



الهيئة العامة للإحصاء
General Authority for Statistics

Methodology of Labor Market Statistics

Q3 - 2021

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Methodology

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Introduction:

The Labor Market Statistics Publication is one of the important statistical products issued by the General Authority for Statistics. It is a quarterly publication that collects its data from two sources; First source: the survey (the manpower survey), and the second source: the data of administrative records of the authorities concerned with the labor market (the Ministry of Human Resources and Social Development, the General Organization for Social Insurance, and the National Information Center). This publication, in addition to the rest of the statistical products issued by the authority, contributes to support decision and policy makers, and it includes: statistics of employees and job seekers based on many basic variables according to the administrative distribution of the Kingdom's regions such as: nationality, gender, age groups, and educational level, in addition to the main indicators extracted from the labor force survey estimates such as unemployment rates, economic participation, employment, and others.

The Labor Market Statistics Publication is an extension of the Labor Force Survey report, which began to be issued annually in 1999 and continued as an annual publication until 2007, then turned into a semi-annual publication and became a quarterly publication starting from the second quarter of 2016. In the fourth quarter of 2016, it was developed to be a publication that collects the survey results with the administrative records of the authorities concerned with the labor market in the Kingdom under the name (Labor Market Statistics Publication).

The importance of this publication stems from the fact that it provides comprehensive statistics on the labor market in the Kingdom of Saudi Arabia and contributes to building a statistical database for the labor market that can be used in preparing and planning future, social, and economic development programs in the Kingdom.

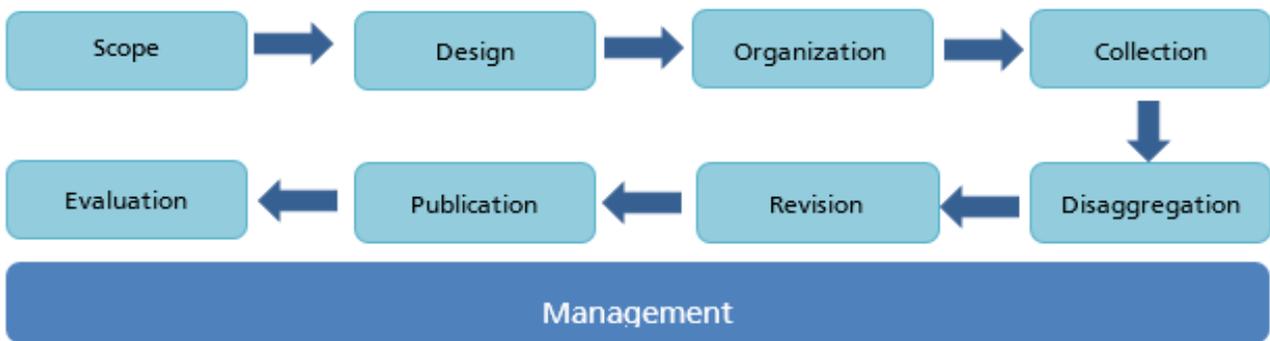
The General Authority for Statistics extends its thanks and appreciation to all partners and clients from the authorities concerned with the labor market in the Kingdom for their cooperation in the completion of the labor market statistics publication. It also extends its thanks to the heads of households for their response to enumerators and answering the labor force survey form, as their cooperation had the greatest impact in completing the data collection processes in the survey.

The General Authority for Statistics is pleased to receive your suggestions and observations about this publication via (info@stats.gov.sa) in order to improve its content, and add further development to future publications.

The General Authority for Statistics

Methodology:

GASTAT implements all its statistical works in accordance with a unified methodology that compile with the nature of each statistical product. It relies on the Manual of the Statistical Procedures which conforms with the procedures adopted by the international organizations. The statistical product goes through eight connected stages, in addition to a ninth stage (the comprehensive "management" stage), which are as follows:



The first three stages: (Scope, design, and organization) are collaborative stages between GASTAT and its clients from the different developmental entities. However, the fourth stage (Data collection) is a collaborative stage between GASTAT and the statistical community either households or establishments, in order to complete data and information. On the other hands, the rest of the stages are considered statistical stages carried out by GASTAT, including (Disaggregation, revision, and publication). After that, the eighth stage (Evaluation) is done through collaboration with clients again, whereas the (Management) stage is an administrative and organizational stage the is connected with all stages. These stages have been applied on the labor market statistics as follows:

First stage: The scope:

The first step in the process of producing (Labor Market Statistics), it is also the first collaborative stage between GASTAT and the labor market group which includes (Ministry of Human resources and Social Development, and General Organization of Social Insurances, and Human Resources Development Fund) in addition to the National Information Center, private sector, and the academic sector. Many workshops and meeting have been held between GASTAT and these organizations to understand their needs and requirements as they are considered data providers and users at the same time.

