



الهيئة العامة للإحصاء
General Authority for Statistics



Goal 9: Industry, Innovation and Infrastructure

SDG 9: Industry, Innovation and Infrastructure

Indicator 9.1.1 Proportion of the rural population who live within 2 km of an all-season road.

Description of the indicator: The indicator (commonly known as the World Bank's Rural Access Indicator) measures the proportion of the rural population who live within two kilometers of a road that is usable in all seasons in a country.

Sources of data: General Authority for Statistics and Transport General Authority

Unit of measurement: Percent %

Level of disaggregation: National

Method of calculation:

The indicator is calculated by the following spatial layers:

Rural Boundary Spatial Layer: Includes population according to the results of the 2022 Population and Housing Census, and a spatial layer usable in all seasons.

Geospatial analyses and processing were conducted to extract the number of rural residents living within 2 km of roads and the total rural population.

The percentage of rural residents living within 2 km of roads that are usable in all seasons was calculated as:

*Total Rural Residents Living Within 2 km of Roads Usable in all seasons / Total Rural Residents * 100.*

The index is calculated using the following spatial layers:

Rural Boundary Spatial Layer: Includes population according to the results of the 2022 Population and Housing Census, and a spatial layer usable in all seasons.

Geospatial analyses and processing were conducted to extract the number of rural residents living within 2 km of roads and the total rural population.

Last updated: 2022

Indicator	Year
	2022
Proportion of the rural population who live within 2 km of an all-season road (%)	91.77

Indicator 9.1.2 Passenger and freight volumes, by mode of transport

Description of the indicator: includes passenger and cargo volumes, which means the sum of passenger volume and cargo reported to air carriers in terms of number of people and metric tons of tonnage respectively.

The International Transport Forum collects data on transport statistics (rail and road) on an annual basis from all member states. This data is collected from the ministries of transport, statistical offices and other designated institutions as the official source of data. Although there are clear definitions of all the terms used in this survey, countries may have different methodologies for calculating kilometers per ton and kilometers for passengers. The methods can be based on traffic or mobility surveys, and the use of very different sampling methods and estimation techniques, which can affect the comparability of their statistics.

Sources of data: General Authority of Civil Aviation, Saudi Ports Authority, Economic Cities and Special Zones Authority, Transport General Authority, General Authority for Statistics, and NEOM.

Unit of measurement: Number of passengers, freight exports and imports in tons, Maritime transport: arriving and departing passengers, shipping exports and imports in tons, Land transport: Number of passengers, metric tons, railways in tons - railway freight containers in tons.

Level of disaggregation: National

Method of calculation:

This indicator consists of the following six components. Each component is the sum of the transportation volume.

- (1) Freight volume (tonne-kilometres), by maritime transport
- (2) Passenger volume (passenger-kilometres), by railway transport
- (3) Freight volume (tonne-kilometres), by railway transport
- (4) Passenger volume (passenger-kilometres), by air transport
- (5) Freight volume (tonne-kilometres), by air transport
- (6) Freight volume (tonne-kilometres), by land transport

Last updated: 2024

Trains (passengers and freight)	2020	2021	2022	2023	2024
Trains passengers	2,421,545	7,342,173	22,782,591	30,292,670	42,668,058
Trains frights (tons)	10,855,879	11,885,557	13,567,519	14,324,888	15,615,789
Trains frights (containers)	701,378	671,372	673,443	698,970	887,865

Land passenger transport - buses (million)	2021	2022	2023
	13	42.6	117.6

Air Transport	Item	2022	2023	2024
	Total International Passenger	41,619,201	60,582,822	69,311,809
	Total Domestic Passenger	46,871,418	51,121,685	59,305,214
	Total exported and imported freight	777,363	894,059	1,191,474

International freight through land ports (tons)	Item	2020	2021	2022	2023
	Exports	10,734,715	10,617,743	12,751,166	13,538,128
	Imports	9,806,860	10,474,845	11,388,639	11,423,197

