



الهيئة العامة للإحصاء
General Authority for Statistics

Metadata Report of Digital economy statistics

V-2.2

Quality Management



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1. Contact

1.1. Contact organization	General Authority of Statistics
1.2. Contact organization unit	Department of Digital Economy Statistics
1.3. Contact person function	Director of Digital Economy Statistics Department
1.4. Contact mail address	P.O. Box: 3735 Riyadh, 11481 Kingdom of Saudi Arabia
1.5. Contact email address	info@stats.gov.sa
1.6. Contact phone number	199009

2. Metadata Update

2.1. Metadata last update	18/02/2024
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3. Statistical Presentation

3.1. Data description
<p>The Digital Economy Survey for the year 2022 is the first survey of the digital economy conducted by the General Authority for Statistics as part of the digital economy statistics, recognizing the importance of this activity and its modern techniques. All aspects of individuals' and communities' lives worldwide have witnessed a radical transformation in light of the rapid development of modern technologies, leading to the transformation of traditional economic processes and activities into digital ones. Its importance lies in providing data on the digital economy in the Kingdom of Saudi Arabia to meet the demands of international,</p>



regional, and local organizations and entities.

The Digital Economy Statistics Survey is conducted with the following objectives:

- Providing a data source to help calculate the contribution of the digital economy to the Gross Domestic Product (GDP) of the Kingdom of Saudi Arabia.
- Identifying important indicators related to the digital economy.

The main targeted indicators include:

- The share of the digital economy contribution to the Gross Domestic Product (GDP) of the Kingdom of Saudi Arabia.

3.2. Classification system

The following classifications are applied:

The National Classification for Economic Activities (ISIC4): The statistical classification based on the International Standard of Industrial Classification of All Economic Activities (ISIC4) is used to describe productive activities of an establishment.

The classifications are available on GASTAT's website www.stats.gov.sa

3.3. Sector coverage

covers all economic sectors.

3.4. Statistical concepts and definitions

Terminologies and concepts of the digital economy:

- Digital economy:

The digital economy consists of economic activities that are conducted or facilitated through digital technologies. It states that the digital economy encompasses all economic activities that heavily rely on the use of digital inputs or are significantly enhanced using digital inputs, including digital technologies, digital infrastructure, digital services, and data.

- Establishment:

It is an economic unit with a legal entity (having a commercial register) engaged in a specific economic activity owned by an individual, group of individuals, company, semi-governmental sector, or institution.



- Economic Activity:

It refers to all the activities or services practiced or provided by the establishment. It might be profitable, or non-profitable (as is the case with charities which depend upon donations.). In the case of multiple economic activities for a single establishment, the economic activity with the highest revenue is selected. Classification of the economic activity of the establishments relies on International Standard Industrial Classification (ISIC REV.4).

- Website:

The website is a digital asset that is created to display the establishment's products or services. It is a long-term investment that provides value to the establishment by generating expected customers and increasing brand awareness.

- Digital Intermediary Application or Platform:

It is an online interface that facilitates direct interaction between multiple buyers and various sellers without having economic ownership of the goods or services being sold through it.

3.5. Statistical unit

The statistical unit in digital economy survey is an economic establishment.

3.6. Statistical population

The statistical population of the digital economy consists of all economic establishments that have active business records with the Ministry of Commerce of Saudi Arabia and cover all economic activities.

3.7. Reference area

The sample is a representative sample for Saudi Arabia's 13 administrative regions.

3.8. Time coverage

Data are available from 2022.



3.9. Base period

Not applicable.

4. Unit of measure

Most results are calculated as a percentage (e.g., the share of the digital economy in the Gross Domestic Product).

5. Reference period

Reference period for variables or dataset is 2022 data.

6. Confidentiality

6.1. Confidentiality - policy

According to the Royal Decree No. 23 dated 07-12-1397, data must always be kept confidential, and must be used by GASTAT only for statistical purposes.

Therefore, the data are protected in the data servers of the Authority.

6.2. Confidentiality - data treatment

Data were displayed in appropriate tables to facilitate its summarization, comprehension, and results extraction. Also, to compare data with other data and extract statistical meanings for the study community. It is also easier to check tables without the need to see the original questionnaire, which usually include data like names and addresses of individuals, names of data providers, which violates data confidentiality of statistical data.



“Anonymity of data” is one of the most important procedures. To keep data confidential, GASTAT removed information on individual persons, households, or business entities such a way that the respondent cannot be identified either directly (by name, address, contact number, identity number etc.) or indirectly (by combining different - especially rare - characteristics of respondents: age, occupation, education etc.).

7. Release policy

7.1. Release calendar

The survey’s results are bound by a release calendar.

7.2. Release calendar access

Available on the: <https://www.stats.gov.sa/en/future-releases>

7.3. User access

One of GASTAT’s objectives is to meet better its clients’ needs, so it immediately provides them with the bulletin’s results once the publication is published.

