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José L. Zofío

Contact details

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Education

2000: Ph.D in Economics. Universidad Autónoma de Madrid, Spain

1993: Bachelor of Economics, Universidad Autónoma de Madrid, Spain

Professional Positions

2014- : Full Professor (CU), Department of Economics, Universidad Autónoma de Madrid.

2002-2014: Associate Professor (TU), Department of Economics, Universidad Autónoma de Madrid.

1997-2002: Assistant Professor, Department of Economics, Universidad Autónoma de Madrid.

1995-1997: FPI grant, Department of Economics, Universidad Autónoma de Madrid.

Research Interests / Research Profile

Efficiency and productivity analysis, Industrial Organization, Operational Research and quantitative methods

Publications

Articles in peer-reviewed journals

Sáiz, Patricio and José L Zofío (2021), “**The Making and Consolidation of the First National Trademark System: Diffusion of Trademarks across Spanish Regions (1850-1920)**,” *Regional Studies*, forthcoming [[download](#)].

Aparicio, Juan and José L Zofío (2020), “**Economic Cross-Efficiency**,” *Omega*, 100, 102374 <https://doi.org/10.1016/j.omega.2020.102374>.

Álvarez, Inmaculada C., Javier Barbero and José L. Zofío (2020), “**A Data Envelopment Analysis Toolbox for MATLAB**,” *Journal of Statistical Software*, 95(3), pp. 1-49. <https://doi.org/doi:10.18637/jss.v095.i03> (see www.deatoolbox.com).

Aparicio, Juan, Magdalena Kapelko and José L. Zofío (2020), “**The Measurement of Environmental Economic Inefficiency with Pollution-generating Technologies**,” *Resource and Energy Economics*, 62, 101185. <https://doi.org/10.1016/j.reseneeco.2020.101185>.

Balk, Bert M. and José L. Zofío (2020), “**Symmetric decompositions of cost variation**,” *European Journal of Operational Research*, 185, pp. 1189-1198. <https://doi.org/10.1016/j.ejor.2020.02.034>.

- Balk, Bert M., Javier Barbero and José L. Zofío (2020), "**A toolbox for calculating and decomposing Total Factor Productivity indices**," *Computers and Operations Research*, 115, 104853, <https://doi.org/10.1016/j.cor.2019.104853>. (see www.tfptoolbox.com).
- Álvarez, Inmaculada C., Javier Barbero, Andrés Rodríguez-Pose and José L. Zofío (2018) "**Does institutional quality matter for trade? Institutional conditions in a sectoral trade framework**," *World Development*, 103, pp. 72-87. <https://doi.org/10.1016/j.worlddev.2017.10.010>.
- Álvarez, Inmaculada C., Javier Barbero and José L. Zofío. (2017). "**A Panel Data Toolbox for MATLAB**," *Journal of Statistical Software*, 76(6) (www.paneldatatoolbox.com). <http://dx.doi.org/10.18637/jss.v076.i06>.
- Aparicio, Juan and José L. Zofío (2017), "**Revisiting the Decomposition of Cost Efficiency for Non-homothetic Technologies: A Directional Distance Function Approach**," *Journal of Productivity Analysis*, 48(2-3), pp. 133-146. <https://doi.org/10.1007/s1123-017-0512-8>.
- Aparicio, Juan, Javier Barbero, Magdalena Kapelko, Jesús T. Pastor and José L. Zofío (2017), "**Testing the Consistency and Feasibility of the Standard Malmquist-Luenberger Index: Environmental Productivity in World Air Emissions**", *Journal of Environmental Management*, 196, pp.148-160. <https://dx.doi.org/10.1016/j.jenvman.2017.03.007>.
- Aparicio, Juan, Jesús T. Pastor, Fernando Vidal and José L. Zofío (2017), "**Evaluating productive performance: A new approach based on the product-mix problem consistent with Data Envelopment Analysis**," *Omega*, 67(C), pp. 134-144. <https://doi.org/10.1016/j.omega.2016.04.007>.
- Aparicio, Juan, Jesús T. Pastor and José L. Zofío (2017), "**Can Farrell's allocative efficiency be generalized by the directional distance function approach?**," *European Journal of Operational Research*, 257(1), pp. 345-351. <https://doi.org/10.1016/j.ejor.2016.08.007>.
- Condeço-Melhorado, Ana M., José L. Zofío and Panayotis Christidis (2017) "**Drivers of changes in Spanish accessibility for the 1960–2010 period**", *European Transport Research Review*, 9(2), pp. 9-19. <https://doi.org/10.1007/s12544-017-0229-9>.
- Gallego, Nuria and José L. Zofío (2017) "**Trade Openness, Transport Networks and the Spatial Location of Economic Activity**," forthcoming in *Networks and Spatial Economics*. [[download](#)]
- Álvarez, Inmaculada C., Javier Barbero and José L. Zofío (2016) "**A spatial autoregressive panel model to analyze road network spillovers on production**," *Transportation Research Part A: Policy and Practice*, 93 pp. 83-92. <https://dx.doi.org/10.1016/j.tra.2016.08.018>.
- Barbero, Javier and José L. Zofío (2016). "**The multiregional core-periphery model: The role of the spatial topology**," *Networks and Spatial Economics*, 16(2), pp. 469-496. <https://dx.doi.org/10.1007/s11067-015-9285-7>.
- Álvarez, Inmaculada C., Ana M. Condeço-Melhorado, Javier Gutiérrez and José L. Zofío (2016), "**Integrating network analysis and interregional trade to study the spatial impact of transport infrastructure using production functions**," *Regional Studies*, 50(6), pp. 996-1015. <https://dx.doi.org/10.1080/00343404.2014.953472>.
- Maroto, Andrés and José L. Zofío (2016), "**Accessibility gains and road transport infrastructure in Spain: A productivity approach based on the Malmquist index**", *Journal of Transport Geography*, 52, pp. 143-152. <https://doi.org/10.1016/j.jtrangeo.2016.03.008>.
- Aparicio, Juan, Jesús T. Pastor and José L. Zofío (2015), "**How to properly decompose economic efficiency using technical and allocative criteria with non-homothetic DEA technologies**," *European Journal of Operational Research*, 240(3), pp. 882-891. <https://doi.org/10.1016/j.ejor.2014.08.012>.