The feedback of these organization has been taken into consideration to assure the achievement of all Labor Market Statistics'' objectives which can be summarized in:

1. supporting decision and policy makers, researchers, and those who are interested in getting up-to-date and comprehensive statistics related to the labor market in Saudi Arabia.
2. Empowering Public and private sectors to investigate the labor market changes and get use of them.
3. Providing the academic sectors with the requirements of social and economic studies and research.
4. Providing up-to-date statistics on:
 - Unemployment rate according to many variables.
 - Unemployed individuals and labor force according to many variables.
 - Workers according to many variables.
 - Labor Force Participation rate, and employment.
 - Average wages and average working hours.
 - Job seeking method, period of unemployment, and previous work and training experiences.

In this stage, we should make sure that all published statistics contribute in meeting the requirements of Saudi Vision 2030. They also must cover the regional requirements such as the requirements of GCC-STAT, and other international requirements represented in (ILO)

Second stage: The design:

The stage of designing the statistical work as it is considered a whole product. Through this stage, the statistical community is determined, statistical framework, survey sample, and questionnaire are designed, methods and tools of data collection are identified, and sampling units are specified. Clients collaborate in all these procedures to benefit from their feedbacks, so that all requirements can be achieved within the statistical product.

The most important outputs of this stage are:

1.1. Statistical community:

Statistical community of labor market statistics consists of all individuals (Saudis and non-Saudis) who habitually live in Saudi Arabia.

1.2. Statistics sources:

Labor market statistics' data are based on two main sources in order to provide comprehensive information on Saudi labor market. They include statistics from the household telephone survey (Labor Force Survey) which GASTAT conducts quarterly. They also include quarterly data from administrative records of related governmental entities. Therefore, GASTAT can calculate its indicators and release them along with the household survey indicators within the Labor Market Statistics Bulletin.

1.2.1. First source of labor market statistics: Labor Force Survey

It is a household telephone survey conducted by GASTAT under the (social statistics) category. Information is collected by contacting a sample of households from all administrative regions of Saudi Arabia. In addition to completing an electronic questionnaire that includes a number of questions. This survey provides estimates and indicators of population' labor force (15 years and above) who live in Saudi Arabia. Moreover, it includes estimates population (inside labor force and outside it), and key indicators of labor market Such as the unemployment rate and the labor force participation rate.

1.2.2. Second source of labor market statistics: Administrative records

Recorded and updated data and information of governmental entities that are related to labor market. These data are resulted from the official electronic registration and documentation operations of these entities. Ministry of Human resources and Social Development, General Organization of Social Insurances, and the National Information Center periodically provide GASTAT with their recorded data through the electronic linkage, as these entities are considered key references of workers' data in both the public and private sectors in Saudi Arabia.

The following table shows the type of data provided by each entity from the labor market statistics sources:

Data Source	Entity	Data and Indicators
Household telephone survey	General Authority for Statistics	Estimates of labor force, unemployed individuals, and indicators of labor force
Administrative records	Ministry of Human resources and Social Development	Government sector' workers.
	General Organization of Social Insurances	Participants on the job who are subject to social insurance laws and regulations in the private and government sector, and those who stop participating in social insurance in the quarter according to gender, nationality, and reason for stoppage.
	National Information Center (NIC)	Domestic workers.

2.3. Terminologies and concepts of labor market statistics

2.3.1. Terminologies and concepts of the Labor Force Survey (First source of labor market statistics)

2.3.1.1. Survey' statistical framework

Comprehensive manual of all statistical community units. It relies on the framework of the process of inventorying and numbering buildings and real estate units 2020.

2.3.1.2. Survey sample

A selected sample from the statistical framework in order to conduct Labor Force Survey. This sample includes all household members who share the same dwelling including domestic workers and the like.

2.3.1.3. Household

A person or a group of persons - with or without kinship binding them to one another - who share residence during the enumeration. The household includes:

- 1- Saudi and non-Saudi nationals who usually live with the household but they were absent while the survey was conducted for being temporarily away (abroad or in the kingdom). For example: businessmen, tourists, people who are travel for medication, students on scholarship beyond the borders of the kingdom.
- 2- Individuals who usually live with the household but have been absent while the survey was conducted for taking night shifts, such as guards, physicians, nurses, airport staff and fishers.
- 3- Domestic workers such as servants, drivers and the like who living with the same household

2.3.1.4. Head of household

It refers to the person regarded by the household members as its chief member. Usually, s/he is responsible for undertaking the responsibility of the household and his/her age must not be under (15) years old. If the household consists of children and their mother, and they are cared for by a relative who does not live with them, such a relative shall not be deemed as the head of the household, nor shall s/he be recorded as one of its members, since s/he shall be recorded with his/her own household. In this case, the mother shall be deemed as the head of the household.

