

I SELA-ELIZABETH TÉLLEZ-LEÓNitellez@cemla.org

Updated: May, 2022

POSITIONS

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| Director of Financial Markets Infrastructures, CEMLA | 11.2021 to date |
| Senior Economist, CEMLA | 04.2021–10.2021 |
| Guest Researcher, International Institute for Applied Systems Analysis (IIASA) | 07.2020–03.2021 |
| Research Scholar, IIASA | 07.2019–06.2020 |
| Academic and research visitor, University of Oxford | 01.2018–03.2018 |
| Postdoctoral researcher, IIASA | 06.2017–06.2019 |
| Economist, Central Bank of Mexico | 10.2013–05.2017 |
| Deputy Director of the External Sector, Mexican Ministry of Finance | 01.2010–09.2013 |

EDUCATION

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| Ph.D. in Economics and Social Sciences, <i>Wirtschaftsuniversität Wien, WU, The Vienna University of Economics and Business, Austria</i> <i>Specialization: Mathematics in Economics and Business, Machine Learning and Artificial Intelligence</i> <i>Summa Cum Laude</i> | 2022 |
| Post-doctorate in three research programs: Systemic Risk and Resilience; Advanced Systems Analysis; and, Evolution and Ecology (Climate Change), <i>International Institute for Applied Systems Analysis (IIASA), Austria</i> | 06.2017–06.2019 |
| Ph.D. in Economic Sciences, <i>Instituto Politécnico Nacional (IPN), México</i> <i>Specialization in Macroeconomic Modeling, Econometric Methods and Economic Policy Analysis.</i> <i>Graduated Summa Cum Laude</i> | 2012 |
| Master in Economics, <i>Centro de Investigación y Docencia Económicas (CIDE), México</i> <i>Specialization in Macro-Financial Analysis</i> <i>Graduated Magna Cum Laude</i> | 2009 |
| Bachelor's degree in Economics, <i>Universidad Autónoma Metropolitana, Azcapotzalco (UAM-Azc), México</i> <i>Specialization in Applied Economics and Quantitative Methods.</i> <i>Graduated Summa Cum Laude</i> | 2007 |

PUBLICATIONS

Peer-reviewed papers

- Téllez-León Isela-Elizabeth, Gerardo Hernández-del-Valle, Ivette Soto, and Franklim Arévalo-Guevara (2022). **“A statistical Analysis of the Mass Payment System in El Salvador”**. *Submitted to Journal*.
- Téllez-León Ivett-Téllez y Isela-Elizabeth Téllez-León (2022). **“What are the Effects of the Macroeconomic Variables on the Mexican Stock Market?”**. *Submitted to Journal*.
- Téllez-León Isela-Elizabeth, Paolo Barucca, Tomaso Aste, Ana Paola Girón, Melissa Molina, Nestor García (2022). **“Measurement of the Efficiency of the Guatemalan Payments System through Agent-Based Models”**. *Working in progress*.
- Téllez-León Isela-Elizabeth, Giacomo Livan, Lisseth Barzallo and Jorge Barrera (2022). **“Analyzing the Vulnerability of Ecuadorian Payments Systems”**. *Working in progress*.
- Franklim Arévalo, Paolo Barucca, Isela-Elizabeth Téllez-León, William Rodríguez, Gerardo Gage y Raúl Morales (2022). **“Identifying clusters of anomalous payments in the Salvadorian payment system”**. *Latin American Journal of Central Banking*, 3 (1).
- Téllez-León Isela-Elizabeth, Martínez-Jaramillo, S., Escobar-Farfán, L. O., & Hochreiter, R. (2021). **“How are network centrality metrics related to interest rates in the Mexican secured and unsecured interbank markets?”**. *Journal of Financial Stability*, 55, 100893.
- Benavides-Perales G, Téllez-León Isela-Elizabeth, & Venegas-Martínez, F. (2020). **“How sensitive is the exchange rate to external and internal factors in Mexico? A comparative analysis with 27 developed and emerging economies”**. *Journal of Accounting and Management Science Research*, 6(1).
- Aguilar-Hernández, B. J., Isela-Elizabeth Téllez-León and F. Venegas-Martínez (2020). **“Economic activity and bank collapse 2007-2010: A Markovian model for changing the regime of bank reserves”**. *Nicolaita Journal of Economic Studies*, 15(2).
- Tellez-Leon Isela-Elizabeth. & Ibarra, R. (2020). **“Are all types of capital flows driven by the same factors?”**. *Evidence from Mexico. Empirical Economics*, 59(1), 461-502.
- Téllez-León Isela-Elizabeth, & Venegas-Martínez, F. (2019). **“Determinants of Financial Deepening in Mexico: A Dynamic Panel Data Approach”**. *Journal of Quantitative Methods for the Economy and Business*, (27).
- Pérez-Guzmán, K., Téllez-León Isela-Elizabeth, Kharrazi, A., Fath, B., & Venegas-Martínez, F. (2018). **“What makes Input-Output Tables of Trade of Raw Material Goods Peculiar Networks? The World and Mexican Cases”**. *Mexican Journal of Economics and Finance*, 13(4), 483-505.
- Téllez-León Isela-Elizabeth, Venegas-Martínez, F., & Ramírez-Grajeda, M. (2018). **“Growth and foreign direct investment in Mexico by type of investment and by sector”**. *Nicolaita Journal of Economic Studies*, 13(2), 45-61.
- Benavides-Perales, G., Téllez-León Isela-Elizabeth, & Venegas-Martínez, F. (2018). **“The impact of banking and external sectors on Mexican agriculture in the period 1995–2015”**. *Agricultural Economics*, 64(1), 36-49.