- Prieto, Angel, M., José L Zofío and Inmaculada C. Álvarez (2015), "**Cost economies, urban patterns and population density: The case of public infrastructure for basic utilities,**" *Papers in Regional Science*, 94(4), pp. <https://doi.org/10.1111/pirs.12096>.
- Zofío, José L., Ana M. Condeço-Melhorado, Andrés Maroto-Sánchez and Javier Gutiérrez (2014) "**Generalized transport costs and index numbers: A geographical analysis of economic and infrastructure fundamentals,**" *Transportation Research Part A: Policy and Practice*, 67(C), pp. 141-157. <https://doi.org/10.1016/j.tra.2014.06.009>.
- Alvarez, Inmaculada, Angel, M. Prieto and José L Zofío (2014), "**Cost Efficiency, Urban Patterns and Population Density when Providing Public Infrastructure: A Stochastic Frontier Approach,**" *European Planning Studies*, 22(6), pp. 1235-1258. <http://dx.doi.org/10.1080/09654313.2013.778957>.
- Aparicio, Juan, Jesús T. Pastor and José L. Zofío (2013), "**On The Inconsistency of the Malmquist-Luenberger Index**", *European Journal of Operational Research*, 229, pp. 738-743. <https://doi.org/10.1016/j.ejor.2013.03.031>.
- Jiménez-Sáez, Fernando, Jon M. Zabala-Iturriagagoitia and José L. Zofío (2013), "**Who leads research productivity growth? Guidelines for R&D policy-makers,**" *Scientometrics*, 94, 273-303. <https://doi.org/10.1007/s11192-012-0763-0>.
- Zofío, José L., Jesús T. Pastor and Juan Aparicio (2013), "**The Directional Profit Efficiency Measure: On Why Profit Inefficiency is either Technical or Allocative,**" *Journal of Productivity Analysis*, 40, 247-266. <https://doi.org/10.1007/s11123-012-0292-0>.
- Jiménez-Sáez, Fernando, Jon M. Zabala-Iturriagagoitia, José L. Zofío and Elena Castro-Martinez (2011), "**Evaluating Research Efficiency within National R&D Programs,**" *Research Policy*, 40, pp. 230-241. <https://doi.org/10.1016/j.respol.2010.10.005>.
- Arguedas, Carmen, Eva Camacho and José L Zofío, (2010), "**Environmental Policy Instruments: Technology Adoption Incentives with Imperfect Compliance,**" *Environmental and Resource Economics*, 47(2), pp. 261-274. <https://doi.org/10.1007/s10640-010-9375-4>.
- Cuesta, Rafael, C.A. Knox Lovell and José L. Zofío (2009), "**Environmental Efficiency Measurement with Translog Distance Functions**", *Ecological Economics*, 68, pp. 2232-2242. <https://doi.org/10.1016/j.ecolecon.2009.02.001>.
- Paramio, Juan L. and José L. Zofío (2008), "**Labor Market Duality and Leisure Industries in Spain: Quality of Life versus Standard of Living,**" *American Journal of Economics and Sociology*, 67(4), pp.683-717. <http://dx.doi.org/10.1111/j.1536-7150.2008.00591.x>
- Prieto, Ángel M. and José L. Zofío (2007), "**Network DEA Efficiency in Input-Output Models: With an Application to OECD Countries,**" *European Journal of Operational Research*, 178, pp. 292-304. <https://doi.org/10.1016/j.ejor.2006.01.015>.
- Zofío, José L. (2007), "**Malmquist Productivity Index Decompositions: A Unifying Framework,**" *Applied Economics*, 39, pp. 2371–2387. <http://dx.doi.org/10.1080/00036840600606260>.
- Zofío, José L. and Ángel M. Prieto (2007), "**Measuring Productive Efficiency in Input-Output Models by Means of Data Envelopment Analysis,**" *International Review of Applied Economics*, 21 (4), pp.519-538. <http://dx.doi.org/10.1080/02692170701189219>.
- Zofío, José L. and Ángel M. Prieto (2006), "**Return to Dollar, Generalized Distance Function and the Fisher Productivity Index,**" *Spanish Economic Review*, 8, pp. 113-138. <https://doi.org/10.1007/s10108-006-9004-0>.