2.3.1.5. Main occupation

The main type of occupation practiced by the employee during the reference time.

2.3.1.6. Economic activity

All activities performed or services provided by the establishment in return for consideration. Sometimes, the establishment gets nothing in return, such as charities that are financed by donations.

2.3.1.7. Those involved in the labor force survey:

Individuals (15 years and over) who are during the reference period (the previous seven days) to communicate with the family:

- Worked for at least one hour in return for a salary or profit (in cash or in kind) as regular or temporary employees or as employers or working for themselves.
 - Or, they assisted a family member for at least an hour, with or without pay, in any type of business or on a farm belonging to a family member.
 - Or they were temporarily absent from their work for the whole week due to leave, sickness, or any other reason, and they will return to it again.

The definition includes students, job seekers, retirees, housewives, etc. who worked during the seven days prior to communicating with the family for at least one hour, noting that this does not include housework such as cooking, washing and washing done by the housewife or household maintenance work. Regular performed by a family member.

2.3.1.8. Unemployed individuals

Individuals (15 years and above) who were:

1. Without a job in the week preceding the household contact.
2. Seriously looking for work during the four weeks prior to contacting the family and this includes those who did not search for work during the four weeks prior to contacting the family because they were waiting to find work, or establish their own business during the next period, when they previously searched for a job before the reference period.
3. People who were able to work and ready to join whenever necessary during the week preceding the household contact or the next two weeks.

2.3.1.9. Unemployed individuals who have been working

Unemployed individuals (15 years and above) who had been working then left their jobs for any reason, and during the time reference were: unemployed, seriously seeking a job and ready to get one if any available.

2.3.1.10. Population (Labor force)

Individuals (15 years and above) who collaborate or even ready to collaborate in the production of commodities and services during the period of the survey time reference. They include the employed and unemployed population.

2.3.1.11. Population (outside the labor force)

Population (15 years and above) who are not classified under the labor forces (unemployed) because they do not work, do not seek a job, unable to work, or are not ready to work during the survey reference period. For example: Students, housewives, pensioners who do not work, individuals who

are unable to work, individuals who do not want to work and those who do not seek any job for other reasons.

2.3.1.12. Type of sector

A sector is the entity for which the employed person has been working according to the estimates of the labor survey; it is divided into:

1. **Public sector:** it includes all government entities such as ministries, authorities, government institutions, municipalities, schools, universities, institutes, government hospitals, military sector, government banks like (social development bank, agricultural bank) and development funds. It also includes establishments that produce goods and services and totally owned (i.e., ownership of 50% or more by the government), and supervised by the government such as (Saudi Airlines, Saudi railways Organization, and ARAMCO).
2. **Private sector:** it includes all establishments that work in commercial and productive businesses, and market-oriented services that are owned by companies and individuals (companies, institutions, shops, small enterprises...etc.) either formal or informal, organized or unorganized. These establishments are not totally owned by the government (or only partially owned by the government, with less than 50% ownership). The institutional sector that includes all self-employed individuals and employers is considered to be the private sector.
3. **Agricultural sector:** It includes the unorganized sector of farms, animal husbandry, and hunting activities owned by individuals and families. However, it does not include the organized sector of agricultural and animal husbandry activities owned by private companies.
4. **Non-Profit Organizations Sector:** Non-governmental non-profit organizations and authorities which provide the community with goods or services for free or at a nominal price, such as charities and vocational authorities.
5. **Domestic Workers Sector:** Individuals who provide a household with services for a salary and live with it, such as the female domestic worker, driver, gardener, and building guard who lives with in the household.
6. Sector of regional and international organizations and institutions.
7. Other unclassified sectors.

2.3.1.13. Indicators' definitions:

Indicator	Definition
Unemployment rate	An indicator that measures people who are unemployed at the working-age population (15 +) and who are part of the labor force it is calculated as a ratio of the unemployed to the labor force.

Labor Force Participation rate	An indicator that measures the participation of the working-age population (15 +) in the labor force (as either employed or unemployed individuals). as a ratio of the labor force to the working-age population (15 +).
Employment-to-Population Ratio	It is an indicator that measures the proportion of the total population 15 years and over that is employed.
Employment rate	It is an indicator that measures the participation of the working-age population (15 years and over) in the labor force as employed individuals, which is the ratio of the labor force to employed individuals.
Average weekly working hours	Measures the average weekly working hours of workers (15 years and over), which is the total number of working hours to the total number of employees.
Average monthly wage per paid employees	An indicator that measures the average monthly salary of the employed persons with paid jobs (15 years and above), i.e., total salary to total employees or apprentice with paid jobs or those who mention their salary.

In reporting these indicators, we provide a breakdown for the following age groups of the population aged 15 and above: Youth (15-24), Core Working Age (25-54) and population age 55 and over.



