

Carlos Fabian Fuentes Rivas

M.Sc. in Applied Economics

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PROFESSIONAL PROFILE

Economist with a Master's in Applied Economics and strong expertise in econometric modeling, decision science, and data analysis for public policy. Experienced in developing simulation models, leading empirical research, and implementing data-driven solutions under uncertainty. Skilled in R, Python, and statistical software to generate insights for strategic decision-making in complex socioeconomic contexts.

EDUCATION

Instituto Tecnológico y de Estudios Superiores de Monterrey <i>M.Sc. in Applied Economics</i> <ul style="list-style-type: none">Thesis: "Evaluating the Impact of Decision Support Tools on Human Performance under Deep Uncertainty."	Mexico City, Mexico 2023 - 2025
Universidad Autónoma de Guadalajara, UDG <i>Academic Mobility Exchange Program</i>	Guadalajara, Mexico 2016
Universidad Autónoma Metropolitana, UAM <i>B.A. in Economics</i>	Mexico City, Mexico 2013 - 2017

EXPERIENCE

Senior Research Programmer <i>Instituto Tecnológico y de Estudios Superiores de Monterrey</i> <ul style="list-style-type: none">I collaborate in the development and application of the SISEPUEDE model (Simulating Sectoral Pathways and Uncertainty Exploration for Decarbonization), a simulation tool designed to analyze the transformations necessary for decarbonization in greenhouse gas emitting sectors at the regional level, we work developing the model with World Bank teams for different regions of the world such as Croatia, and Georgia, Iran, among others.I perform statistical analysis and econometric models focused on the study of the interaction between decision support tools and human beings.I collaborate in the development of discussion forums on urban problems, such as housing in the city of Monterrey, to design strategies based on robust decision-making models.	October 2024 - Present <i>Mexico City, Mexico</i>
Senior Coordinator of Research and Faculty <i>Instituto Tecnológico y de Estudios Superiores de Monterrey</i> <ul style="list-style-type: none">Coordinate with the School's Research and Faculty Office to support the dissemination of faculty research through platforms such as RePEc and institutional channels.Track and analyze metrics on the School's scientific output, providing insights to strengthen the visibility and impact of academic work.Identify funding opportunities and support the development of research proposals to enhance the school's research agenda.	November 2025 – Present <i>Mexico City, Mexico</i>
Associate Researcher <i>Instituto Tecnológico y de Estudios Superiores de Monterrey</i> <ul style="list-style-type: none">My research work in this position focused on the development of statistical analyses and econometric models to study the interaction between decision support tools and humans. This work focused on evaluating how these tools improve people's ability to make decisions in contexts of deep uncertainty, contributing to the advancement of knowledge in the field of "Decision Making under Deep Uncertainty".	September 2023 - September 2024 <i>Mexico City, Mexico</i>
Teaching Assistant – Graduate Courses <i>Instituto Tecnológico y de Estudios Superiores de Monterrey</i> <ul style="list-style-type: none">Support graduate-level instruction in the Master's in Applied Economics program by assisting in the delivery of courses in Econometrics, Systems Modeling, and Climate Policy.Provide academic and technical guidance during office hours, helping students with assignments, project development, and applied modeling exercises.Design and implement practical labs and teaching materials involving econometric analysis, simulation techniques, and climate policy tools.	2023 – Present <i>Mexico City, Mexico</i>

International Internship

July 2024

Presidential House, Government of El Salvador

San Salvador, El Salvador

- Collaborated with presidential advisors in diagnosing the education system and schools in El Salvador, providing key empirical evidence for the formulation of public policies. Conducted geospatial analysis and data visualization using R and QGIS to create detailed maps of educational infrastructure and student distribution. Implemented clustering techniques to optimize resources and improve administrative efficiency. My work was fundamental in supporting strategic decisions aimed at improving the national education system.

Deputy Director of Poverty Measurement

May 2020 - Sep 2024

National Council for the Evaluation of Social Development Policy, CONEVAL

Mexico City, Mexico

- Lead the identification and analysis of macroeconomic factors affecting poverty and social development in Mexico, utilizing advanced quantitative methods and statistical analysis to influence strategic public policy decisions.
- Lead the estimation and analysis of key indicators related to the Sustainable Development Goals (SDGs), contributing to the UN's 2030 Agenda through advanced data analysis techniques and statistical programming.
- Promote continuous improvement in indicator calculation methodologies, implementing innovative solutions for tracking poverty and social development, enhancing the accuracy and relevance of reports.
- Implement and manage labor poverty analysis programs, significantly improving the efficiency and accuracy of data analysis, and providing robust tools for public policy evaluation.
- Create and present research reports and notes, using unique economic data to provide relevant insights in client forums, industry events, and consultative meetings, positioning the organization as a sector leader with highly differentiated capabilities.
- Collaborate with data scientists and consulting teams to explore alternative data sets and forecasting methods, pushing the boundaries of traditional economics to offer more precise and useful analyses.

Head of Information Sources Analysis Department

February 2018 - April 2020

National Council for the Evaluation of Social Development Policy, CONEVAL

Mexico City, Mexico

- Integrated databases from various sources, developing a robust statistical information system for constructing sociodemographic and economic indicators, facilitating strategic and in-depth analysis of the causes of poverty in Mexico.
- Developed calculation programs for estimating poverty and Income Poverty Lines using R, optimizing the precision and efficiency in the measurement and monitoring of these key indicators.

Social Service

March 2017 - August 2017

National Council for the Evaluation of Social Development Policy, CONEVAL

Mexico City, Mexico

- Contributed to the 2016 poverty measurement process, actively participating in data validation and the creation of calculation programs using various statistical tools.

Teaching Assistant - Econometrics

January 2017 - December 2017

Universidad Autónoma Metropolitana, UAM

Mexico City, Mexico

- Provided academic support in Econometrics classes, facilitating the understanding of concepts and statistical techniques through practical and theoretical sessions.

TECHNICAL SKILLS

Programming Languages: R, Python, SQL, STATA

Geospatial Analysis: R, ArcGIS, QGIS

Visualization Tools: Tableau, PowerBI

Development Tools: Git, Docker, Jupyter, AWS

CONTINUING EDUCATION

Diploma in Applied Statistics and Indicator Validation with STATA, (CIMAT 2024)

Data Visualization Course, (Stevens Institute of Technology 2024)

Impact Evaluation Incubator, (CONEVAL 2022)

Multivariate Analysis, 2020

Economic Valuation Methods for Water Environmental Services, 2017

PUBLICATIONS

Multidimensional Poverty in Mexico in the Context of the COVID-19 Health Emergency, Dimensions, OPHI 2022. [Link to publication](#)