- Cuesta, Rafael. A. and José L. Zofío (2005), “**Hyperbolic Efficiency and Parametric Distance Functions: With Application to Spanish Savings Banks,**” *Journal of Productivity Analysis*, 24, pp. 31-48. <https://doi.org/10.1007/s11123-005-3039-3>.
- García, M^a Isabel, Yolanda Fernández and José L. Zofío (2003), “**The Economic Dimension of the Culture and Leisure Industry in Spain: National, Sectoral and Regional Analysis,**” *Journal of Cultural Economics*, 27, pp. 9-30. <https://doi.org/10.1023/A:1021525019776>.
- Prieto, Angel M. and José L. Zofío (2001), “**Evaluating Effectiveness in Public Provision of Infrastructure and Equipment: The Case of Spanish Municipalities,**” *Journal of Productivity Analysis*, 15, pp. 41-58. <https://doi.org/10.1023/A:1026595807015>.
- Zofío, José L. and C.A. Knox Lovell (2001), “**Graph Efficiency and Productivity Measures: An Application to U.S. Agriculture,**” *Applied Economics*, 33, pp. 1433-1442. <http://dx.doi.org/10.1080/00036840010009865>.
- Zofío, José L. and Ángel M. Prieto (2001), “**Environmental Efficiency and Regulatory Standards: The Case of CO₂ Emissions from OECD countries,**” *Resource and Energy Economics*, 23, pp. 68-83. [https://doi.org/10.1016/S0928-7655\(00\)00030-0](https://doi.org/10.1016/S0928-7655(00)00030-0).

Books

- García, M.I., **Zofío, J.L.**, Herrarte, A. and Moral, J. (2005): *La dimensión económica de la industria de la cultura y el ocio*, Mc Graw-Hill, Madrid
- Lasuen, J.R., García, M.I. and **Zofío, J.L.** (2005): *Cultura y Economía*. Fundación autor/Sociedad General de Autores y Editores, Madrid
- Lasuen, J.R., Olmedillas, B. and **Zofío, J.L.** (2004): *El comercio exterior de los servicios culturales españoles en el marco de la OCDE*. Fundación autor/Sociedad General de Autores y Editores, Madrid
- García, M.I. and **Zofío, J.L.** (2003): *La evolución sectorial de la Industria de la Cultura y el Ocio en España (1993-1997)*. Sociedad General de Autores y Editores / Fundación Autor, Madrid
- García, M., Fernandez, Y. and **Zofío, J.L.** (2001): *La evolución de la Industria de la Cultura y el Ocio en España por Comunidades Autónomas (1993-1997)*. Sociedad General de Autores y Editores / Fundación Autor, Madrid
- García, M., Fernandez, Y. and **Zofío, J.L.** (2000): *The Culture and Leisure Industry in Spain. Its Contribution to GDP (1993- 1997)*. Sociedad General de Autores y Editores / Fundación Autor, Madrid
- García, M., Fernandez, Y. and **Zofío, J.L.** (2000): *La Industria de la Cultura y el Ocio en España. Su aportación al PIB (1993-1997)*. Sociedad General de Autores y Editores / Fundación Autor, Madrid
- Prieto, A.M. and **Zofío, J.L.** (1999): *Eficiencia en la provisión de infraestructura y equipamiento estratégico en los municipios de Castilla y León*. Junta de Castilla y León, Consejería de Economía y Hacienda, Valladolid.

