

# Carlos Mendez

## Academic Positions

2018-Present Associate Professor, Graduate School of International Development, Nagoya

University, Japan.

2019-Present **Founding Director**, Quantitative Regional and Computational Science Network.

2015-2018 Lecturer, Faculty of Arts and Science, Kyushu University, Japan.

## Education

2015 **Ph.D. in International Development**, *Nagoya University*, Japan.

2012 M.A. in International Development, Nagoya University, Japan.

2010 Research Student in International Development, Nagoya University, Japan.

2008 **B.A. in Commercial Engineering (Business-Economics)**, *Universidad Católica Boliviana*, Bolivia.

2007 **Visiting Student in Commercial Engineering (Business-Economics)**, *Pontificia Universidad Católica de Chile*, Chile.

## Research and Teaching Fields

Primary: Development Economics, Regional Economics

Secondary: Applied Econometrics, Macroeconomics

## Teaching Experience

## **Graduate Courses**

2022-Present Associate Professor, Applied Econometrics, Nagoya University.

2022-Present Associate Professor, Introduction to Statistics and Data Science, Nagoya

University.

2022-Present Associate Professor, Regional Development, Nagoya University.

2022–Present Associate Professor, Introductory Macroeconomics, Nagoya University.

2018-Present Associate Professor, Seminar in Economic Development Policy and Management

I and II, Nagoya University.

2019–2022 Associate Professor, Development Macroeconomics, Nagoya University.

- 2021–2022 Associate Professor, Quantitative Economic Analysis, Nagoya University.
- 2012–2014 Teaching Assistant, Development Macroeconomics, Nagoya University.
- 2012–2014 **Teaching Assistant**, Development Microeconomics, Nagoya University .
  - 2013 **Teaching Assistant**, Advanced Microeconomics I, Nagoya University .
  - 2013 **Workshop Instructor**, Advanced Topics in Economic Growth and Productivity, Nagoya University.
  - 2013 **Workshop Instructor**, *Advanced Topics in Macroeconomics*, Nagoya University. Undergraduate Courses
- 2016-2018 Lecturer, Introduction to Economics, Kyushu University.
- 2016-2018 Lecturer, Kikan- General Education Seminar, Kyushu University.
- 2017-2018 Lecturer, Academic Presentations in English (FC-SP), Kyushu University.
- 2016-2017 Lecturer, Global Poverty and Development, Kyushu University.
- 2016-2017 **Lecturer**, *Interdisciplinary Collaborative Learning of Social Issues*, Kyushu University.
- 2017-2017 **Lecturer**, *Introduction to Data Analysis and Visualization (SALC)*, Kyushu University.
- 2015-2017 Lecturer, Economics is Everywhere (SALC), Kyushu University.
  - 2008 Invited Lecturer, Microeconomics I, Universidad Católica Boliviana.

## Other Experience

- 2012–2015 **Research Assistant**, Globalization and Development Research Project, JSPS Class-A International Joint Research Project lead by Prof. Shigeru Otsubo, Nagoya University.
- 2008–2009 **Local Consultant**, Japanese International Cooperation Agency (JICA) and OP-MAC corporation, Bolivia.
- 2007–2008 **Junior Consultant**, The World Bank and the Danish International Development Agency (DANIDA), Bolivia.
- 2007–2008 Junior Consultant, Pro-Mujer Microcredit International, Bolivia.
  - 2007 Intern, FIE Microcredit, Bolivia.
  - 2006 Junior Consultant, Pro-Mujer Microcredit, Bolivia.

### Awards

- 2023 **Top Cited Article 2021-2022**, Regional Science Policy and Practice, Regional convergence and spatial dependence across subnational regions of ASEAN: Evidence from satellite nighttime light data.
- 2023 **Top Cited Article 2021-2022**, Review of Development Economics, Disparities in regional productivity, capital accumulation, and efficiency across Indonesia: A club convergence approach.

