

Temas de Econometría A

Curso Académico: (2019 / 2020)

Fecha de revisión: 08-05-2020

Departamento asignado a la asignatura: Departamento de Economía

Coordinador/a: DELGADO GONZALEZ, MIGUEL ANGEL

Tipo: Optativa Créditos ECTS : 4.0

Curso : 2 Cuatrimestre : 2

REQUISITOS (ASIGNATURAS O MATERIAS CUYO CONOCIMIENTO SE PRESUPONE)

Econometría I, Econometría II y Econometría III

OBJETIVOS

Esta asignatura cubre tópicos avanzados de teoría econométrica y estadística que no son estudiados con la suficiente profundidad en los cursos anteriores, proporcionando herramientas clave para el desarrollo de investigación en metodología econométrica. Su contenido se determina de acuerdo a la actualidad de los temas y cubrirán materias como inferencia e identificación no paramétrica y semiparamétrica, procesos estocásticos, inferencia basada en procesos empíricos, métodos bootstrap en Econometría y contrastes de especificación.

DESCRIPCIÓN DE CONTENIDOS: PROGRAMA

Esta asignatura cubre tópicos avanzados de teoría econométrica y estadística que no son estudiados con la suficiente profundidad en los cursos anteriores, proporcionando herramientas clave para el desarrollo de investigación en metodología econométrica. Su contenido se determina de acuerdo a la actualidad de los temas y cubrirán materias como inferencia e identificación no paramétrica y semiparamétrica, procesos estocásticos, inferencia basada en procesos empíricos, métodos bootstrap en Econometría y contrastes de especificación.

ACTIVIDADES FORMATIVAS, METODOLOGÍA A UTILIZAR Y RÉGIMEN DE TUTORÍAS

Actividades formativas

Clase teórica

Clases prácticas

Listas de problemas

Trabajo individual del estudiante

Tutorías

Metodologías docentes

Exposiciones en clase del profesor con soporte de medios informáticos y audiovisuales, en las que se desarrollan los conceptos principales de la materia y se proporciona la bibliografía para complementar el aprendizaje de los alumnos.

Clases prácticas con resolución de ejercicios y problemas que ilustran la teoría y permiten estudiar casos particulares y pequeñas extensiones.

Conjuntos de problemas para resolver en casa de forma individual que ayudan a sistematizar el estudio de la asignatura y repasar conceptos fundamentales.

SISTEMA DE EVALUACIÓN

Trabajos semanales y examen final

Peso porcentual del Examen Final: 50

Peso porcentual del resto de la evaluación: 50

BIBLIOGRAFÍA BÁSICA

- Fan, J. $\hat{\epsilon}$ Local Linear Smoothers and Their Minimax Efficiencies $\hat{\epsilon}$, *Annals of Statistics* 21, 196 $\hat{\epsilon}$ 216, 1993
- Manski, C.F $\hat{\epsilon}$ Adaptive Estimation of Non-linear Regression Models $\hat{\epsilon}$, *Econometric Reviews* 3, 145-194, 1984
- Newey, W. K. $\hat{\epsilon}$ Adaptive Estimation of Regression Models via Moment Restrictions $\hat{\epsilon}$, *Journal of Econometrics* 38, 301 $\hat{\epsilon}$ 339, 1988
- Newey, W.K $\hat{\epsilon}$ Efficient Instrumental Variables Estimation of Nonlinear Models", *Econometrica* 58, 809 $\hat{\epsilon}$ 837., 1990
- Powell, J, Stock, J. and Stoker, T $\hat{\epsilon}$ Semiparametric Estimation of Index Coefficients $\hat{\epsilon}$, *Econometrica* 57, 1403 $\hat{\epsilon}$ 1430
- Robinson, P. M Asymptotically Efficient Estimation in the Presence of Heteroskedasticity of Unknown Form $\hat{\epsilon}$. , *Econometrica* 55, 875-891, 1988
- Robinson, P. M $\hat{\epsilon}$ Semiparametric Econometrics: A Survey", *Journal of Applied Econometrics* 3, 35-51, 1988
- Robinson, P. M $\hat{\epsilon}$ Root $\hat{\epsilon}$ N-Consistent Semiparametric Regression $\hat{\epsilon}$, *Econometrica* 6, 931-954, 1988
- Stone, C.J. $\hat{\epsilon}$ Adaptive Maximum-likelihood Estimation of a Location Parameter $\hat{\epsilon}$., *Annals of Statistics* 3, 267-284, 1975

