

**COURSE DATA****Data Subject**

Code	44337
Name	Applied industrial economics
Cycle	Master's degree
Créditos ECTS	5.0
Academic year	2015 - 2016

Study (s)

Degree	Center	Acad. year	Period
2202 - M.U. en Economía	FACULTY OF ECONOMY	2	First term

Subject-matter

Degree	Subject-matter	Character
2202 - M.U. en Economía	3 - Specific subject areas	Optional

Coordination

Name	Department
AÑON HIGON, MARÍA DOLORES	132 - ESTRUCTURA ECONÓMICA (ECONOMÍA APLICADA II)
MAÑEZ CASTILLEJO, JUAN ANTONIO	132 - ESTRUCTURA ECONÓMICA (ECONOMÍA APLICADA II)
SANCHIS LLOPIS, AMPARO	132 - ESTRUCTURA ECONÓMICA (ECONOMÍA APLICADA II)

SUMMARY

The course is devoted to the analysis of hot topics in the field of Industrial Economics from an applied point of view. In each one of the topics, we analyse in depth the corresponding seminal papers paying special attention to the theoretical mode used as reference, the empirical strategy, the data sources and the interpretation of the results. We start the course with a thorough revision of the new developments to estimate total factor productivity using firm data. Next, we devote two topics to the measurement of the private and social returns to R&D. Topic 4 analyses the relationship between market structure and innovation. Topic 5 focuses on Sutton's analysis of market concentration. Topic 6 analyses the determinants of firms' entry and exit decisions. Finally, topic 7 is devoted to an analysis of the regulation of electrical markets.



PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

Other requirements

The prerequisites to enrol in this course are have attended the Microeconomics and Econometrics courses of the first term

RESULTADOS DE APRENDIZAJE

After completing the course students must be able to:

1. Understand the operation of markets, mainly when markets behave imperfectly, and the key variables that determine the behavior of agents in them;
2. Understand the economic behavior in organizations;
3. Analyze the most important strategic variables for operators and conduct an empirical study to determine the key variables that determine the behavior of these agents.

DESCRIPTION OF CONTENTS

1. Productivity measurement using firm level data

The topic is devoted to explain the recent developments in the estimation of total factor productivity using firm level data

1. Endogeneity and estimation of total factor productivity
2. The control function approach
3. ACF and Wooldridge alternative approaches
4. Endogenising the law of motion of productivity

2. Measuring the Private Returns to R&D

The topic is devoted to the analysis of the private returns to R&D

1. Introduction
2. Theoretical Framework
3. Measurement Issues
4. Empirical Estimates of the Private Returns to R&D

3. Measuring the social returns to R&D with special focus on R&D spillovers

This topics analyses the social returns to R&D with a special focus on R&D spillovers

1. Introduction
2. Conceptual Framework
3. Measuring R&D Spillovers and channels of knowledge transmission
4. Empirical Evidence
5. Policy Implications



4. Market structure and innovation

This topic analyses the role of market structure on firms' innovation incentives

1. Introduction.
2. Incentives for innovation under different market structures.
3. Competition and innovation.
4. Empirical studies.

5. Market concentration and the bounds approach

This topic analyses the bounds approach to market concentration:

1. Introduction.
2. A theoretical framework
3. The bounds approach
4. Industry cases
5. Related empirical studies

6. Firm entry and exit

In this topic we analyse the determinant of firms' entry and exit

1. Static model of market structure, entry and exit
2. Dynamic models of market structure, entry and exit
3. Applications

7. Competition and regulation in the electricity market

In this topic we carry out a brief introduction to the regulation mechanisms of utilities market and then we focus in the electricity market

1. Mechanisms of regulation in the utilities markets
2. The case of the electricity market

WORKLOAD

	Hours
CLASSROOM ACTIVITIES	
Theory classes	40.0
Classroom practises	10.0
Total Classroom activities	50.0
NON-ATTENDING ACTIVITIES	
Development of group work	10.0
Development of individual work	15.0
Study and independent work	30.0
Readings supplementary material	10.0
Resolution of case studies	10.0
Total Non-attending activities	75.0
TOTAL	125.0



TEACHING METHODOLOGY

There will be two types of sessions:

1. Lectures taught by the lecturers
2. Classes: there will be two types of classes, discussion and interpretation of papers, and computer based classes replicating the results obtained in some papers

EVALUATION

70% of the final mark corresponds to the Exam paper mark

20% of the final mark corresponds to individual essays

10% of the final mark correspond to group presentations

REFERENCES

Basic

- Topic 1: Productivity measurement using firm level data

References:

Olley, G. S., & Pakes, A. (1992). The dynamics of productivity in the telecommunications equipment industry (No. w3977). National Bureau of Economic Research.

Levinsohn, J., & Petrin, A. (2003). Estimating production functions using inputs to control for unobservables. *The Review of Economic Studies*, 70(2), 317-341.

Akerberg, D., Caves, K., & Frazer, G. (2006). Structural identification of production functions.

Van Beveren, I. (2012). Total factor productivity estimation: A practical review. *Journal of Economic Surveys*, 26(1), 98-128.

- Topic 2: Measuring the Private Returns to R&D

References:

Griliches, Z. (1979). Issues in assessing the contribution of research and development to productivity growth, *Bell Journal of Economics*, 10(1), 92-116.

Griliches, Z. (1980). R&D and the productivity slowdown. *American Economic Review*, 70(2), 343-348.

Hall, B. H., and J. Mairesse (1995), Exploring the Relationship Between R&D and Productivity in French Manufacturing Firms, *Journal of Econometrics*, 65, 263-293

Hall B.H., Mairesse J. and P. Mohnen (2009): 'Measuring the Returns to R&D', NBER Working Paper No. 15622, December 2009.