GASTAT has relied on the approved formulas of the UN international standards that are compiled with the international labor organization ILO. The indicators are calculated as follows:

Indicator	Calculation formula
Labor force	$= (Number_Employed + Number_Unemployed)$
Unemployment rate	$= 100 \times \left(\frac{Number_Unemployed}{Total_Labor_Force} \right)$
Unemployment rate for males	$= 100 \times \left(\frac{Number_Unemployed_Males}{Total_Labor_Force_Males} \right)$
Unemployment rate for females	$= 100 \times \left(\frac{Number_Unemployed_Females}{Total_Labor_Force_Females} \right)$
Employment rate	$= 100 \times \left(\frac{Number_Employed}{Total_Labor_Force} \right)$
Employment rate for males	$= 100 \times \left(\frac{Number_Employed_Males}{Total_Labor_Force_Males} \right)$
Employment rate for females	$= 100 \times \left(\frac{Number_Employed_Females}{Total_Labor_Force_Females} \right)$
Labor Force Participation rate	$= 100 \times \left(\frac{Total_Labor_Force}{Total_Population_15\ and\ over} \right)$
Labor Force Participation rate for males	$= 100 \times \left(\frac{Total_Labor_Force_Males}{Total_Population_15\ and\ over_Males} \right)$
Labor Force Participation rate for females	$= 100 \times \left(\frac{Total_Labor_Force_Females}{Total_Population_15\ and\ over_Females} \right)$
Employment to Population Ratio	$= 100 \times \left(\frac{Number_Employed}{Total_Population_15\ and\ over} \right)$
Employment to Population Ratio for males	$= 100 \times \left(\frac{Number_Employed_Males}{Total_Population_15\ and\ over_Males} \right)$
Employment to Population Ratio for females	$= 100 \times \left(\frac{Number_Employed_Females}{Total_Population_15\ and\ over_Females} \right)$





Based on the international standards that Saudi Arabia is committed to, and applied to the G-20 countries:

- Indicators of labor Force Participation rate, employment rate, unemployment rate, Employment to Population ratio, average weekly working hours, and average monthly wages of employees are all based on the estimates of (the Labor Force Survey), which is a telephone survey conducted by GASTAT through contacting households to complete the survey's form
- Data of workers from administrative records have several indicators for labor market, but they are not used statistically to measure employment, unemployment, or labor Force Participation rate.
- Commitment to these standards will facilitate international comparisons between countries in labor market indicators.

2.3.1.14. Introduction of new age groups for Labor Market reporting and analysis

Beginning with the Q3 2021 release, GASTAT is introducing three age-groups of the population that are of analytical interest in the examination and interpretation of labor market conditions. These groups are:

- Youth, persons aged 15 to 24 years
- Core working age population, persons aged 25 to 54 years, and
- Persons who are 55 years and older.

Labor market conditions differ for these age groups. For this reason, these groups are of interest to policy makers in developing policies targeted to different segments of the working age population.

Youth: within the youth group, one can define two sub-groups for which labor market conditions are markedly different.

- Youth (15 to 19 years). Many persons between 15 to 19 years of age. Those participating in the labor force, would typically be interested in part-time work, but there can be a temporary influx of students into the labor force in search of jobs between school terms.
- Youth (20 to 24). Youth aged 20-24 are a mixture of those still pursuing studies as well as youth who have completed their education and are making the transition into the labor force..

Core working age population: Persons aged 25 to 54 years.

Persons aged 55 and over: In this age group, we see declining participation in the labor force. As the age increases within this group, more persons have retired or withdrawn from the labor force.



Those in this group are mostly employed persons, with few people looking for work. Those not working are mostly out of the labor force, i.e., not actively looking for work.





2.3.2 concepts related to administrative records available at government agencies (the second source of Labor Market statistics):

2.3.2.1. Workers (based on the administrative records):

All working individuals subjected to approved regulations and laws from the regulatory entities of labor market and are registered in the administrative records. On the other hand, workers can be classified in the administrative records based on the regulations and laws they are subjected to as follows:

- Saudi workers subjected to the laws and regulations of the civil services and working at all governmental institutions and bodies, in other words, workers who hold jobs that are considered within the general budget of the country, also subjected to the civil retirement system (males or females) employees, as well as non-Saudi contractors who fill these positions in accordance the regulations of non-Saudis employment.
- Participants on the job who are subject and regulations of social insurance as well as labor system, which includes Saudis and non-Saudis
- Domestic workers: non-Saudis workers from both genders who work in houses, including servants, cleaners, cooks, waiters, drivers, guards, nurses, and private teachers.