Maritime Transport	Item	2020	2021	2022	2023	2024
	Arrivals	254,081	335,873	512,803	590,668	387,577
	Departures	237,327	316,176	504,970	544,055	348,600
	Total	491,408	652,049	1,017,773	1,134,723	736,177
	Exports freight (tons)	198,486,245	188,848,491	228,814,531	203,546,680	219,240,386
	Imports freight (tons)	100,784,808	101,759,133	128,698,584	105,165,539	101,544,281
	Total	299,271,053	290,607,624	357,513,115	308,712,219	320,784,667

Indicator 9.2.1 Manufacturing value added as a proportion of GDP and per-capita

Description of the indicator: It is the ratio between the market value added of GDP and the per capita value added of the manufacturing industry.

Industrial VAT per capita is calculated by dividing the industrial value added at the fixed US dollar rate in 2015 by the population of a country or region.

Gross value-added measures the contribution of each individual product, industry or sector to a country's economy. The gross value added generated by any unit engaged in a productive activity can be calculated as the residual of the gross product of the units minus intermediate consumption and the goods and services used in the production process, or as the sum of the income of the factors resulting from the production process (System of National Accounts 2008). Manufacturing refers to industries belonging to Section C defined by ISIC revision 4, or D.

GDP represents the sum of the total value added from all resident institutional units in the economy. For the purpose of comparison over time and across countries, industrial value added, and GDP are estimated in terms of constant prices in US dollars. The current series is offered at fixed prices for 2015

Sources of data: General Authority for Statistics

Unit of measurement: Percent and Saudi Arabia Riyal (SAR)

Level of disaggregation: National

Method of calculation:

Value Added of Manufacturing Industry / GDP Value Added Percentage of Manufacturing Industry *100 =

Manufacturing value added per capita (SAUDI RIYAL) = (added to manufacturing / total population).

$$MVA \text{ as a proportion in GDP} = \frac{MVA}{GDP} \times 100$$

$$MVA \text{ per capita} = \frac{MVA}{Population} \times 100$$

Last updated: 2023

Note: As for GDP at constant prices, it undergoes annual updates and therefore the indicator will change annually based on these updates.

Item	Year				
	2019	2020	2021	2022	2023
Added value percentage for transformative industries from GDP (%)	11.71	12.46	13.05	12.86	15.07
Per capita share of the transformative industries added value (SAR)	11,411	10,247	14,100	18,578	20,429

Indicator 9.2.2 Manufacturing employment as a proportion of total employment

Description of the indicator: The indicator is represented by the share of employment in the manufacturing industry in total employment.

Employment includes all persons of working age who have been engaged within a short reference period (one week) in any activity for the production of goods or the provision of services for remuneration or profit. The difference between the two series for a particular country is the operational standards used to define employment, one series is based on statistical standards from the Thirteenth International Conference on Labor Statistics and the other is based on the standards of the Nineteenth Congress on Labor Statistics. In the XIX Conference on Labor Statistics series, employment is narrowly defined as work done for pay or profit, while activities that are not primarily paid (i.e., productive work for personal use, volunteer work and unpaid training work) are recognized as other forms of work. There is no distinction between people who work full-time and those who work less than full-time.

Sources of data: General Authority for Statistics

Unit of measurement: Percent %

Level of disaggregation: National

Method of calculation: Total employment in manufacturing / total employment in all economic activities) * 100

$$\frac{\text{Total employment in manufacturing activities}}{\text{Total employment in all economic activities}} \times 100$$

Last Updated: 2024

Note: As for GDP at constant prices, it undergoes annual updates and therefore the indicator will change annually based on these updates.

Indicator	Year				
	2020	2021	2022	2023	2024
Percentage of manufacturing employment as a proportion of total employment	10.44	10.68	11.4	11.17	12.18

Indicator 9.3.1 Proportion of small-scale industries in total industry value added, based on (a) international classification and (b) national classifications.