- Topic 3: Measuring the Social Returns to R&D: R&D Spillovers

Aitken, B., Harrison, A., (1999). Do domestic firms benefit from direct foreign investment? Evidence from Venezuela. *The American Economic Review*, 89(3), 605-618.

Blomström, M. and A. Kokko (1998), Multinational Corporations and Spillovers. *Journal of Economic Surveys*, 12(3), 247-277.

Cassiman B. and R. Veugelers (2002). R&D Cooperation and Spillovers: Some Empirical Evidence from Belgium. *The American Economic Review*, 92(4), 1169-1184

Coe, D. T., and E. Helpman (1995). International R&D Spillovers. *European Economic Review*, 39, 859-887.

Cohen, W. y D, Levinthal (1989). Innovation and Learning: The Two Faces of R&D. *Economic Journal*, 99, 569-596.

Eberhardt, M., C.Helmers, and H. Strauss (2013). Do Spillovers Matter When Estimating Private Returns to R&D? *Review of Economics and Statistics* 2013 95:2, 436-448

Jaffe A. B., M. Trajtenberg, R. Henderson (1993). Geographic Localization of Knowledge Spillovers as Evidenced by Patent Citations. *The Quarterly Journal of Economics*, 108(3), 577-598

- Topic 4: Market Structure and Innovation

References:

Gilbert, R., 2006, Looking for Mr. Schumpeter: Where Are We in the Competition-Innovation Debate?, NBER Chapters, *Innovation Policy and the Economy*, Volume 6, pp. 159-215, National Bureau of Economic Research, Cambridge, Massachusetts, U.S.A.

Aghion, P.; Bloom, N.; Blundell, R.; Griffith, R. and Howitt, P., 2005, Competition and Innovation: an Inverted-U Relationship, *The Quarterly Journal of Economics*, 120, pp. 701-728.

Vives, X., 2008, Innovation and Competitive Pressure, *The Journal of Industrial Economics*, 56, pp. 419-469.

Beneito, P., Coscollá, M., Rochina-Barrachina, M.E. y Sanchis, A., Competitive pressure and innovation at the firm level, *Journal of Industrial Economics*, forthcoming

Boone, J., 2000, Competitive Pressure: the Effects on Investments in Product and Process Innovation, *The RAND*



- Topic 5: Market concentration and the bounds approach

References:

Sutton, J. (2007), Market Structure: Theory and Evidence, in M. Armstrong and R. Porter, Handbook on Industrial Organization, volume 3, chapter 35, North Holland.

Sutton, J. (1991), Sunk Costs and Market Structure MIT Press.

Sutton J. (1998) Technology and Market Structure MIT Press (Ch 1-6).

Bresnahan, Timothy F., (1992), "Sutton's Sunk Costs and Market Structure: Price Competition, Advertising, and the Evolution of Concentration: Review Article, Rand Journal of Economics; 23(1), pages 137-52.

Schmalensee, R., (1992) "Sunk Costs and Market Structure: A Review Article" Journal of Industrial Economics; 40(2), June 1992, pages 125-34.

Matraves, C., (1999), Market structure, R&D and advertising in the Pharmaceutical industry, Journal Of Industrial economics, 47, pp.169-194.

Robinson, W. and Chiang, J., (1996), Are Suttons predictions robust?: Empirical insights into advertising, R&D and concentration, Journal of industrial Economics, 44(4), pp. 389-408.

- Topic 6: Firm entry and exit

Sutton, J. (1991), Sunk Costs and Market Structure MIT Press.

Bresnahan, T. F., & Reiss, P. C. (1991). Entry and competition in concentrated markets. Journal of Political Economy, 977-1009.

Berry, S. T. (1992). Estimation of a Model of Entry in the Airline Industry. Econometrica: Journal of the Econometric Society, 889-917.

Ellickson, P. B. (2007). Does Sutton apply to supermarkets?. The RAND Journal of Economics, 38(1), 43-59.

Bronnenberg, B. J., Dhar, S. K., & Dubé, J. P. H. (2009). Brand history, geography, and the persistence of brand shares. Journal of political Economy, 117(1), 87-115.



- Topic 7: Competition and regulation in the electricity market

References:

Borenstein, S. (2000) "Understanding competitive Pricing and Market Power in Wholesale Electricity Markets," *Electricity Journal*.

Borenstein, S. (2011) "The Private and Public Economics of Renewable Electricity Generation", *Journal of Economic Perspectives*.

Fabra, N., N.H. von der Fehr and D. Habord (2006) "Designing Electricity Auctions", *Rand Journal of Economics* 37 (1), 23-346.

Federico, G, Vives, X. and Fabra, N. (2009) *Competition and Regulation in the Spanish Gas and Electricity Markets*, IESE SP-SP.

Griffin, J. and Puller, S. (2005) "A Primer on Electricity and the Economics of Deregulation" *Electricity Deregulation: Choices and Challenges*, Griffin and Puller, eds. Chicago: University of Chicago Press.

Heal, G. (2009), *The Economics of Renewable Energy*, NBER Working Paper 15081.

Newbery, D. et al. *A Review of the Monitoring of Market Power Working Papers 0502*, Massachusetts Institute of Technology, Center for Energy and Environmental Policy Research.

Newbery, D. (2011) "Reforming Competitive Electricity Markets to Meet Environmental Targets" *Cambridge Working Papers* 1154.

Wolak, F. (2011) *Regulating Competition in Wholesale Electricity Supply*.