It also receives questions and inquiries of the clients about the Bulletin and its results through various communication channels, such as:

- GASTAT’s official website: www.stats.gov.sa
- GASTAT’s official e-mail address: info@stats.gov.sa
- Client Support’s e-mail address: cs@stats.gov.sa
- Official visits to GASTAT’s official head office in Riyadh or one of its branches in Saudi Arabia.
- Official letters.
- Statistical telephone (199009).



8. Frequency of dissemination

Annual.

9. Accessibility and clarity

9.1. News release

The announcements for each publication are available on release calendar as mentioned in 7.2. Release calendar access. The news release can be viewed on the website of GASTAT in the link: <https://www.stats.gov.sa/en/news>

9.2. Publications

GASTAT issues digital economy publications and reports on a regular basis within a pre-prepared publishing plan and installed on the GASTAT's website. GASTAT is keen to publish its publications in a manner that serves all users of different types, including publications in different formats that contain (publication tables, data graphs, indicators, metadata, methodology, and used questionnaires) in both English and Arabic.

The digital economy publications are available on the link:

<https://www.stats.gov.sa/en/>

9.3. On-line database

Not applicable.

9.4. Micro-data access

Microdata are unit-level data obtained from sample surveys, censuses, and administrative systems. They provide information about characteristics of individual people or entities such



as households, business enterprises, facilities, farms, or even geographical areas such as villages or towns.

The different types of microdata files to meet different information needs:

- **Public use:**

It consists sets of records containing information on individual persons, households, or business entities anonymized in such a way that the respondent cannot be identified either directly (by name, address, contact number, identity number etc.) or indirectly (by combining different - especially rare - characteristics of respondents: age, occupation, education etc.).

- **Scientific use:**

These files established based on specific methodology asked by data requester to extract the datasets with specific characteristics used for strategic studies and decision making as well scientific research purposes on individuals, households and enterprises with no direct identifiers, which have been subject to control methods to protect confidentiality.

Eligible users can access microdata sets through secure interface built-in by GASTAT called "Etaha" with specific documentary requirements.

9.5. Other

Not available.

9.6. Documentation on methodology

The digital economy framework is based on the following international recommendations, definitions, issues and classifications:

- A Roadmap Towards a Common Framework for Measuring the Digital Economy - Report of the G20 digital economy task force, Saudi Arabia 2020.
- A manual for the production of statistics on the digital economy 2020, issued by the United Nations Conference on Trade and Development (UNCTAD).
- https://unctad.org/system/files/official-document/dt/stict2021d2_en.pdf



9.7. Quality documentation

Quality documentation covers documentation on methods and standards for assessing, measuring, and monitoring the quality of statistical process and output. It is based on standard quality criteria such as relevance, accuracy and reliability, timeliness and punctuality, accessibility and clarity, comparability, and coherence.

10. Quality management

10.1. Quality assurance

GASTAT declares that it considers the following principles: impartiality, user orientated, quality of processes and output, effectiveness of statistical processes, reducing the workload for respondents.

Quality controls and validation of data are actions carried out throughout the process in different stages such as the data input and data collection and other final controls.

10.2. Quality assessment

GASTAT performs all statistical activities according to a national model (Generic Statistical Business Process Model - GSBPM). According to the GSBPM, the final phase of statistical activities is overall evaluation using information gathered in each phase or sub-process. This information is used to prepare the evaluation report which outlines all the quality issues related to the specific statistical activity and serves as input for improvement actions.

11. Relevance

11.1. User needs

Internal GASTAT's users, which make use of digital economy survey data, include:

- National accounts department.



External users who make significant use of digital economy survey data include, but is not limited to:

- Governmental entities.
- Regional and International Organizations.
- Research institutions.
- Media.
- Individuals.

The disseminated key variables that mostly used by key users:

Communications System (Ministry of Communications and Information Technology, Telecommunications, Space and Technology Authority and Digital Government Authority)	Digital economy's contribution to GDP
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11.2. User satisfaction

Not available.

11.3. Completeness

Data in complete as follows: The digital economy data is based on data collected through of a sample of economic establishments representing various economic sectors across the Kingdom of Saudi Arabia.

12. Accuracy and reliability

12.1. Overall accuracy

- The quality of data is increased by selecting interviewers based on several practical and objective criteria related to the nature of the work, and their qualification and training.



- Warning, prevention, and correction rules are applied during the data collection process to the electronic questionnaire of the Digital Economy Survey in order to improve data quality.
- The data is checked against previous years to identify any significant changes in the data.
- The internal consistency of the data is checked before finalizing it.
- The correlation between variables is examined and consistency between different data series is confirmed.

13. Timeliness and punctuality

13.1. Timeliness

GASTAT uses the Special Data Dissemination Standard (SDDS) issued by the International Monetary Fund. According to this Standard, all statistics agencies are required to publish data on an annual basis, and with a delay of not more than six months (180 days) after the end of the reference period. If the data are from different source, they may be published in a different frequency.

13.2. Punctuality

Publication takes place in accordance with published release dates for digital economy in the GASTAT webpage.

The data are available at the expected time, as scheduled the release calendar, If the publication delayed the reasons would be provided.