Data of workers in Labor Market statistics which were derived from administrative records do not include the following category:

1. Workers of military and security sectors
2. Workers who are not registered in the civil service and social insurance records, which include:
 - Saudis working for their own businesses and are not subjected to the labor regulations, also, not registered in social insurance, such as: those who work in delivery through electronic apps
 - Saudi employers who work in establishments and not registered in the social insurance
 - Non-Saudi staff working in foreign international, political or military missions.

3. Non-Saudi employees who come to the Kingdom for work that normally takes less than three

2.4. Used statistical classifications:

Classification is identified as an organized group of related categories which are used to collect data according to similarity. Classification is the base for data collection and dissemination in various statistical fields, such as: (economic activity, products, expenses, occupations or health, etc.)

classifying data and information helps to put them in meaningful categories to produce useful statistics. In fact, data collection requires an accurate organization and based on their common features to create reliable and comparable statistics. On the other hand, labor market statistics are based on the international standards of data collection and classification and rely on the following classifications:

2.4.1. The National Classification of the Economic Activities:

It is a statistical classification based on ISIC4 which is the reference of the productive activities. This classification was used in the Labor Force Survey to identify the main economic activities of the establishment where an individual works.

Economic activity can be defined as (all the practiced activities or works and services provided by the establishment that make a financial return, sometimes the establishment does not gain any financial return from its works as in charity institutions that rely on donations).

2.4.2. Saudi classification of professions:

It is a statistical classification which is based on ISCO that provides a system to classify and collect professions' information where they can be obtained by statistical surveys and census.

This classification is used in the Labor Force Survey in order to classify employees based on their professions.

2.4.3. Saudi classification for majors and educational levels:

It is a statistical classification that is based on ISCED which is the reference for organizing educational programs and related qualifications based on the education levels and fields. It covers all the educational programs, levels and methods of learning as well as all the educational stages from kindergarten until higher education. This classification is used in the Labor Force Survey to classify individuals 15 years and above according to their majors and education levels.

2.4.4. National guide for countries and nationalities:

It is an international and unified classification that covers countries and their affiliated territories, and based on ISO (country code 3166). The classification gives codes to countries and their affiliated territories. Using these codes and numbers instead of the country name is more beneficial for statistical purposes in which it saves time and avoids any errors. The classification is used in the Labor Force Survey to classify Saudi or non-Saudi individuals.

2.5. Form design:

Form of telephone data collection (first source of Labor Market statistics): the survey's form was prepared and designed by labor force survey specialists in the General Authority for Statistics (GASTAT). When designing the form, the international recommendations and standards issued by the International Labor Organization (ILO) of labor force surveys were taken into consideration. The



form was presented to the ILO experts during their visit to the Authority and to the relevant bodies as well to consider their feedback and observations. The questions were formed in a specified and unified way between researchers.



The form was divided into six sections based on the topic to increase its efficiency in achieving the technical specifications of the data collection

Introductory data	Characteristics of household individuals (all household individuals)	Economic data of individuals (15 years and over)	Job search and availability to work (unemployed individuals 15 years and over)	COVID-19 pandemic	Result of the contact
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Examples of what was included in the form of the Labor Force Survey (the first source of the labor market statistics):

Name of the individual, gender, relationship with the head of the household, nationality, age, marital status, educational status, specialization for holders of secondary education and above, The workers and those absent from work during the 7 days preceding the contact with the family, job seekers, method of job seeking, reasons of not looking for a job, duration of job seeking, the availability of work, previous work experience, reasons for leaving the previous job, occupation, name of the employer, type of sector, economic activity, work status, monthly net per employed capita, pension system of employed, number of main working hours during the previous 7 days, if the individual has another work in addition to his main work, and work contract.

The full form can be viewed and downloaded via the official website of GASTAT

https://www.stats.gov.sa/sites/default/files/file_manger/2021_Q3_LFS%20Questionnaire_EN%2022-08-2021.pdf

After the survey form was approved, it was converted into an electronic form that can be dealt with through the developed data collection system using a computer, which is characterized by the following:

- 1) Review the researcher's work area (survey sample).
- 2) Telephony with a family using a communication system (Cisco Jabber)
- 3) Completing data with high quality using data auditing and navigation rules (to automatically detect input errors and illogical inputs at the moment the data is completed).
- 4) Communication between the supervisory groups by sending and receiving notes with the researcher.

2.6. Identifying required data from administrative records:



The administrative records data (the second source of the labor market statistics): GASTAT has completed the data of the labor market automatically from government entities. The data includes the main data of employees, as follows:

1. Data from the Ministry of Human resources and Social Development: Including data on employees subjected to Civil Service regulations and policies according to a number of variables.
2. Data from GOSI: Including data related to those who are registered and are working, who are subjected to GOSI's regulations and policies according to a number of variables.
3. Data from the National Information Center: It included data related to domestic workers, according to a number of variables.

