# uc3m Universidad Carlos III de Madrid

#### **Public Economics**

Academic Year: (2019 / 2020) Review date: 15/05/2020 11:14:59

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

Type: Electives ECTS Credits: 6.0

Year: 4 Semester:

# REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

- 1. MATHEMATIC ANALISYS, INCLUDING AN INTRODUCTION TO CONSTRAINED OPTIMIZATION
- 2. INTERMEDIATE MICROECONOMICS, INCLUDING AN INTRODUCTION TO GENERAL EQUILIBRIUM

TO DISPELL ANY DUBTS:

1. THE FIRST DAY OF CLASS YOU WILL BE GIVEN A SET OF REVIEW PROBLEMS, PART OF WHICH WILL BE DUE THE FOLLOWING WEEK.

TO PROVIDE THE NECESSARY INCENTIVES, REVIEW PROBLEMS WILL ALWAYS GET DOUBLE MARK.

STUDENTS ARE SUPOSSED 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 a 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**

Students of this subject will acquire knowledge and understanding in the following four areas.

#### I. STATE INTERVENTION

- ¿ Knowledge of the variety of situations in which the free market leads to inefficient outcomes or a socially unacceptable distribution of wealth or resources, paving the way for an economic justification for state intervention.
- Understanding of possibilities and difficulties associated with state intervention: public goods and externalities.
  - II. SOCIAL CHOICE
- ¿ Awareness of the fundamental difficulties in any attempt to aggregate individual preferences for public or collective decisions.
- ¿ Familiarity with how to reconcile the idea of economic efficiency and distributional equity in spite these difficulties.
  - III. INCIDENCE, EFFICIENCY AND EQUITY IN THE TAX SYSTEM
- ¿ Acquaintance with the idea that the tax burden does not necessarily falls on the economic agent liable to pay the tax.
- ¿ Awareness that any tax policy that alters the economic activities; relative prices results in the impoverishment of the economy. Awareness that the distorting change in their behavior that involves a welfare loss is known as the excess burden.
- ¿ Ability to analyze the excess burden in three basic cases: the choice of a consumer good or service versus all other goods, the choice between consumption and leisure, and the choice in an intertemporal consumption model.
  - IV. FISCAL SYSTEM STRUCTURE AND THE IDEA BEHIND ¿LA REFORMA FISCAL¿.
- Knowledge of the structure and the basic problems plaguing the income tax of individuals, corporation tax, contributions to social security tax, and value-added tax and inheritance transfers.
- Knowledge of the basic economic ideas that are envisaged under the banner of "Tax Reform". This knowledge and understanding will be complemented by the following skills:
- ¿ Ability to analyze the design of the tax system.
- ¿ Ability to defend and justify personal beliefs on public economics and the tax system.
- Ability to maintain a critical and analytical perspective and to distinguish between the positive and normative elements of political debate.

## **DESCRIPTION OF CONTENTS: PROGRAMME**

This course is divided into four parts. The first part focuses on the justification for state interventions to deal with market failures, with particular attention to public goods and externalities. The second part discusses the problem of aggregating individual preferences, the normative criteria for efficiency and equality and their integration in the functions of well being. The third part presents and introduction to the theory of taxes, providing analysis of the incidence of taxes and their effects on behaviour. We study in detail the excess burden in the choice of goods over or against other goods, the choice between leisure and consumption and intertemporal choice ¿ a model of consumption. The fourth part reviews the basics of key tax figures and the ideas behind the "Tax Reform".

### LEARNING ACTIVITIES AND METHODOLOGY

The course follows a textbook, 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

% end-of-term-examination/test:

60
% of continuous assessment (assignments, laboratory, practicals...):

40

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

**BASIC BIBLIOGRAPHY** 

(30%)

- J. Mirrlees, S. Adam, T. Besley, R. Blundell, S. Bond, R. Chote, M. Gammie, P. Johnson, G. Myles and J. Poterba, , Tax by Design: The Mirrlees Review, Oxford University Press, , 2011(http://www.ifs.org.uk/mirrleesReview/design) (Mirrlees)
- Stiglitz, Joseph, , Economics of the Public Sector,, Third Edition

#### ADDITIONAL BIBLIOGRAPHY

- Castañer, J. M. y , J. F. Sanz. , Imposición lineal sobre la renta y equivalencia distributiva: un ejercicio de microsimulación
- Castells et al, ..., Una alternativa fiscal para España
- Díaz, M. y M., Sebastián., Ideas para una reforma fiscal en España
- Gale ,, W.. , Building a Better Tax System
- Hall, R. y A., Rabushka., The Flat Tax
- Manresa, A., S. Calonge y E. Berenguer., Progresividad y redistribución de los impuestos en España, 1990-1991
- McLure, C. y , G. Zodrow. , Administrative Advantages of the Individual Tax Prepayment Approach to the Direct Taxation of Consumption
- Ruiz-Castillo, J., En defensa de un impuesto, progresivo sobre el consumo
- Slemrod, J. y Bakija, J.., Taxing Ourselves: , A Citizens Guide to the Great Debate over Tax Reform
- Zubiri, I., El diseño del IRPF en un contexto económico cambiante: , el trade off eficiencia-equidad