Description of the indicator: Under the Sustainable Development Goals, defined here for the purposes of collecting and compiling statistical data, small industrial enterprises refer to statistical units, usually enterprises, engaged in the production of goods for markets below a specified size category.

The proportion of “small industries” to the total industry value added, according to the International Classification, is an indicator calculated as the proportion of manufacturing value added of small industrial enterprises to the total manufacturing value added according to UNIDO’s international definition of “small industry” (less than 20 people worked on average during the reference period).

The proportion of “small industries” of the total value added of industry, according to the national classification, is an indicator calculated as the ratio of manufacturing value added of small industrial enterprises to the total value added of manufacturing according to the national definition of “small industries”.

Concepts: The International Recommendations for Industrial Statistics, 2008 (United Nations, 2011) define an institution as the smallest legal unit that constitutes an organizational unit that produces goods or services. The Foundation is the basic statistical unit in which all information relating to its production activities and transactions, including financial and balance sheet accounts, is kept. This designation is also used to classify institutional sectors in the 2008 SNA.

The total number of employed persons is defined as the total number of people working in or for a statistical unit, whether

full-time or part-time, including:

- Employers
- Active business partners
- Unpaid family members
- Salaried staff (for more details, see United Nations, 2011).

The size of the statistical unit should primarily be determined based on employment, in terms of the average number of individuals employed during the reference period. If the average number of individuals employed is not available, the total number of individuals employed at a single point in time may be used as a measure of size.

The size classification should consist of the following categories of the average number of individuals employed: 1-9, 10-19, 20-49, 50-249, and 250 or more. This should be considered as the minimum breakdown of the overall range; more detailed classifications should be developed within this framework, where appropriate.

The added value cannot be observed directly from the accounting records of the units. It is derived as the difference between the gross product or output of the census and the intermediate consumption or census inputs (United Nations, 2011). Value added at base prices is calculated as the difference between gross product at base prices and intermediate consumption at buyers’ prices. The value-added assessment closely corresponds to the assessment of the gross output. If output is valued at base prices, value-added is also valued at base prices (intermediate consumption is always valued at buyers’ prices).

Sources of data: General Authority for Statistics

Unit of measurement: Percent %

Level of disaggregation: National

Method of calculation: The ratio of “small industries” in the total value added is an indicator calculated as the ratio of the value added of small manufacturing enterprises in the total value added of manufacturing:

(Value Added for Small Scale Manufacturing Projects / Total Manufacturing Value Added (VAT) * 100

$$\frac{\text{Manufacturing value added of “small-scale industries”}}{\text{Total manufacturing value added}} \times 100$$

The manufacturing sector is defined according to the International Standard Industrial Classification of All Economic Activities (ISIC) Revision 3 (1990) or Revision 4 (2008). It refers to industries belonging to Sector D in Revision 3 or Sector C in Revision 4.

Last updated: 2023

Indicator	2019	2020	2021	2022	2023
Proportion of small-scale industries in total industry value added	9.72	8.44	8.17	7.45	8.33

Indicator 9.5.1 Research and development expenditure as a proportion of GDP

Description of the indicator: R&D expenditure as a percentage of GDP is the proportion of R&D expenditure divided by total economic outputs.

Experimental research and development includes creative and methodological work carried out with the aim of increasing the stock of knowledge - including the knowledge of humanity, culture and society - and innovating new applications of available knowledge.

Expenditures on practical research and development within an organization represent the amount of money spent on practical research and development conducted within the reporting unit.

Sources of data: General Authority for Statistics

Unit of measurement: Percent %

Level of disaggregation: National

Method of calculation: Calculating the indicator of experimental R&D expenditure as a percentage of GDP is self-explanatory, using readily available GDP data as a denominator.

Expenditure on scientific research and development as a percentage of GDP (R&D intensity) is calculated as follows:

Calculating R&D expenditure as a percentage of GDP.

R&D spending can be broken down by performance sector, source of funding, scientific field, type of research and cost.