BIBLIOGRAFÍA COMPLEMENTARIA

- Abadie, A. Bootstrap tests for distributional treatment effects in instrumental variable models. , *Journal of the American Statistical Association*, 97(457), 284-292, 2002
- Abadie, A., & Imbens, G. W. Large sample properties of matching estimators for average treatment effects., *Econometrica*, 74(1), 235-267., 2006
- Anderson, T.W. Goodness of fit tests for spectral distributions, *The Annals of Statistics*, 21, 830-847, 1993
- Andrews, D. W. K. A conditional Kolmogorov test, *Econometrica*, 65, 1097--1128., 1997
- Anselin, L. *Spatial Econometrics: Methods and Models* , (Vol. 4). Springer Science & Business Media., 2013
- Bai, J. and Ng, S. A test for conditional symmetry in time series models, *Journal of Econometrics* 103, 225-258, 2001
- Bartlett, M.S Problèmes de l'analyse spectral des séries temporelles stationnaires, *Publ. Inst. Statist. Univ. Paris III-3*, 119-134, 1954
- Bickel, P.J. and M. Rosenblatt On Some Global Measures of the Deviations of Density Function Estimates, *Annals of Statistics*, 1, 1071-1095, 1973
- Bierens, H. Consistent model specification test, *Journal of Econometrics*, 20, 105--134., 1982
- Bierens, H. A Consistent conditional moment test of functional form, *Econometrica*, 58, 1443-1458., 1990
- Bierens, H. and W. Ploberger Asymptotic theory of integrated conditional moment tests, *Econometrica*, 65, 1129--1151, 1997
- Blinder, A. S. Wage discrimination: reduced form and structural estimates, *Journal of Human Resources*, 436-455., 1973
- Blum, J.R., J. Kiefer and M. Rosenblatt Distribution free tests of independence based on the sample distribution function, *Annals of Mathematical Statistics*, 32, 485-498., 1961
- Butler, C.C. A test for symmetry using the sample distribution function, *Annals of Mathematical Statistics* 40, 2209-2210., 1969
- Cantelli, F. Sulla probabilita come limita della frequenza, . *Rend. Accad. Lincei* 26(1), p. 39, 1933
- Case, A. C. Spatial patterns in household demand, *Econometrica: Journal of the Econometric Society*, 953-965., 1991
- Chen, H. and J.P. Romano Bootstrap-assisted goodness-of-fit tests in the frequency domain, *Journal of Time Series Analysis*, 20, 619 $\hat{\epsilon}$ 654, 2002
- Chen, X. and Y. Fan (Consistent hypothesis testing in semiparametric and nonparametric models for econometric time series, *Journal of Econometrics*, 91, 373--401., 1999
- Chernozhukov, V., Fernández-Val, I., & Melly, B Inference on counterfactual distributions. , *Econometrica*, 81(6), 2205-2268., 2013
- D'Agostino, R.B. and M.A. Stephens Goodness-of-fit techniques, Marcel Dekker., 1986
- Delgado On testing conditional moment restrictions. *Structural Econometrics: Essays in Methodology and Applications*, B. Dutta ed., Oxford University Press, Oxford., 285-313., 2010
- Delgado, M Testing the equality of nonparametric regression curves, *Statistics and Probability Letters*, 17, 199--204, 1993
- Delgado, M. A. Hoeffding-Blum-Kiefer-Rosenblatt process. *Encyclopedia of Statistical Sciences*, Update Volume 3, Kotz et al eds. 326-328., 1999
- Delgado, M. and W. González-Manteiga Significance testing in nonparametric regression based on the bootstrap, *The Annals of Statistics*, 29, 1469-1507., 2001
- Delgado, M., M. A. Domínguez and P. Lavergne Consistent tests of conditional moment restrictions. , *Annales d'Economie et de Statistique*, 81(1), 33-67., 2006

