



مركز الإحصاء
STATISTICS CENTRE

Residential Rents Index Methodology

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Table of Contents

Overview.....	3
Importance.....	3
Objectives.....	3
Concepts & Definitions.....	3
Coverage (Geographical Coverage - Statistical Units)	4
Frequency.....	4
Classifications.....	4
Main Data Sources.....	4
Questionnaires.....	4
Sample Design.....	5
Data Collection.....	5
Data Editing.....	5
Indicators Calculation.....	6
Outputs.....	7
Timeliness.....	7
Dissemination.....	7

Overview

The rent law (The 5% law) was abolished in November 2013, and rental prices began to rise immediately in varying proportions after abolishing the law; and with the abolition of this law, it was necessary to study the effect of abolishing the law on rental price levels. Statistics Centre - Abu Dhabi, in cooperation with Abu Dhabi Municipality, has begun to develop possible alternatives to monitor rental rates. By the end of April 2014, about six months had passed since the law was abolished, during which it is expected that contracts for half of the rented housing would have been renewed. Whereas the contracts were renewed with the consent of the landlord and the tenant, which means that the values of the concluded contracts are acceptable to both parties, and we are going to rely on these renewed contracts in calculating the Rent Index Number .

Importance

Rental prices in the Emirate of Abu Dhabi were governed by a law that allowed landlords/investors to increase the property's rental price by no more than 5% annually. When the Government of Abu Dhabi decided to liberate rental prices, the rent law (The 5% law) was abolished in November. Since it is necessary to regulate the relationship between landlords and tenants, it was necessary to find statistical indicators that reflect monthly rental prices. Through these indicators, it is possible to monitor rental prices and take the appropriate decisions at the right time. This necessitated the creation of a special index that measures rates of change in rental prices in the regions of the Emirate.

Objectives

The report on housing provides the following indicators:

The change in registered housing rental prices in the Emirate of Abu Dhabi during the study period compared with the same period of the previous year. If the Rental Price Index Number reached 108.6% during the period from January to September 2015, the rental prices increased by 8.6% % during the period from January to September 2015 compared to the same period in 2014.

The report is also informative about the average prices of residential rents according to the residential communities, as the report includes the average housing rental prices on several levels. This means that it is possible to check average house rents in any area of Abu Dhabi according to the number of bedrooms and the area, with a confidence level of 95%.

Concepts & Definitions

Residential Rents Index: a statistical indicator that measures the rate of change in rent prices of housing unit.

Source of Data: It is the entity that supplies raw data for this indicator is obtained, which is the Department of Municipalities and Transport.

Comparison Period: The "current" or most recent period for which the index was calculated. However, the term is used to refer to any period that is compared to the base period.

Base Period: the year in which the residential rents price index equals 100. The base period serves as a benchmark for future periods, allowing economists to judge rates of increase and decrease in prices compared with that year.

Price: The market value of the rental price of the residential unit.

Symbols used: '-' means that the value does not exist .

Geographical Coverage – Statistical Units

This report covers all types of buildings such as villas and towers at the level of Abu Dhabi regions, Al Ain, and Al Dhafra region. As for the sub-regions, the level of coverage depends on the level of processed data received from the Tawtheeq (contracts registration) Program. The Rental Price Index Number is calculated at the level of the region, type of housing, and type of building. When calculating the Rental Price Index Number, the following points are taken into consideration:

- The index number is calculated for residential units only. Therefore, all commercial and industrial contracts are neglected .
- Only contracts with a duration of year are included in calculating the index number, with contracts lasting for more than or less than one year excluded.
- Housing contracts that were not documented in the previous year are also excluded when calculating the index number .

Frequency

The Residential Rent Price Index Number is calculated and issued to the relevant government departments on a monthly basis.

Classifications

The classification of the Department of Municipalities and Transport is used, which is specific to the Emirate of Abu Dhabi and is related to buildings, residential units and names of communities.

Main Data Sources

The data used to measure this indicator are administrative data obtained from the Tawtheeq Program of the Department of Municipalities and Transport at the Emirate of Abu Dhabi. where the data is then reviewed, edited, and processed at Statistics Centre - Abu Dhabi for use in the production of the indicator.

Questionnaires

Data are imported automatically in SPSS format from the Department of Municipalities and Transport, a process involving no field operations or paper, or electronic forms, and the data are classified as administrative records.

Sample Design

No sample of registered leases is drawn. Rather, the Residential Rent Price Index is based on all the contracts registered during the previous month. It is known that all leases in the Emirate of Abu Dhabi shall be annually notarized and renewed .

Data Collection

The data from Tawtheeq Program is directly imported through an electronic link, as Abu Dhabi Municipality provided Statistics Centre - Abu Dhabi with a username to access Tawtheeq data and draw it directly from its database. To calculate the monthly Rent Price Index Number, the data is drawn on a monthly basis, and when data is withdrawn, the month and year of the required data are first determined. The files are downloaded from “Tawtheeq” database to the database of the Statistics Center Abu Dhabi, by exporting them to SPSS data.