2.7. Coverage:

2.7.1. Spatial coverage:

The labor market statistics covers the statistics related to the labor market across all administrative regions in Saudi Arabia, which are 13 regions. The Labor Force Survey (the first source of the labor market statistics) covers the following regions: (Riyadh, Makkah, Madinah, Qassim, Eastern Region, Asir, Tabuk, Hail, Northern Borders, Jazan, Najran, Al-Baha and Al-Jouf). This is done through the contact of a sample of households from each region, which are chosen by a scientific method in order to be a sample representing the households of the region. However, the administrative records data (the second source of the labor market statistics), include the entire Saudi Arabia's population whose data is documented in the records of relevant government entities.

2.7.2. Temporal coverage:

The labor force survey data (the first source of the labor market statistics) is based on the number of household members, their demographic, social and economic characteristics, as follows:

- 1) Data on the number of household members and their demographic characteristics is based on the date of the household contact and inspection.
- 2) Data of employees is based on the seven days prior to the household contact and inspection.
- 3) Data of job seekers is based on the four weeks prior to the household contact and inspection, which means the last full four weeks preceding the household contact (from Sunday of the first week to the Saturday of the last week).
- 4) Data of employment availability is based on the seven days prior to the contact, or the following two weeks (the two weeks following the date of the contact, from Sunday of the first week to Saturday of the second week).
- 5) Data of enrollment in training programs is based on the seven days prior to the household contact for young people aged (15-29 years).



The data from administrative records (the second source of the labor market statistics) is based on the last day of the Gregorian quarter of each year.

2.8. Labor Force Survey Statistical framework:

- The framework of the process of inventorying and numbering buildings and real estate units 2020, has been used as a list that includes all community particulars.
- The lists, maps and analytical specifications of the units have been developed to select the data providers (households).
- The required metadata has been identified in order to create the statistical framework and the testing framework, and verify its validity and use for the current survey cycle.

2.9. Sample Design:

- The survey community is divided into non-overlapping parts characterized by relative homogeneity in their units. Each part is a layer and each layer is treated as an independent community.
- A sample was drawn from each stratum independently, and in the end all the withdrawn sampling units are merged to form the total sample.
- The sample units were selected from among the statistical frameworks that were designed to cover the target statistical community in two stages. In the first phase, the primary sampling units were chosen (Enumeration Areas), which are the enumeration areas from the framework of the process of counting and numbering buildings and real estate units in 2020, By using the regular random sample, (1334) enumeration areas were selected from the main sample size of (9560) enumeration areas. distributed among all classes in all administrative regions using the method proportional to size weighting the number of Saudi families in it, then in the second phase the final sampling units were chosen, which are the households in the enumeration areas that were selected in the first phase using a simple random sample of (40) families from each enumeration area, a total of (53,360) families in the Kingdom.
- The optimal methodology to select the sampling units is prepared in order to provide satisfying outputs, with the quality required and the minimum efforts of data providers, by using known statistical methods such as the rotation and interference control methods.
- The required metadata to apply the statistical framework and select the sample is identified.





- The sample is tested and evaluated, and its validity and use for the current survey cycle is verified.

Sample units in the Labor Force Survey:

The primary sample unit is the enumeration areas, which are the sample units that were taken in the first stage from the sample design. The (households) are the secondary and final sample units, which are sample units that were taken in the second stage of the sample design, and each secondary sample unit is considered a part of the primary sample unit.

3. Third stage: Organization:

It is the last stage of the preparation that precedes the process of household contacts and data collection. The work procedures required for the preparation of the labor market statistics have been prepared in this stage. It will begin from the next stage "collection stage" and will end with the "assessment stage". In addition, the procedures are organized and collected and its appropriate order is determined in order to reach a methodology that achieves the objectives of the labor market statistics. At this stage, the procedures that were done in the preparation of the previous version of the labor market statistics were reviewed to develop the work procedures in this version. These procedures were also described and documented to facilitate the updates in the future cycles. Furthermore, the statistical work procedures were tried and tested to ensure that they meet the requirements of the preparation of the labor market statistics in its final form. Then, the procedures of the statistical work are approved, and the road map of the implementation is developed.

Testing the efficiency of input systems and the process of transmission, synchronization and review of data, which is carried out through tablets or desktops of the labor force survey, is one of the most important procedures at this stage.

4. Fourth Stage: Collection:

4.1. Labor Force Survey data collection (the first source of the labor market statistics):

First: The sample is selected by identifying (53,360) households as a chosen sample to represent the survey community at the level of Saudi Arabia, distributed according to the administrative regions as follows:

Administrative Region	Number of Households	Administrative Region	Number of Households	Administrative Region	Number of Households
Riyadh	8280	Asir	3600	jazan	2840
Makkah	9680	Tabuk	2920	Najran	2560
Madinah	3680	Hail	2600	Al-Baha	2400
Qassim	2640	Northern Borders	2800	Al-Jouf	2640
Eastern Region	6720				

Second: The candidates working as researchers, who contacted the households to collect data (Labor Force Survey), were selected according to a number of practical and objective criteria related to the nature of work, such as:

- Education level.
- Previous experience in labor force survey
- Personal qualities, such as: good conduct, medical and psychological fitness with no sensory disability.
- The candidate must pass the training program of the Labor Force Survey.
- Not less than 20 years old.