14. Coherence and comparability

14.1. Comparability - geographical

Data is comparable.



14.2. Comparability - over time

The survey started in 2022 as the first time it was implemented and is conducted as an annual survey.

14.3. Coherence- cross domain

Not applicable.

14.3.1. Coherence - sub annual and annual statistics

Not applicable.

14.3.2. Coherence- National Accounts

Not applicable.

14.4. Coherence - internal

The digital economy indicators for a given reference period have full internal coherence, as they are all based on the same corpus of microdata, and they are calculated using the same estimation methods.

15. Resources used

Description	Total
Total staff (GASTAT's staff, researchers).	251
Number of unites surveyed.	54957
Total days of data collection period (end date - start date).	31
Average conducted interviewer per day (during data collection).	7



16. Data revision

16.1. Data revision - policy

Not applicable, only final results will be published.

16.2. Data revision - practice

Not applicable, only final results will be published.

17. Statistical processing

17.1. Source data

The publication of digital economy relies on data collected on establishments for the fiscal year 2022. And the stratified random sampling approach has been followed. The total number of establishments has been divided into several strata determined by economic activity and size.

The main variable published for digital economy data is:

- The share of the digital economy in the Gross Domestic Product (GDP).

17.2. Frequency of data collection

Annual.

17.3. Data collection

Data collection:

The data collection is carried out through Computer-assisted telephone interviewing (CATI) and Computer-Assisted Personal Interviews (CAPI).



17.4. Data validation

Data is reviewed and validated to ensure its accuracy in a manner that suits its nature, aiming to enhance the quality and accuracy of the provided statistics.

The data for the current year is compared with data and estimates from other studies conducted by local authorities and international organizations to ensure its integrity and consistency in preparation for data processing, result extraction, and revision.

In addition to processing and tabulating data to verify its accuracy, all outputs are stored and uploaded to the database after being calculated by the General Authority for Statistics to be reviewed and processed by specialists in the digital economy survey through modern technologies and software designed for this purpose.

17.5. Data compilation

Data Coding:

In the **digital economy survey**, interviewers collect from respondents, a detailed description of each field. This information is then coded in-house by an automated process, which is reviewed by a small-dedicated team of coding experts using a series of consistency checks.

Data Editing:

Specialists of digital economy Statistics Department have processed and analyzed data in this stage, and this step was based on the following measures:

- Sort and arrange data in groups or different categories in a serial order.
- Summarize detailed data into main points or main data.
- Link between many parts of data and make them connected.
- Process incomplete or missing data.
- Process illogical data.
- Convert data into statistically significant data.
- Organize, display and interpret data.

Imputation (for Non-Response or Incomplete Data Sets):

GASTAT uses the following methods to offset data in the digital economy survey:

- Use centralization measures at the target class level to offset values.
- Use scales of dispersion at the target layer level to offset values.



- Use of administrative records data.

Extrapolation and weighting:

After processing the data collected from the responding establishments, weights were created to produce tables of indicators following two main steps in weight creation, which are:

- Adjustment of non-response.
- Calculating adjusted weight.

Statistical estimates applied:

The General Authority for Statistics relied on the equations adopted according to international standards in calculating the main indicators as follows:

- Percentage of establishments that provided their services through electronic applications: $\frac{\text{The number of establishments that provided their services through electronic applications}}{\text{The total number of establishments that used the Internet}} \times 100$.
- Percentage of establishments that used systems or devices connected to the Internet: $\frac{\text{The number of establishments that used systems or devices connected to the Internet}}{\text{The total number of establishments}} \times 100$.
- Percentage of establishments that purchased cloud computing services: $\frac{\text{The number of establishments that purchased cloud computing services}}{\text{The total number of establishments}} \times 100$.
- Percentage of establishments that delivered their sales electronically: $\frac{\text{The number of establishments that delivered their sales electronically}}{\text{The total number of establishments that received purchase orders through the Internet}} \times 100$.
- Percentage of establishments that received their purchases electronically: $\frac{\text{The number of establishments that received their purchases electronically}}{\text{The total number of establishments that ordered or purchased goods and services through the Internet}} \times 100$.
- Percentage of establishments that tracked goods and services via the Internet: $\frac{\text{The number of establishments that tracked goods and services via the Internet}}{\text{The total number of establishments that used the Internet}} \times 100$.
- Percentage of establishments that have an account on social media platforms: $\frac{\text{The number of establishments that have an account on social media platforms}}{\text{The total number of establishments that used the Internet}} \times 100$.
- Percentage of establishments that advertised their products through social media platforms: $\frac{\text{The number of establishments that advertised their products through social media platforms}}{\text{The total number of establishments that used the Internet}} \times 100$.
- Percentage of establishments that provided online support for after-sales services through their website: $\frac{\text{The number of establishments that provided online support for}}{\text{The total number of establishments that used the Internet}} \times 100$.



after-sales services through their website /The total number of establishments that have their own website*100.

17.6. Adjustment

Not applicable, only final results will be published.

18. Comment

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