

Dimension	<i>Global view on the AI landscape</i>
Sub-dimension	<i>AI areas of strength</i>
Indicator name	<i>G3: AI areas of specialisation - Comparative Advantage in Thematic Areas</i>
Rationale	It explores the specialisation of geographic areas in the AI field. It measures a country's specialisation in a thematic area (or AI subdomain) within the AI domain in comparison with the world average specialisation in that area.
Definition	The Revealed Comparative Advantage (RCA) is a ratio computed as the share of activities of a geographic area in a thematic area over the share of activities in that thematic area worldwide. For the computation, activities are assigned to the thematic area that better represents the activity's content.
Unit of measurement	Ratio
Geographical coverage	World
Geographical granularity	Macro areas (top countries plus world regions), EU27 Member States
Breakdown	Thematic areas: Machine learning, Computer vision, AI services...
Data source(s)	JRC AI TES Dataset 2020, available at https://data.jrc.ec.europa.eu/collection/id-0126 See description of the dataset in indicator G1.
Reference date	Period 2009-2020 (one value for the entire period)
Known limitations	The collected activities must contain text to be considered in this indicator.
References and Comments	The value $RCA = 1$ represents the world average or average specialisation in the thematic area when all countries are considered. It is the benchmark towards which all countries are compared. When a country presents $RCA > 1$ in a thematic area, then this country is relatively specialised in this area and has a revealed comparative advantage. Reference: Samoili S., Righi R., Cardona M., López Cobo M., Vázquez-Prada Baillet M., and De Prato G., TES analysis of AI Worldwide Ecosystem in 2009-2018, EUR 30109 EN, Publications Office of the European Union, Luxembourg, 2020, ISBN 978-92-76-16661-0, doi:10.2760/85212, JRC120106. https://publications.jrc.ec.europa.eu/repository/handle/JRC120106