- 2022 **Top Cited Article 2020-2021**, Regional Science Policy and Practice, Regional convergence, spatial scale, and spatial dependence: Evidence from homicides and personal injuries in Colombia 2010-2018.
- 2022 **Top Cited Article 2020-2021**, Review of Development Economics, Disparities in regional productivity, capital accumulation, and efficiency across Indonesia: A club convergence approach.
- 2021 **Encouraging Award**, Japan Section of the Regional Science Association International.
- 2017 Emerging Scholar Award, Interdisciplinary Social Sciences Research Network.
- 2013 Outstanding Research Assistantship, Nagoya University.
- 2012–2015 **Doctoral Studies Scholarship**, Japanese Government MEXT.
- 2010–2012 Master Studies Scholarship, Japanese Government MEXT.
- 2009–2010 Research Student Scholarship, Japanese Government MEXT.
  - 2008 **Medal of Academic Excellence**, *Highest GPA (92/100) in the Commercial Engineering Major*, Universidad Católica Boliviana.
  - 2008 University Valedictorian, Universidad Católica Boliviana.
  - 2007 Bolivian Representative Fellowship, Pontificia Universidad Católica de Chile.
- 2005–2007 **Academic Excellence Fellowship**, Best Student of the Commercial Engineering Major, Universidad Católica Boliviana.
  - 2003 New Millennium Leader, Latin American Circle in Oratory.
  - 2003 **Diploma of Academic Excellence**, *Best Student of High School*, Instituto Salesiano Domingo Savio.

## Research Grants

- 2023 Integrating Satellite Images with Socieconomic Data for Monitoring Sustainable Development, Strategic Proposal for Fusion Research, ISEE, Nagoya University.
  - Principal Investigator
- 2023-2027 Spatial Econometric Analysis of Regional Economies and Decentralization in Indonesia Based on Legal Mapping Method and Satellite Nighttime Light Data, Japan Society for the Promotion of Science, KAKENHI Grant 23H03617. Coinvestigator
- 2019-2022 Testing for Distributional Divergence in the Pillars of Global Sustainable Development: Integrating the Insights from a New Hierarchical Clustering Algorithm, Japan Society for the Promotion of Science, Additional Support for Independent Research.
  - Principal Investigator
- 2019-2022 Testing for Distributional Divergence in the Pillars of Global Sustainable Development: Integrating the Insights from a New Hierarchical Clustering Algorithm, Japan Society for the Promotion of Science, KAKENHI Grant 19K13669. Principal Investigator

2018 Designing Integrated Industrial Policies for Pro-Poor Growth under Globalization: Promoting Surviving Industries in Developing Countries in Asia and Africa with New Public-Private Partnership, Japan Society for the Promotion of Science, KAKENHI Grant 15H02620. Collaborator

## Computer skills

Programming: Python, R, Stata, Matlab, Julia, JavaScript, Gauss, LATEX

User: QGIS, GeoDA, Maple, Mathematica, EViews, SPPS, MINITAB, GTAP, ADEPT

## Professional Activities

Memberships: American Economic Association (AEA)

European Economic Association (EEA)

Spatial Econometrics Association (SEA)

Japan Society for International Development (JASID)

Japan Section of the Regional Science Association International (JSRSAI)

Applied Regional Science Conference (ARSC)

Japan Society of Social Science on Latin America (JSLA)

Referee: Regional Science Policy and Practice, REGION, Sustainability, GeoJournal, Asia-Pacific Journal of Regional Science, Letters in Spatial and Resource Sciences, Economic Change and Restructuring, Journal of Economic Structures, Regional Studies, Regional Science, Essays on Economic Policy, Forum of International Development Studies, Economics Bulletin.

### Publications and Research

## Peer-reviewed Articles

- 2023 Regional unemployment dynamics in Indonesia: Serial persistence, spatial dependence, and common factors, *Letters in Spatial and Resource Sciences*. (with Tifani Siregar)
- 2023 Regional Okun's law and endogeneity: Evidence from the Indonesian districts, *Applied Economics Letters*. (with Harry Aginta and Masakazu Someya)
- 2023 Convergence clubs and spatial structural change in the European Union, *Structural Change and Economic Dynamics*. (with Eleonora Cutrini)
- 2023 Measuring and understanding regional inequality through the lens of the Indonesian experience: A book review of regional inequality and development by Takahiro Akita and Mitsuhiko Kataoka, *Asia-Pacific Journal of Regional Science*
- 2022 Regional income convergence and conditioning factors in Turkey: Revisiting the role of spatial dependence and neighbor effects, *Annals of Regional Science*. (with Ugur Ursavas)
- 2022 Schooling ain't learning in Europe: A club convergence perspective, *Comparative Economic Studies*. (with Linda Glawe)