- Delgado, M.A. Testing serial independence using the sample distribution function, *Journal of Time Series Analysis*, 17, 271-286, 1996
- Delgado, M.A. and J. Mora A nonparametric test for serial independence of regression errors, *Biometrika*, 87, 228-234, 2000
- Delgado, M.A. and J.C. Escanciano Nonparametric tests for conditional symmetry in dynamic models, *Journal of Econometrics*, 652-682., 2007
- Delgado, M.A. and T. Stengos Semiparametric testing in non-nested econometric models, *Review of Economic Studies*, 303, 291-303, 1994
- Delgado, M.A., Hidalgo, J. and Velasco, C. Distribution free goodness-of-fit tests for linear processes, *The Annals of Statistics*, 33, 2568-2609, 2005
- Delgado, M.A., Stute, W Distribution-free specification tests of conditional models, *Journal of Econometrics* 143, 37-55, 2008
- Durbin, J. Weak convergence of the sample distribution function when parameters are estimated, *The Annals of Statistics*, 1, 279-290, 1973
- Durbin, J. and M. Knott Components of Cramér-von Mises statistic I, *Journal of the Royal Statistical Society, Series B*, 34, 290-307., 1972
- Durbin, J., C.C. Taylor and M. Knott Components of Cramér-von Mises statistic II, *Journal of the Royal Statistical Society, Series B*, 37, 216-237, 1975
- Escanciano, J.C. Weak convergence of non-stationary multivariate marked processes with applications to martingale testing, *Journal of Multivariate Analysis*, 98, 1321-1336., 2007
- Escanciano, J.C. and C. Velasco Generalized spectral tests for the martingale difference hypothesis, *Journal of Econometrics*, 134, 151-185., 2006
- Escanciano, J.C. and C. Velasco Testing the martingale difference hypothesis using integrated regression functions, *Computational Statistics & Data Analysis*, 51, 2278-2294., 2006
- Fan, Y. Testing goodness-of-fit of a parametric density function by kernel method, *Econometric Theory*, 10, 316-356., 1994
- Fan, Y. and Q. Li Consistent model specification tests: omitted variables, parametric and semiparametric functional forms, *Econometrica*, 64, 865--890, 1996
- Fan, Y. and Q. Li Consistent model specification tests, *Econometric Theory*, 16, 1016-1041., 2000
- Foresi, S., & Peracchi, F. The conditional distribution of excess returns: An empirical analysis., *Journal of the American Statistical Association*, 90(430), 451-466., 1995
- Glivenko, V. Sulla determinazione empirica delle leggi di probabilita, *Giornale dell'Istituta Italiano degli Attuari* 4, p. 92., 1933
- Hart, J. Nonparametric Smoothing and Lack-of-Fit Tests, Springer, 1993
- Hill, B.M. A simple general approach to inference about the tail of a distribution, *Annals of Mathematical Statistics*, 3, 1163-1174, 1975
- Hoeffding, W. A nonparametric test of independence, *Annals of Mathematical Statistics*, 19, 546-557., 1948
- Hong, Y. Generalized spectral tests for serial dependence, *Journal of the Royal Statistical Society. Series B*, Vol. 62, 557-554., 2000
- Horowitz, J.L. and V.G. Spokoiny An adaptive, rate-optimal test of a parametric model against a nonparametric alternative, *Econometrica*, 69(3), 599-631., 2001
- Hsing, T. On tail index estimation using dependent data, *Annals of Statistics*, 19, 1547-1569., 1991
- Härdle, W. Applied Nonparametric Regression, Cambridge Univ. Press, 1986
- Härdle, W. and E. Mammen Comparing nonparametric versus parametric regression fits, *The Annals of Statistics*, 21, 1926-1947, 1993
- Imbens, G. W., & Wooldridge, J. M. Recent developments in the econometrics of program evaluation., *Journal of Economic Literature*, 47(1), 5-86., 2009
- Khmaladze, E.V Martingale approach to the goodness of fit tests, *Theory of Probability and its Applications*, 26, 246-265., 1981
- Khmaladze, E.V. An innovation approach in goodness of fit tests in Rm, *The Annals of Statistics*, 16, 1503-1516, 1988
- Khmaladze, E.V. Goodness of fit problem and scanning innovation martingales, *The Annals of Statistics*, 21, 798-829, 1993
- Kolmogorov, A. Sulla determinazione empirica di una leggi di distribuzione, *Giornale dell'Istituta Italiano degli Attuari* 4, 33, 1933
- Koul, H. L. and Stute, W. Nonparametric Model Checks for Time Series, *The Annals of Statistics*, 27, 204-236., 1999
- Lavergne, P. and Q. H. Vuong Nonparametric significance testing, *Econometric Theory*, 16, 576-601, 2000
- Leadbetter, M.R., G. Lindgren & H. Rootzen Extremes and Related Properties of Random Sequences and Processes. , Springer-Verlag, 1983
- Lee, M-j Methods of Moments and Semiparametric Econometrics for Limited Variable Models, , Springer, 1996
- Lehmann, E.L. and J.P. Romano Testing statistical hypotheses, Springer, 2006