Third: All candidates (employees of the authority, collaborators from employees of some government agencies) were qualified and trained to work in collecting survey data through special training programs, according to the following:

- Holding a training program for researchers that included providing guidance and awareness lectures, during which the instruction manual is explained, the survey objectives and data collection method are defined, and a detailed explanation of all the questionnaire questions.
- Conducting a practical application on how to complete the online survey form.

The performance of the researchers was also tested during the training, their performance was evaluated, and the extent of their understanding of the questionnaire was verified before starting the communication and data collection process.

The training programs that have been provided to researchers assigned to all manpower survey data include: practical and practical lectures on the technical, technical, administrative and awareness materials used in the data collection processes. Researchers are also introduced to the survey objectives and data collection method. The training programs also include a detailed explanation of all the questionnaire questions, and the technical tasks, and administrative, as well as training on methods of communicating with data providers and how to submit questions in record time.

Fourth: Direct contact with the household in the process of completing the survey questionnaire and data collection: Each researcher contacted the households within the sample of the survey, The method of direct contact with the family was adopted in the process of completing the survey questionnaire and collecting data, whereby the researchers in charge of this process make a phone call to the heads of the households, and then the researcher introduces himself, clarifies his goal of communication, gives an overview of the survey and its objectives, and takes permission to complete the required data directly using the form Electronic workforce survey, and the survey questionnaire data are completed based on the specified time reference, To download and transfer the updated data for the family directly to the database and store it in preparation for review and processing.

Fifth: All Researchers used Laptops to complete survey questionnaire data based on the time reference specified according to the number of household members and their demographic, social and economic characteristics.

Sixth: upload and transfer the household data directly to the database associated with it at the headquarters of GASTAT, where it is stored in a specific format for review and subsequent processing.

Seventh: (Auditing rules) are applied to ensure the consistency, accuracy and logic of the data on the Labor Force Survey questionnaire. This is done through an (electronic bases that detect the discrepancy of answers). These bases were built by linking the logical relationship between the answers of the questionnaire and its variables to help the researcher to detect any error directly when completing data with the household. These bases will not allow the passing of errors if the answer conflicts with another information or answer in the questionnaire.

Eighth: The data collected was verified by reviewing the data through the same researcher, his inspector and the supervisor on the survey in the supervision area. All the work areas were subjected to a process of monitoring and reviewing from the data quality team at the headquarters of GASTAT.



This room also monitors and controls the performance of all working groups in synchronization with the time of the data collection process implementation from the first day to the last day.

Data Quality Team:

It is an operations team that works concurrently with the work of surveys, and is equipped with all electronic follow-up methods, monitoring and tracking screens, in which observers and quality specialists review the consistency of data and discover errors and extreme values during the data collection process by following up what is filled out by the researcher in a timely and immediate manner. It aims to verify that researchers follow the instructions related to the survey, verify the logic and correctness of the data, ensure the application of the scheduled communication schedule for the family, ensure the reliability and rationality of the data, and review some important survey indicators to ensure the accuracy of the data, and the Data Quality Room performs several tasks, most notably:

- Reviewing the collected data, and sending notes to the work teams at various levels through the office automated system linked to the researchers' computers, so that they can quickly receive the notes at their work sites.
- Contacting the families, and asking some questions in the form to them to verify the safety of the researcher's completing the data, the extent of his commitment to the instructions, obtaining the missing data that has not yet been received, and thanking the heads of the families for their cooperation.

4.2. Access to data from administrative records (second source of Labor market statistics):

GASTAT has coordinated with the government entities concerned with the Labor market to obtain data on Labor market statistics. Such data include data of workers, based on data of administrative records. These data are preserved in the databases of the Authority, and are audited and reviewed according to the scientific statistical method and generally quality criteria in coordination with the source of the data.

5. Fifth Stage: Disaggregation:

During this stage, raw data are disaggregated based on the classification and coding inputs completed during the data collection process, according to the Saudi Vocational Classification based on The International Classification, The National Classification of Economic Activities, The National Manual of Countries and Nationalities based on The International Manual, and Majors and Education Levels Manual based on (ISCED). During disaggregation process, other classifications and coding are also used, such as: data distribution at administrative regions level, qualitative and descriptive classification in terms of gender determination, individual's marital status, or quantitative classification such as income groups.

