



Workshop on Applications of Machine Learning Techniques for Measuring Inequality of Opportunity and Other Poverty-Related Indicators

ADB Headquarters, Manila, Philippines

07-08 August 2025

Information Note

1. General Information

The Asian Development Bank (ADB), in partnership with the London School of Economics and Monash University, will conduct a workshop¹ on using machine learning to better understand poverty and inequality. This workshop will explore how machine learning can improve estimates of inequality of opportunity (IOP) and other poverty statistics, bringing together statistical offices from Asia and the Pacific.

General Objectives:

- i. To provide a high-level appreciation of the importance of probing beyond conventional measures of total inequality and examining inequality of opportunities;
- ii. To understand how inequality of opportunities is measured and how machine learning techniques can potentially minimize under- or overestimation of inequality of opportunities;
- iii. To explore other applications of machine learning techniques in the estimation of more granular poverty statistics; and
- iv. To promote the inclusion of questions in existing household surveys that can facilitate the measurement of inequality of opportunities.

Target audience: National Statistics Offices' mid-level managers and technical staff involved in estimation of poverty and inequality.

Note: Ideally, the technical staff should have background in R programming language.

This two-day workshop on applications of machine learning techniques for measuring inequality of opportunity and other poverty-related indicators is scheduled for August 07 – 08, 2025 and will be held hybrid in Manila, Philippines. See Annex 1 for detailed program.

2. Program

Zoom Meeting. To join virtually, you may access the zoom meeting thru this link:

<https://adb-org.zoom.us/j/92592754689?pwd=a8lsM16sihHI6TGs95taU7KWmz6rW6.1>

Meeting ID: 925 9275 4689

Passcode: ADBiopw1

This link will be available at exactly 8:45 AM.

There will also be hands-on activities where participants will work on a specific data set to estimate inequality of opportunities using machine learning techniques.

¹ This workshop will be supported by ADB's technical assistance projects on the Key Indicators for Asia and the Pacific 2021-2023 Subproject 3 (TA 6926) and Development of New Statistical Resources and Building Capacity in New Data Sources and Technologies (TA 6856- supported by the Japan Fund for Prosperous and Resilient Asia and the Pacific).

Annex 1. Program
WORKSHOP ON APPLICATIONS OF MACHINE LEARNING TECHNIQUES FOR MEASURING
INEQUALITY OF OPPORTUNITY AND OTHER POVERTY-RELATED INDICATORS
 7 August 2025 | 8:30 AM – 4:30 PM and 8 August 2025 | 9:00 AM – 5:10 PM

Time	Activity/Names
Day 1 – 7 August 2025	
8:30 AM – 9:00 AM	Registration
9:00 AM – 9:15 AM	<p>Welcome Remarks</p> <p>Albert Park <i>Chief Economist and Director General Economic Research and Development Impact Department Asian Development Bank</i></p> <p>Francisco Ferreira (virtual) <i>Amartya Sen Professor of Inequality Studies and Director International Inequalities Institute London School of Economics</i></p> <p>Gaurav Datt <i>Associate Professor Department of Economics Monash University</i></p>
9:15 AM – 9:35 AM	<p>Presentation: What the data say about the pace of poverty and inequality reduction?</p> <p>Arturo Martinez Jr. <i>Senior Statistician Data Division Economic Research and Development Impact Department Asian Development Bank</i></p>
9:35 AM – 10:00 AM	<p>Presentation: The Blind Spots in Data: Uncovering what conventional poverty and inequality measures miss</p> <p>Joseph Albert Nino Bulan <i>Associate Statistics Officer Data Division Economic Research and Development Impact Department Asian Development Bank</i></p>
10:00 AM – 10:15 AM	Coffee break
10:15 AM – 10:40 AM	<p>Presentation: What is inequality of opportunities?</p> <p>Gaurav Datt <i>Associate Professor Department of Economics Monash University</i></p>
10:40 AM – 11:10 AM	<p>Presentation: How should inequality of opportunities be measured?</p> <p>Paolo Brunori (virtual) <i>Associate Professorial Research Fellow</i></p>

Time	Activity/Names
	<i>International Inequalities Institute London School of Economics</i>
11:10 AM – 11:40 AM	Presentation: A Walkthrough of Database of Global Estimates of Opportunity and Mobility Pedro Torres-Lopez (virtual) <i>International Inequalities Institute London School of Economics</i>
11:40 AM – 12:45 PM	Lunch Break
12:45 PM – 1:45 PM	Presentation: Are We Under- or Overestimating Inequality of Opportunities: Evolution of Measurement Approaches Paolo Brunori (virtual) <i>Associate Professorial Research Fellow International Inequalities Institute London School of Economics</i> Gaurav Datt <i>Associate Professor Department of Economics Monash University</i>
1:45 PM – 2:45 PM	Hands-on workshop: How to set up data in preparation for estimating inequality of opportunities using machine learning techniques? John Nguyen <i>Research Associate Monash University</i>
2:45 PM – 3:00 PM	Coffee Break
3:00 PM – 4:30 PM	Hands-on workshop: Estimating inequality of opportunities Gaurav Datt <i>Associate Professor Department of Economics Monash University</i> John Nguyen <i>Research Associate Monash University</i>
Day 2 – 8 August 2025	
9:00 AM – 9:15 AM	Recap of Day 1 John Nguyen <i>Research Associate Monash University</i>
9:15 AM – 10:15 AM	Continuation of hands-on workshop: Estimating inequality of opportunities Gaurav Datt <i>Associate Professor Department of Economics Monash University</i>

Time	Activity/Names
	John Nguyen Research Associate Monash University
10:15 AM – 10:30 AM	Coffee Break
10:30 AM – 11:30 AM	(Three) Group Presentations
11:30 AM – 12:30 PM	Lunch Break
12:30 PM – 1:30 PM	Other applications of machine learning techniques: The case of computer vision techniques for poverty mapping Arturo Martinez Jr. Senior Statistician Data Division Economic Research and Development Impact Department Asian Development Bank
1:30 PM – 4:30 PM	Country Presentations Workshop Participants
4:30 PM – 5:00 PM	Synthesis Gaurav Datt Associate Professor Department of Economics Monash University
5:00 PM – 5:10 PM	Closing Remarks Haruka Sekiya Alternate Executive Director Asian Development Bank