Data Editing

The data is drawn from the Tawtheeq program in Abu Dhabi Municipality in the form of an SPSS file. The main auditing and calculation processes are all done through the SPSS program. Edits are carried out according to the following steps:

- For calculating this indicator, only housing units used for "residential" purposes are selected.
- Duplicate contracts are removed based on the single number UNIT_REG_NUM.
- Make sure that the lease term is (one year) and the data that are not equal to 12 months are removed.
- It is ensuring that the data represent the study period.
- Contracts representing: shop, warehouse, office, exhibition are deleted.
- Buildings that make up “multi-unit villas” are converted into a "villa complex"
- The Apartments are always within towers. If The apartments are within villas, they transformed into towers "
- “Duplex villa" within a building are converted into a "duplex villa" within villas.
- Verify the number of bedrooms in studios is (0), the number of bedrooms in apartments starting from (1), the number of bedrooms in villas starting from (2), and the number of bedrooms in duplexes starting from (2),
- Ensure that there are no empty cells in the number of bedrooms variable, and converted to 0 if the housing unit is a studio .
- Contracts with rent less than 3000 dirhams and contracts whose rent value exceeds 500,000 dirhams will be deleted
- A new variable is created in the name of the current month (the month of the study).
- The rent file for the current month is linked to the base year using the unique number for each dwelling.

- when merging the monthly rents file with the account file (the base file), make sure that the new data is not existed in the previous months (when merging the rents data before calculating the attribute), and the new month's data is deleted if it is present in the previous months' data
- Contracts whose price relative is less than 0.4 or more than 2.0 shall be deleted for each new month, leaving previous months as they are.

Indicators Calculation

The mechanism for calculating the residential Rent Price Index Number:

- Preparing a file representing the base period, covering the year 2020.
- Creating a file for the current month that contains the rent value only for linking purposes.
- Linking the comparison price file with the base price file.
- Deleting the data existed in the comparison period and not existed in the base period after merging the two files.
- Calculating the recurrences of the ""UNIT_REG_NUM"" variable.
- Calculating the price ratio, the comparison price divided by the base price.
- Calculating the geometric mean at the level of the required areas.
- Process of Calculation according to the following equation:

$$Rent Price Index(RPI) = \prod_{i=1}^n \left(\frac{RP_{it}}{RP_{i0}} \right)^{\frac{1}{n}}$$

- Where: RP_{it} represents the rental value of the housing in the **period t** (the current period)

RP_{i0} represents the rental value of the housing in the period 0 (the previous period)

The process of calculating the Residential Rent Price Index is carried out on several levels:

- Monthly according to the type of building: Villas complexes and towers, using only the month's data.
- Cumulatively from January to the current month by housing type, region, and type of building.
- Calculation of minimum and maximum rental prices:

The calculation of average, minimum and maximum rents in the Emirate of Abu Dhabi at the level of the region and type of building (villa complexes, towers) and the level of the number of bedrooms in the housing, uses the following mathematical formula:

$$\bar{X} \pm 1.96 \frac{\sigma}{\sqrt{n}}$$

This formula represents a 95% confidence interval of average rental rates. Where the following symbols represent:

\bar{X} : The average rental price for the housing

σ : standard deviation, and in the actual calculation of observations, we use "s," representing the standard deviation of the sample.

n : number of observations

1.96 :is the value of z in the standard normal distribution which **represents a confidence level of 95%.**

The limit $\frac{\sigma}{\sqrt{n}}$ is called the standard error.

Minimum rental price in the confidence period: $\bar{X} - 1.96 \frac{\sigma}{\sqrt{n}}$

Maximum rental price in the confidence period: $\bar{X} + 1.96 \frac{\sigma}{\sqrt{n}}$

Outputs

- Monthly Residential Rent Price Index for the months of the year by region.
- Monthly Residential Rent Price Index for the months of the year by the type of building.
- Cumulative Residential Rent Price Index during the cumulative period by region .
- Cumulative Residential Rent Price Index and number of
- Contracts during the cumulative period by housing unit and type of building.
- Residential Rent Price Index for 2013-2020 by type of building (100 = 2013)
- Distribution of registered contracts during the cumulative period by sub-region and type of building.
- Residential Rent Price Index Number during the cumulative period by type of housing unit and type of building.
- Residential Rent Price Index Number during the cumulative period according to sub-region.
- The average price, minimum, and maximum rent for housing within a villa by number of bedrooms and sub-region during the cumulative period .
- Average, minimum, and maximum rent for housing within a tower by number of bedrooms and sub-region during the cumulative period.

Timeliness

This report is issued within 18 days after the reference month.

Dissemination

The Residential Rent Price Index Number is only published to the concerned government entities through the shareholder used jointly by Statistics Centre - Abu Dhabi and government entities.



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