- 2022 Social and economic convergence across districts in Indonesia: A spatial econometric approach, *Bulletin of Indonesian Economic Studies*. (with Cani Miranti)
- 2022 Regional convergence and spatial dependence in Thailand: Global and local assessments, *Journal of the Asia Pacific Economy*. (with Katikar Tipayalai)
- 2022 Economic and social disparities across subnational regions of South America: A spatial convergence approach, *Comparative Economic Studies*.(with Felipe Santos)
- 2021 Regional income disparities, distributional convergence, and spatial effects: Evidence from Indonesian regions 2010-2017, *GeoJournal*. (with Felipe Santos and Anang Gunawan)
- 2021 Regional income disparities and convergence clubs in Indonesia: New district-level evidence, *Journal of the Asia Pacific Economy*. (with Harry Aginta and Anang Gunawan)
- 2021 Sectoral productivity convergence, input-output structure and network communities in Japan, *Structural Change and Economic Dynamics*. (with Alvaro Dominguez and Felipe Santos)
- 2021 Provincial income convergence clubs in Indonesia: Identification and conditioning factors, *Growth and Change*. (with Anang Gunawan and Shigeru Otsubo)
- 2021 Human capital constraints, spatial dependence, and regionalization in Bolivia: A spatial clustering approach, *Economia*. (with Erick Gonzales)
- 2021 Regional convergence and spatial dependence across subnational regions of ASEAN: Evidence from satellite nighttime light data, *Regional Science Policy and Practice*. (with Felipe Santos)
- 2021 Disparities in regional productivity, capital accumulation, and efficiency across Indonesia: A club convergence approach, *Review of Development Economics*. (with Mitsuhiko Kataoka)
- 2021 Regional convergence, spatial scale, and spatial dependence: Evidence from homicides and personal injuries in Colombia 2010-2018, *Regional Science Policy and Practice* (with Felipe Santos)
- 2020 Regional efficiency convergence and efficiency clusters: Evidence from the provinces of Indonesia 1990-2010, *Asia-Pacific Journal of Regional Science*.
- 2020 Labor productivity, capital accumulation, and aggregate efficiency across countries: New evidence for an old debate, *Forum of International Development Studies*.
- 2019 Lack of global convergence and the formation of multiple welfare clubs across countries: An unsupervised machine learning approach, *Economies*.
- 2019 A comparison of TFP estimates via distribution dynamics: Evidence from light manufacturing firms in Brazil, *Empirical Economics Letters*. (with Erick Gonzales)
- 2019 Industrial productivity divergence and input-output network structures: Evidence from Japan 1973-2012, *Economies*. (with Alvaro Dominguez)
- 2018 Beta, sigma and distributional convergence in human development? Evidence from the metropolitan regions of Bolivia, *Latin American Journal of Economic Development*.

- 2018 On the distribution dynamics of human development: Evidence from the metropolitan regions of Bolivia, *Economics Bulletin*.
- 2018 Investment constraints and productivity cycles in Bolivia, Conyuntural Economics.
- 2017 Heterogeneous growth and regional (di)convergence in Bolivia: A distribution dynamics approach, *Coyuntural Economics*.
- 2015 The world productivity distribution: Convergence and divergence patterns in the postwar era, *Latin American Journal of Economic Development*.
- 2015 On the development gap between Latin America and East Asia: Welfare, efficiency, and misallocation, *Forum of International Development Studies*.

#### **Books**

- 2020 Convergence Clubs in Labor Productivity and its Proximate Sources: Evidence from Developed and Developing Countries. Springer
- 2015 Essays on Aggregate Productivity, Structural Change, and Misallocation. Lambert Academic Publishing

## **Book Chapters**

- 2021 Regional Economic Growth Convergence and Spatial Growth Spillovers at Times of COVID-19 Pandemic in Indonesia. In Resosudarmo B. et al. (Ed.), Regional Perspectives of Covid-19 in Indonesia. IRSA Press
- 2021 Promoting Both Industrial Development and Regional Convergence: Towards a Regionally Inclusive Industrial Policy. In Otsubo S. and Otchia C. (Ed.), *Designing Integrated Industrial Policies*. Routledge
- 2015 Divergent and Unequal Development in Latin America: Causes and Policy Challenges. In Otsubo S. (Ed.), *Globalization and Development: In Search of a New Development Paradigm*. Routledge

## Reports

2008 Productive Investment Complementarity across Local and Regional Governments in Bolivia, Consultancy Report, The World Bank–DANIDA. (with Guillermo Gonzales)

#### Dissertations

- 2015 Essays on Aggregate Productivity, Structural Change and Resource Misallocation, Doctoral Dissertation, Nagoya University
- 2012 On the Determinants of Bolivia's Economic Growth: Productivity and Institutional Puzzles, *Master Dissertation*, Nagoya University
- 2008 The Relative Importance of the Industry Forces and Firm Resources on Performance: An Empirical Evaluation of the Biggest Firms in Bolivia, *Undergraduate Dissertation*, Universidad Católica Boliviana

## Recent Conference Presentations

2023 Mapping multidimensional poverty in Cambodia: Integrating big data, socioeconomic surveys, and machine learning, GSID-ISEE 2023 Research Workshop, Nagoya, Japan.