- Téllez-Leon Isela-Elizabeth & Venegas-Martínez, F. (2018). **“Impact of Foreign Direct Investment in the Mexican GDP by Origin Country and Destination State”**. *Panorama Económico*, 13(26), 33-33.
- Téllez-Leon Isela-Elizabeth, Martínez, F. V., & Grajeda, M. R. (2018). **“Impact of the Collection, Credit and Access to Financial Services in Economic Activity in Mexico: Dynamic Panel by Federal Entities and Economic Sectors”**. *Stochastics: Finance and Risk Journal*, 8(2), 109-148.
- Covarrubias-Sánchez, C. I., Téllez-León Isela-Elizabeth & Venegas-Martínez, F. (2018). **“Portfolios of the Mexican Stock Market that Minimize a Coherent Measure of Risk Subject to Restrictions of Expected Returns and Short Sales”**. *ESECONOMÍA*.
- Téllez-Leon, Isela-Elizabeth & Francisco Venegas-Martínez (2016). **“Consumption and Portfolio Decisions with Recursive Stochastic Differential Utility (UDRE): Alternative Models”**, *EconoQuantum Review*, 13(2).
- Téllez-León Isela-Elizabeth, et al. (2015). **“Effects of Volatility of the Exchange Rate on Inflation Expectations and Growth Prospects in Mexico (2002-2014)”**. *Ensayos Revista de Economía (Essays Journal of Economics)*, 34(2), 63-78. B
- Téllez-León Isela-Elizabeth, et al. (2015). **“Transfer of the Reference Rate for Lending and Deposit Rates: The Case of Mexico, 1995-20131”**. *Journal of Applied Economic Sciences*, 10(7), 37. ISSN: 2393-5162
- Téllez-Leon Isela-Elizabeth, et al. (2015). **“Transmission of Volatility of Exchange Rate to Inflation Expectations and Prospects for Growth in Mexico”**, *Essays UANL Journal*, Vol. XXXIV, Number 2.
- Téllez-Leon, Isela-Elizabeth & Francisco Venegas-Martínez (2013). **“The Influence of Price Stability and Performance of the Financial System in Economic Growth of Mexico, 1994-2013”**. *Semester Economic Journal (University of Medellín)*, Vol. 16, Number 34. ISSN: 0120-6346
- Téllez-Leon, Isela-Elizabeth & Francisco Venegas-Martínez (2013). **“Modelling of the Monetary Policy Decisions within a Discrete Framework: The Case of Mexico, 2004-2012”**. *Economic Research Review*, April-June, Vol. 72, Number 284 (ESP and ING), pp. 23-55. ISSN: 0185-1667.
- Téllez-Leon, Isela-Elizabeth & Francisco Venegas-Martínez (2013). **“Principal Determinants in the Monetary Policy Decisions of Mexico: An Econometric Analysis”**. *Economic Studies (Journal-COLMEX)*, January-June, Vol. 28, Issue 1, p. 79-108. ISSN: 0188-6916.
- Téllez-Leon, Isela-Elizabeth & Francisco Venegas (2013). **“Has the Dynamics of the Balance of Payments really been a restriction for Economic Growth in Mexico? - Part I”**. *Journal of Economics and Finance (REMEF)*, Vol. 8, Number 2, July-December 2013. ISSN: 1665-5346.
- Téllez León Isela-Elizabeth and Francisco Venegas Martínez. **“Has the Dynamics of the Balance of Payments really been a restriction for Economic Growth in Mexico? - Part II”**. *Journal of Economics and Finance (REMEF)*, Vol. 9, Number 1, 2014.

