

# Carlos Alberto Toruño Paniagua

DEVELOPMENT ECONOMIST M.Sc.

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## Summary

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Development Economist with experience as a researcher in development topics, including justice, democracy, and socioeconomic development. Skilled in data science with a strong command of R, Python, and Stata for data extraction, management, visualization, and analysis. I bring a balanced blend of quantitative rigor and a focus on policy impact, demonstrated through roles in both research institutions and international projects. Passionate about leveraging data-driven insights to inform policy and foster governance improvements.

## Professional Experience

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### **The World Justice Project, Senior Data Analyst**

*April 2022 – Present*

Responsible for designing and implementing data workflows to automate processes related to data extraction and handling, quality checks, data visualization and analysis, and report production. Promoted data democratization and research reproducibility. Led the data harmonization and quality checks of WJP's General Population Polls in over 50 countries, implemented AI solutions focused on Natural Language Processing, programmed data apps and dashboards, and led web scraping and data extraction processes.

### **Programa Estado de la Nación (PEN), Consultant for political and institutional topics**

*Nov. 2021 – Mar. 2022*

Consulted on political and institutional research for Nicaragua, supporting the data analysis of the 2021 Nicaraguan Post-Electoral Survey, the production of the State of Democracy in Nicaragua 2022 Report, and other studies related to the youth socioeconomic conditions.

### **Fundación Nicaragüense para el Desarrollo Económico y Social (FUNIDES), Senior Researcher**

*Jun. 2016 – Jul. 2019*

Led the institutional research department, identifying research opportunities, designing study protocols, and supervising the research efforts on topics related to democracy, governance, rule of law, and civic culture. I also supported the research on topics related to education, health, poverty, and inequality through data cleaning and analysis, survey programming, database management, and conducting focus groups with experts and studied individuals.

### **Central American University (UCA), Lecturer**

*Sep. 2015 – Dec. 2018*

Assisted the economics department at Central American University (UCA) in Nicaragua by providing lectures and tutorials for undergraduate courses in Regulation and Antitrust Economics and Social Quantitative Techniques.

### **National Institute for the Promotion of Economic Competition (Procompetencia), Economic Analyst**

*Sep. 2015 – Dec. 2018*

Supported senior officers in the national antitrust authority's economics department on cases of unfair competition, mergers, and acquisitions. Responsibilities included firm-level data analysis, market delineation for cases, and preparing reports to support legal proceedings.

## Education

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University of Göttingen, M.Sc. in Development Economics

Oct. 2019 – Oct. 2021

Central American University, B.Sc. in Applied Economics

Feb. 2010 – Apr. 2014

## Skills & abilities

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- Programming languages and technologies: R, Python, Stata, HTML, CSS, LaTeX, CPro, ODK, Git, Docker, SQL, Tableau.
- Machine learning and prompt engineering.
- Data extraction, transformation, and wrangling.
- Data visualization, business intelligence, and dashboard design and programming.
- Web apps (Shiny, Dash, Streamlit).
- Quasi-experimental designs.
- Survey design and programming.
- Natural Language Processing.
- Geospatial Analysis.
- Web scrapping.
- Regression analysis and econometrics.
- Languages: Spanish, English, Portuguese, German.

## Publications

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- Toruño C. (2021). "Political favoritism and social protection policies: Evidence from a cash transfer program in Colombia". Master thesis submitted to Prof. Dr. Krisztina Kis-Katos at the chair of International Economic Policy of the University of Göttingen. Document available on [this link](#).
- Toruño C. & Granada, D. (2020). "Local democracy in Nicaragua: Study case in the municipalities of El Almendro and Kukrahill" (Original document in Spanish). FUNIDES: Managua, Nicaragua. Document available on [this link](#).
- Toruño C. & López Espinoza, Á. (2019). "Diagnosis of the demand for technical occupations in times of crisis" (Original document in Spanish). RENET: Managua, Nicaragua. Document available on [this link](#).
- Toruño C. & Huelva, L. & Pacheco, C. (2018). "State of Democracy in Nicaragua 2019" (Original document in Spanish). FUNIDES: Managua, Nicaragua. Document available on [this link](#).
- Huelva, L. & Pacheco, C. & Toruño C. (2018). "Effects of maternity on the labor supply of women" (Original document in Spanish). FUNIDES: Managua, Nicaragua. Document available on [this link](#).
- Huelva, L. & Toruño, C. (2017). "Impact of public expenditure in the reduction of poverty and inequality". (Original document in Spanish). FUNIDES: Managua, Nicaragua. Document available on [this link](#).
- Huelva, L. & Pacheco, C. & Toruño C. (2017). "Quality of Education in Nicaragua: Does the children enjoy of the same opportunities?". (Original document in Spanish). FUNIDES: Managua, Nicaragua. Document available on [this link](#).

## Data Projects

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- **EU-S Copilot**: Web app containing tools, AI generated media reports, and a data dashboard used in the data cleaning, validation, and analysis of the data collected in the framework of the World Justice Project EUROVOICES.
- **ROLI Map Generator**: Interactive app that generates Choropleth Maps using WJP's Rule of Law Index scores as data inputs.
- **EU Lawyer Dataset**: Online dashboard that shows the results from web scraping publicly available data about lawyers residing in the EU area. Data comes from bar associations in the 27 EU member states.
- **Colombia 2022 - A Twitter Companion**: An online dashboard that shows the results of extracting over 3 million tweets related to multiple presidential pre-candidates for the 2022 Colombian National Elections.
- **WJPr**: R Package containing some data wrangling and visualizations frequently used by the Data Analytics Unit at the World Justice Project.