- 2023 Regional luminosity through the lens of the spatial Solow model: Evidence from Java, Indonesia, The 14th version of the Bolivian Conference on Development Economics, Bolivian Catholic University, Bolivia.
- 2023 Regional luminosity through the lens of the spatial Solow model: Evidence from Java, Indonesia, The 60th Annual Meeting of the Japan Section of the Regional Science Association International, Nagoya, Japan.
- 2023 Regional Okun's law, endogeneity, and heterogeneous effects: District-level evidence from Indonesia, *The 62nd Congress of the European Regional Science Association*, Virtual Conference, Spain.
- 2023 Exploring economic activity from outer space: A Python notebook for processing and analyzing satellite nighttime lights, *The 62nd Congress of the European Regional Science Association*, Virtual Conference, Spain.
- 2022 Regional luminosity and economic activity in Java: What do the new satellite nighttime light data say?, The 59th Annual Meeting of the Japan Section of the Regional Science Association International, Virtual Conference, Japan.
- 2022 Regional income convergence and conditioning factors in Turkey: Revisiting the role of spatial dependence and neighbor effects, *The 61st Congress of the European Regional Science Association*, Virtual Conference, Hungary.
- 2022 Regional inequality clubs in the Philippines: A view from outer space, The 27th Conference of the Pacific Regional Science Conference Organisation (PRSCO), Virtual Conference, Japan.
- 2021 Regional disparities and heterogeneous convergence in Indonesia: A multiscale geographically weighted regression approach, XV World Conference of the Spatial Econometrics Association, Virtual Conference, Japan.
- 2021 Regional disparities and heterogeneous convergence in Indonesia: A multiscale geographically weighted regression approach, *The 13th World Congress* of the Regional Science Association International, Virtual Conference, Morocco.
- 2020 Regional Convergence and Spatial Dependence across Subnational Regions of ASEAN: Evidence from Satellite Nighttime Light Data, The 57th Annual Meeting of the Japan Section of the Regional Science Association International, Virtual Conference, Japan.
- 2020 Regional Convergence and Spatial Dependence across Subnational Regions of ASEAN: Evidence from Satellite Nighttime Light Data, The 57th Annual Meeting of the Japan Section of the Regional Science Association International, Virtual Conference, Japan.
- 2020 National and Subnational Inequality in Africa: A Club Convergence View from Outer Space Motivation, The 31st Annual Conference of the Japan Society for International Development, Virtual Conference, Japan.
- 2020 Human Development Disparities and Convergence across Districts of Indonesia: A Spatial Econometric Approach, The Applied Regional Science Conference (ARSC) 34th Annual Meeting, Virtual Conference, Japan.

- 2020 Regional Income Disparities and Convergence Clubs in Indonesia: New District-Level Evidence, The 2020 Fall Meeting of the Japan Association of Applied Economics (JAAE), Virtual Conference, Japan.
- 2020 Economic and Social Disparities across Subnational Regions of South America: A Spatial Convergence Approach, The 57th/2020 Annual Conference of the Japan Society of Social Science on Latin America, Virtual Conference, Japan.
- 2020 Regional Income Disparities, Distributional Convergence, and Spatial Effects: Evidence from Indonesian Regions 2010-2017, The 19th International Conference of the Japan Economic Policy Association, Virtual Conference, Japan.
- 2020 **Productivity Differences and Convergence Clubs in Latin America**, *The 2020 Bolivian Conference of Development Economics*, Virtual Conference, Bolivia.
- 2019 Disparities in Regional Productivity, Capital Accumulation, and Efficiency across Indonesia: A Convergence Clubs Approach, The 2019 Applied Regional Science Conference (ARSC), Saga, Japan.
- 2019 **Productivity Differences and Convergence Clubs in Latin America**, *The 2019 International Joint Conference of JAHSS and JASID*, Tokyo, Japan.
- 2019 Input-Output Efficiency and Regional Convergence Clusters: Evidence from the Indonesian Provinces 1990-2010, The 56th Annual Meeting of the Japan Section of the Regional Science Association International, Kurume, Japan.
- 2019 Regional Efficiency Dispersion, Convergence, and Efficiency Clusters: Evidence from the Provinces of Indonesia 1990-2010, The 2019 Spring Conference of the Japanese Association of Applied Economics, Nagoya, Japan.
- 2019 Environmental Efficiency and Regional Convergence Clusters in Japan: A Nonparametric Density Approach, The 3rd International Conference on Economic Structures of the Pan Pacific Association of Input-Output Studies, Osaka, Japan.