Specialists of Labor Force 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
- Linking between many parts of data and make them connected
- Process incomplete or missing data
- Process illogical data
- Create survey weights
- Converting data into statistically significant data
- Organize, display and interpret data

Survey weights

After processing the data collected from the respondent households, survey weights were created to produce tables of indicators.

Two main steps in creating the survey weights were:

- 1) non-response adjustment
- 2) Weight calibration.

The weighting methodology was modified by making changes to both the steps in order to improve the weighting methodology. First we collapsed the EA with high non-response with another EA in the same stratum for which the non-response was relatively low. Thus, this dampened the effect of high non-response on the variance by introducing a small bias. We used the rule that PSU level non-response adjustment will be applied only if the corresponding adjustment factor is less than 3.0 because the overall non-response is about 50 percent. Secondly, In Q3 2021, we implemented two-dimensional raking ratio procedure to create calibration weights. The two raking dimensions were defined as:



Dimension 1: Cross-classification of Age-Group X Gender X Nationality,

Dimension 2: Region X 2 Age-Groups (less than 15, and 15 +) X Gender X Nationality.

For dimension 1, there are nine age groups, and they are { 0-4, 5-9, 10-14, 15-24, 25-34, 35-44, 45-54, 55-64, 65 + }. The calibrated weights (also known as final weights) will be assigned to the persons enumerated from the respondent households. The final weights were then used to create tables of the required indicators.

6. Sixth Stage: Revision:

First: Data Outputs Validation:

In addition to the data processing and tabulation in the fifth stage to check their accuracy, all the outputs are stored and uploaded to the database after being calculated by GASTAT to be reviewed and processed by specialists in Labor Force Statistics through modern technologies and software designed for this purpose.

Second: Dealing with confidential data:

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.

Under no circumstances can that be allowed to disclose about any data of the households or their members. It is worth mentioning that the publications are statistical tables at the level of Saudi Arabia and its administrative regions and main cities by demographic characteristics.

7. Seventh Stage: Publication:

First: Preparation and Process of the Results Designed for Publishing:

During this stage, GASTAT downloaded the data's results from the database of surveys of Labor force. Moreover, it organized and reviewed the data of administrative records included in the Labor Market Statistics Bulletin. Then, the publication tables and graphs of data and indicators, metadata, and methodology were prepared and processed to be prepared in both languages English and Arabic.

Second: Preparing Media Kit and Announcing Publication Date:

The publication date of the bulletin is already set up by GASTAT on its official website at the beginning of the Calendar Year. During this period, the Authority is preparing the media kits to

announce the date of releasing the bulletin through media in addition to its various platforms in social networking sites. The bulletin will be published firstly on GASTAT's official website in different formats, such as open data in Excel format to be easily reached for all clients and those who are interested in the Labor market in general. It will be uploaded on the website's statistics library as well.

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 employment, unemployment, and wages on a quarterly basis, and with a delay of not more than one quarter (90 days) after the end of the reference quarter. If the data are from different source, they may be published in a different frequency.

Third: Communicating with clients and providing them with the bulletin's results

One of GASTAT's objectives is to better meet its clients' needs, so it immediately provides them with the bulletin's results once the labor Market Statistics Bulletin 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 (920020081)

8. Eighth Stage: Assessment:

All GASTAT's clients who used the results of the Bulletin will be contacted again in order to assess the entire statistical process. This is done for improvement purposes in order to obtain high-quality data. The improvements include: methodologies, procedures and systems, statisticians' skill level, as well as statistical work frameworks. The participatory stage is carried out with the data users and Authority's clients according to the following steps:

First: Collection of Measurable Assessment Inputs

The most important comments and notes are collected and documented from their sources in different stages, for example comments and notes given by data collectors and their supervisors. Also, notes written by specialists responsible for reviewing, auditing, and analyzing data collected from the team

or administrative regions. Finally, comments and notes collected and documented by data users after publishing the Bulletin, or social media comments and clients' feedback that sent to the Authority through its main channels.

Second: Assessment

The assessment is done by analyzing collected evaluation inputs, and comparing the results of this analysis with the ones expected previously. Therefore, a number of possible improvements and solutions are identified and discussed with specialists, experts, and concerned partners of labor market community. During this step, clients' performances and satisfaction levels of using the results of labor market statistics are measured. It is worth mentioning that based on these procedures, the recommendations for obtaining high quality data for the next labor market statistics are agreed upon.

9. Ninth Stage: Management:

It is a comprehensive stage required to carry out each phase of the labor market statistics production. During this stage, the plan of production is developed, which includes the feasibility study, risk management, financing methods, in addition to expenditure mechanisms. The plan also covers the development of performance indicators, quality criteria, and manpower map required for production. Through this plan, the implementation process of the tasks assigned to different departments at each stage will be followed up and reported to ensure that GASTAT meets its clients' requirements.