Last updated: 2023

Indicator	2022	2023
Research and development expenditure as a proportion of GDP	0.46%	0.49%

Indicator 9.5.2 Researchers (in full-time equivalent) per million inhabitants

Description of the indicator: The number of full-time equivalent researchers per million population is a direct measure of the number of experimental R&D workers per million people.

The OECD Frascati Handbook provides definitions relevant to experimental research and development, and gross domestic expenditure on experimental R&D and researchers. Despite being an OECD guide, the application is universal. During the sixth revision of the Frascati Manual, developing country issues were incorporated into the substance of the Manual. The seventh edition was released in October 2015.

The following definitions, taken from the 2015 edition of the Frascati Manual, are relevant to the calculation of the indicator: Experimental research and development includes the creative and methodological work being done in order to increase the stock of knowledge - including the knowledge of humanity, culture and society - and to invent new applications of available knowledge.

Researchers are professionals involved in the conception or creation of new knowledge. They conduct research and improve or develop concepts, theories, models, technologies, hardware, software or operational methods.

The full-time equivalent of experimental R&D workers is defined as the percentage of hours actually worked spent on experimental R&D during a specific reference period (usually a calendar year) divided by the total number of hours traditionally worked by an individual or group in the same period.

Sources of data: General Authority for Statistics

Unit of measurement: Number of researchers per million population

Level of disaggregation: National

Method of calculation: Computation of the indicator Researchers (in full-time equivalent) per million inhabitants uses available population data as denominator.

$$RES_{Density} = \frac{\text{Total researchers (FTE)}}{\text{Total population of the country}} \times 1,000,000$$

Where 'Total researchers (FTE)' is calculated as:

$$\text{Total researchers (FTE)} = \text{Number of full-time researchers} + \left[\frac{\text{Number of working hours spent on R\&D by part-time researchers}}{\text{Number of normative or statutory working hours of a full-time researcher}} \right]$$

Last updated: 2023

Indicator	2022	2023
Number of Researchers (in full-time equivalent) per million population	834.8	1,093

Indicator 9.b.1 Proportion of medium and high-tech industry value added in total value added

Description of the indicator: The ratio of value added of medium and high-tech industries in the total value added of manufacturing is the value of a ratio between the value added of medium and high-tech industries and the value added of manufacturing.

Sources of data: General Authority for Statistics

Unit of measurement: Percent %

Level of disaggregation: National

Method of calculation: The indicator is calculated as a ratio of the total value added from the economic activities of medium and high-tech industries to the industrial value added using the current US dollar.

$$\frac{\text{Total value added in economic activities of the high-tech industry}}{\text{Sum of value added in MHT economic activities}} \times 100$$

$$\frac{\text{Sum of value added in MHT economic activities}}{MVA} \times 100$$

Data is calculated based on the industries labeled in the table below. The total ratio is then calculated as in the equation above.

Last updated: 2023

Indicator	2019	2020	2021	2022	2023
Proportion of medium and high-tech industry value added in total value added	32.27	32.36	28.15	26.17	27.21

Indicator 9.c.1: Proportion of population is covered by a mobile network, by technology.

<p>Description of the indicator: The proportion of population covered by a mobile network, broken down by technology, refers to the percentage of population living within the range of a mobile phone signal, regardless of whether they are subscribed to or using a mobile phone. This is calculated by dividing the population within the mobile signal range by the total population and multiplying it by 100.</p>
<p>Sources of data: Communications, Space and Technology Commission</p>
<p>Unit of measurement: Percent %</p>
<p>Level of disaggregation: National and Network</p>
<p>Method of calculation: <i>(number of population living within range of cellular signal / total population) × 100</i></p>
<p>Last updated: 2023</p>

Item	Proportion of population is covered by a mobile network, by technology				
	2019	2020	2021	2022	2023
Percentage of 3G mobile networks spread in populated areas	98.9	99.1	100	100	100
Percentage of 4G mobile networks spread in populated areas	94.2	98.3	100	100	100