- Tellez-Leon Isela-Elizabeth, et al. (2011). “**Inflation Volatility and Growth in a Small Open Economy Stochastic: A Mixed Jump-Diffusion Approach**”. *Economics: Theory and Practice Review*, July to December, 35, p. 131-156. ISSN: 0188-8250.
- Téllez-Leon, Isela-Elizabeth & Francisco Venegas-Martínez (2011). “**Exchange Rate Effects on Consumption and Portfolio Decisions: A Stochastic Monetarist Approach**”, *Journal: Economy and Society*, Vol. 17, Number 27, January-June. ISSN: 1870-414X.
- Téllez-Leon, Isela-Elizabeth (2010), “**Is the nominal exchange rate predictable in the long term through its monetary fundamentals? the evidence for Mexico 1995-2008**”, in the *ECORFAN Scientific Journal*. Vol. 1 No. 2, September-December, p. 25-44. ISSN: 2007-1582.
- Téllez-Leon, Isela-Elizabeth (2007). “**The Influence of Shorts on the Exchange Rate, Macroeconomic Stability and Sustained Economic Growth**”. *Tiempo Económico*, UAM.

Chapters

- “**Challenges for Sustainable Economic Growth in Mexico: Implications of the Paradox of Abundance, Climate Change, the Energy Transition and the Diversification of Exports**” (with Pérez-Guzmán), *Global Perspectives for the Energy Transition of Mexico: Challenges of Governance and Sustainability*. ISBN 978-607-8485-46-8. Dec 2019.
- “**System Dynamics: A Stock Index Model applied to the Mexican Case**”, (with Gilberto Anzaldo San Vicente, Guillermo Benavides Perales). *Recent Topics in Time Series and Finance: Theory and Applications in Emerging Markets*. University of Guadalajara, May 2018.
- “**The impact of macroeconomic news on the volatility of the intraday exchange rate**”, *Risk Management Vol. VIII*. Edited by the Autonomous Metropolitan University-Azcapotzalco, 2018.
- “**The Taylor rule and monetary policy in Mexico**”, *Risk Management Vol. IV*, Book compiled by the Market Research Group and Financial Institutions, Division of Social Sciences and Humanities of UAM-Azc. 2016.
- “**The Inflation Risk Premium in Mexico: Alternative Methods**”, *Advances in Financial Economics and Economic Development: Analytical Models and Quantitative Studies*. Book compiled by the University of Guadalajara, 2015.

RESEARCH ACTIVITIES AND MEMBER IN ASSOCIATIONS

- Member of the National System of Researchers (SNI) of Mexico, Level I
- Co-Editor Latin American Journal of Central Banking (CEMLA).
- Editorial Committee Member of the Journal: Finance and Economic Policy.
- Member of the Mexican Mathematical Society, Section MAFEMAR.
- Expert reviewer in the Journal of Financial Stability.
- Expert reviewer in IIASA Magazine Options, winter 19/20.
- Referee in the Latin American Journal of Central Banking (CEMLA).

- Referee in the Empirical Economics (Journal of the Institute for Advanced Studies, Vienna).
- Referee in the Mexican Journal of Economics and Finance (REMEF).
- Referee in PANORAMA ECONÓMICO (IPN).
- Referee in ESECONOMÍA (IPN).
- Referee in ECONOQUANTUM (UDG).
- Referee in Stochastics: Finance and Risk (UAM Journal).
- Referee in Economics: Theory and Practice (UAM Journal).
- Referee in the Economic Research Journal (UNAM).
- Referee in the Economic Studies Journal (COLMEX).
- Referee in the Journal: Economy and Society (FEVaQ).
- Referee in the ECORFAN Scientific Journal (University of London).

TEACHING EXPERIENCE

Econometric models, *Instituto Politécnico Nacional, México*

Financial Econometrics, *Instituto Politécnico Nacional, México*

Intermediate Macroeconomics, *Instituto Politécnico Nacional, México*

Open economy: macroeconomics, *Instituto Politécnico Nacional, México*

SELECTED COURSES, WORKSHOPS, SEMINARS, CONGRESSES

“Certified in Data Science and Machine Learning Applied to Financial Markets”

ITAM - Instituto Tecnológico Autónomo de México, 2022

“Behave Summer School on Agent-Based Modelling for Social Scientists”, it was organised”

ESLS Program in Economic Sociology and Labour Studies, the Behave Lab (University of Milan) and GECS - Research Group on Experimental and Computational Sociology, *University of Brescia, 09.2018*

“Oxford Summer School in Economic Networks”

Mathematical Institute and the Institute of New Economic Thinking. *University of Oxford, 06.2018*

“1st PIER Workshop on Quantitative Analysis Tools for Macroeconomic Policy”

Universidad de Pensilvania, 05.2015

“Quantitative Models of Financial Crisis and Macroprudential Policy”

Banco de México, 10.2016

SELECTED PRESENTATIONS AT CONFERENCES AND SEMINARS

Speaker at CEMLA conferences, from April 2021 to date.