Associate Editor / Publisher Board

Revista de Economía Aplicada (2016 – Actualidad)

Spanish Journal of Economics and Finance (Cuadernos de Economía) (2008 – Actualidad)

Peer-reviewed working papers

Alvarez, I., Barbero, J., Rodríguez-Pose, A. and **Zofío, J.L.** (2015): *Does institutional quality matter for trade? Institutional conditions in a sectoral trade framework*. Discussion Paper N° 10876, Centre for Economic Policy Research, UK.

Barbero, J., Behrens, K. and **Zofío, J.L.** (2015): *Industry location and wages: The role of market size and accessibility in trading networks*, CEPR Discussion Papers 10411, C.E.P.R. Discussion Papers.

Alvarez, I., Condeço-Melhorado, A., Gutierrez, J. and **Zofío, J.L.** (2012): *Integrating network analysis and interregional trade to study the spatial impact of transport infrastructure using production functions*. Working Paper Series, 676, Fundación de las Cajas de Ahorros (FUNCAS), Madrid, Spain.

Alvarez, I., Prieto, A. and **Zofío, J.L.** (2011): *Urban patterns, population density and the cost of providing basic infrastructure: a frontier approach*. Working Paper Series, 639, Fundación de las Cajas de Ahorros (FUNCAS), Madrid, Spain.

Prieto, A., **Zofío, J.L.** and Álvarez, I. (2010): *Provisión de infraestructura pública en medio urbano de baja densidad. Marco institucional, financiación y costes*. Working Paper Series, 7, Centro de Estudios sobre la Despoblación y Desarrollo de Áreas Rurales (CEDDAR), Zaragoza, Spain.

Recent Research Projects

Título del proyecto: Infrastructure, Productivity and Economic Growth.

Entidad financiadora Universidad Autónoma de Madrid - Banco Santander, 2017/EEUU

Entidades participantes: Dpto. de Análisis Económico (Universidad Autónoma de Madrid) / Oviedo Efficiency Group (universidad de Oviedo).

Duración, desde: 7/2017 hasta: 12/2018

Cuantía de la subvención: 12.000,00€.

Investigador responsable: José Luis Zofío

Número de investigadores participantes: Total: 6

Título del proyecto: Eficiencia técnica y productividad: avances metodológicos y aplicaciones.

Entidad financiadora Ministerio de Economía y Competitividad (MTM2016-79765-P)

Entidades participantes: Centro de Investigación Operativa (Universidad Miguel Hernández) / Dpto. de Análisis Económico (Universidad Autónoma de Madrid)

Duración, desde: 10/2016 hasta: 12/2019

Cuantía de la subvención: 46.100,00€.

Investigador responsable: Juan Aparicio Baeza

Número de investigadores participantes: Total: 23

Título del proyecto: Comercio, complejidad económica y análisis espacial. Ministerio de Economía y Competitividad.

Entidad financiadora: Ministerio de Economía y Competitividad (ECO2016-79650-P).

Entidades participantes: Dpto. de Análisis Económico (Universidad Autónoma de Madrid)

Duración, desde: 10/2016 hasta: 12/2019

Cuantía de la subvención: 22.000,00€.

Investigador responsable: Carlos Llano Verduras.

Número de investigadores participantes: Total: 10

Título del proyecto: Benchmarking the efficiency and productivity of innovation systems to improve industrial strategies and policies (BENCH&INNOV&POL).

Entidad financiadora: Ministerio de Ciencia e Innovación, Spain.

Duración: October 2020 –December 2023, EIN2020-112260.

Cuantía de la subvención: Euro 10,000.

Investigador responsable: José Luis Zofio

Título del proyecto: Resource optimization and evaluation: Methodological and computational advances and applications.

Entidad financiadora: Ministerio de Ciencia e Innovación, Spain.

Duración: October 2020 – June 2022, PID2019-105952GB-I00.

Cuantía de la subvención: Euro 65,000.

Investigador responsable: José Luis Zofio

Título del proyecto: Drawing innovation jobs and economic activities to the Madrid region.

Entidad financiadora: Consejería de Educación e Innovación, Comunidad de Madrid, Spain..

Duración: January 2020–December 2023, H2019/HUM-576 1, INNJOBMAD-CM

Cuantía de la subvención: Euro 186,300.

Investigador responsable: José Luis Zofio