- Li Q, Racine JS. Nonparametric Econometrics: Theory and Practice , Princeton University Press, 2007
- Li Q. and S. Wang A simple consistent bootstrap test for a parametric regression function, Journal of Econometrics, 87, 145--165, 1998
- Nikabadze, A. and W. Stute Model checks under random censorship, Statistics and Probability Letters, 32, 249-259, 1997
- Oaxaca, R. Male-female wage differentials in urban labor markets, International Economic Review, 693-709., 1973
- Robinson, P.M. Hypothesis testing in semiparametric and nonparametric models for econometric time series, The Review of Economic Studies, 56, 511-534, 1989
- Rosenblatt M. A quadratic measure of deviation of two-dimensional density estimates and a test of independence, The The Annals of Statistics, 3, 1-14, 1975
- Silverman, B Density Estimation for Statistic and Data Analysis, Chapman Hall., 1986
- Simonov, J.S Smoothing Methods in Statistics, Springer, 1996
- Skaug, H.J. and Tjøstheim A nonparametric test of serial independence based on the empirical distribution function, Biometrika, 80, 591-602, 1993
- Smirnov, N. V. On the distribution of the χ^2 criterion of von Mises, Rec. Math. (NS) 2, 973-993., 1937
- Smirnov, N.U. Sur un critère de symétrie de la loi de distribution d'une variable aléatoire, C.R. (Doklady) Acad. Sci. URSS 56, 11-14, 1945
- Stute, W. Nonparametric model checks for regression, The Annals of Statistics 25 613-641., 1997
- Stute, W. and Zhu, L.-X. Nonparametric checks for single-index models, The Annals of Statistics, 33, 1048-1083., 2005
- Stute, W., Thies, S. and Zhu, L.-X. Model checks for regression: an innovation process approach, The Annals of Statistics, 26, 1916-1934, 1998
- Stute, W., W. Gonzalez-Manteiga and M. Presedo Bootstrap Approximations in Model Checks for Regression, Journal of the American Statistical Association, 93, 141-149., 1998
- Tsybakov, A.E Introduction to Nonparametric Estimation, Springer, 2009
- Wand, M.P. and M.C. Jones Kernel Smoothing, Chapman & Hall, 1995
- Whang, Y.J. Consistent bootstrap tests of parametric regression functions, Journal of Econometrics, 98, 27-46, 2000
- Whang, Y.J. Consistent specification testing for conditional moment restrictions, Economics Letters, 71, 299-306, 2001
- Zheng, X. A consistent test of functional form via nonparametric estimation techniques, Journal of Econometrics, 75, 263-289, 1996
- Zheng, X. A consistent nonparametric test of parametric regression models under conditional quantile restrictions, Econometric Theory, 14, 123-138, 1998