Conference at the Central Bank of Brazil, Which Network Measures explain the Interest Rate Spread in the Mexican Secured and Unsecured Interbank Markets? Co-author presented, 2019

Speaker in the Retreats and Research Seminars at RISK, Machine Learning IIASA-CHS group, IIASA-OCDE group, during 2017-2019, at International Institute for Applied System Analysis.

Speaker in the Research Seminar of EPP, International Institute for Applied System Analysis, 2017.

Speaker at the Research Seminar in: The Central Bank of Mexico, University of Vienna, IIASA, University Iberoamericana, and in the Economic Research and Teaching Center (CIDE). With the theme: Are all types of capital flows driven by the same factors? Evidence from Mexico, May 2017, October and November 2018, Mexico and Austria.

Speaker at the 4th. IMEF Financial Research Congress with the topic: Analysis of the Effect of Different Types of Foreign Direct Investment on Mexican Economic Growth between 1999 and 2013, held on August 28 and 29, 2014, Universidad de las Americas Puebla, UDLAP.

Speaker at the 2nd. IMEF Financial Research Congress with the topic: Predictive content of macroeconomic and financial variables for monetary policy decisions in Mexico, it held on August 30, 2012, at the Tecnológico de Monterrey, Querétaro Campus.

Speaker at the 2nd. IMEF Financial Research Congress with the topic: Effects of macroeconomic announcements on the volatility of the exchange rate in real time, it held on August 30, 2012, at the Tecnológico de Monterrey, Querétaro Campus.

Speaker at the 2nd. IMEF Financial Research Congress with the topic: Probit models of Banxico's monetary policy decisions and their evaluation in forecast-hope, it carried out on August 30, 2012, at the Tecnológico de Monterrey, Campus Querétaro.

Speaker at the 4th. Finance Forum, Risk Management and Financial Engineering to the topic: Monetary policy in Mexico is a Taylor-type rule? It held on September 22, 2011, organized by the Autonomous Metropolitan University -Azcapotzalco.

Speaker at the XLIII Congress of the Mexican Mathematical Society MAFEMAR in section 2010 with the theme: Consumption and Portfolio Decisions under Uncertainty in Finite Time, it held on November 3, 2010, in Tuxtla Gutierrez.

Speaker at the 3rd. Week of Growth, Trade and Economic Development, Theory and Evidence on the theme: Inflation Volatility and Growth in a Stochastic Small Open Economy with a Financial Sector, it held on September 2, 2010, in the Graduate Section of National Polytechnic Institute.

Speaker at the 1st. ECORFAN Congress with the theme: Is Predictable Nominal Exchange Rate in the Long Term through Monetary Fundamentals? The evidence for Mexico 1995-2008, it held on November 24, 2009, at University of London.

AWARDS AND GRANTS

Lázaro Cárdenas Award 2012. Distinction granted by the President of the Mexican Republic and the Director of the IPN. Recognition of excellent academic performance (general average 10 from 10), at the PhD in Economic Sciences, IPN.

Letter of congratulations from Dr. Enrique Cabrero Mendoza, General Director of CIDE, 2008. Recognition for being the best student of the Master's in Economics in the third quarter with an average of 9.6 from 10.

Conacyt Scholarship in Master in Economics, CONACYT, 07.2007-06.2009

University Merit Award from the UAM-Azcapotzalco, Distinction awarded for being the best student of the Bachelor of Economics, 2007

SKILLS

Strong Knowledge of the E-views, SPSS, STATA, Matlab, R, Python, E&F chaos for Economic Dynamics Models, among others.

Strong Knowledge database management: BANXICO, INEGI, IMF, OECD, BIIACS, Bureau of the Census (BC), Bureau of Labor Statistics (BLS), Bureau of Economic Analysis (BEA), Federal Reserve Board (FRB), among others.

LANGUAGES

Español – Nativo

Inglés – Fluido

Alemán – Nivel A2

Italian – Nivel A2

RESEARCH INTERESTS

Infrastructures and Financial Markets, Payment Systems, CBDCs, Machine Learning, Financial Inclusion, Cybersecurity, Fintech, SupTech, RegTech, Financial Stability, Financial Econometrics, Applied Economics, Macroeconomic Modeling, Network Dynamics, Monetary Policy and Economic Policy Analysis