. Student presentations are also included

The teaching-learning relationship covers three areas:

- 1) Students will develop appropriate theoretical knowledge through classes taught by professors with the support of exercises.
- 2) Students will develop technical skills through exercises to be solved by the student, with solutions to selected exercises discussed in the classroom.
- 3) Students will develop troubleshooting skills by dealing with case studies involving the discussion of specific measures on tax and spending. The student should be able to analyze certain policies relating to public economics, to defend their positions, and to maintain a critical stance on the proposals of their peers.

## **ASSESSMENT SYSTEM**

There will be a final exam (60%) as well as continuous evaluation. The latter consists of a set of exercises that students are supposed to hand in on a weekly basis (10%), student presentations of certain parts and some tests (30%)

% end-of-term-examination:	60
% of continuous assessment (assigments, laboratory, practicals):	40

## **BASIC BIBLIOGRAPHY**

- J. Gruber Public Finance and Public Policy, Worth Publishers, 2015
- Toshihiro Ihori Principles of public finance, Springer, 2017

## ADDITIONAL BIBLIOGRAPHY

- Harvey S. Rosen and Ted Gayer, Public Finance, McGrawHill, 2007
- Slemrod, J. y Bakija, J.. , Taxing Ourselves: , A Citizens Guide to the Great Debate over Tax Reform
- Stiglitz, Joseph. E. and Kay Rosengard Economics of the public sector, Norton and Company, 2015

## **BASIC ELECTRONIC RESOURCES**

- Emmanuel Saez . Undergraduate Public Economics: http://eml.berkeley.edu//~saez/course131/course131.html