SRI LANKA INSTITUTE OF INFORMATION TECHNOLOGY

Malabe

Data Warehousing And Business Intelligence

IT 3021

Assignment 02

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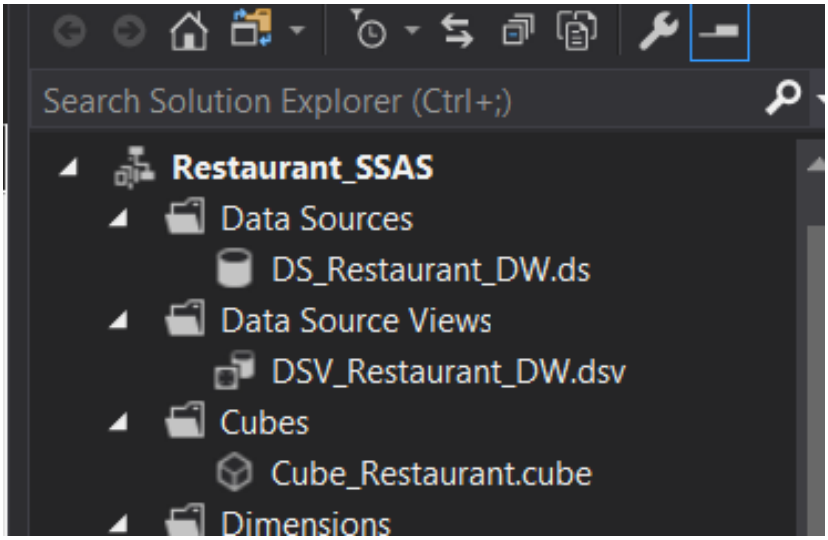
Data Source

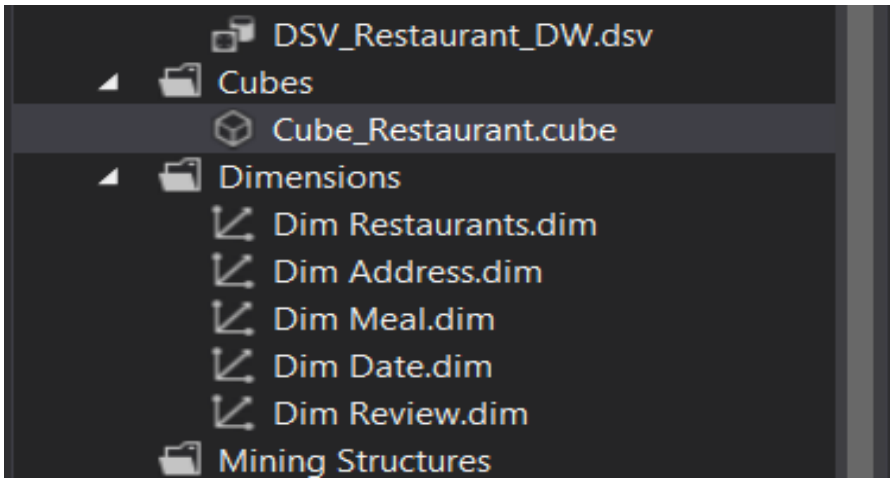
For this purpose use Restaurant_DataWarehousing as Data warehouse which implemented in last Assignment.

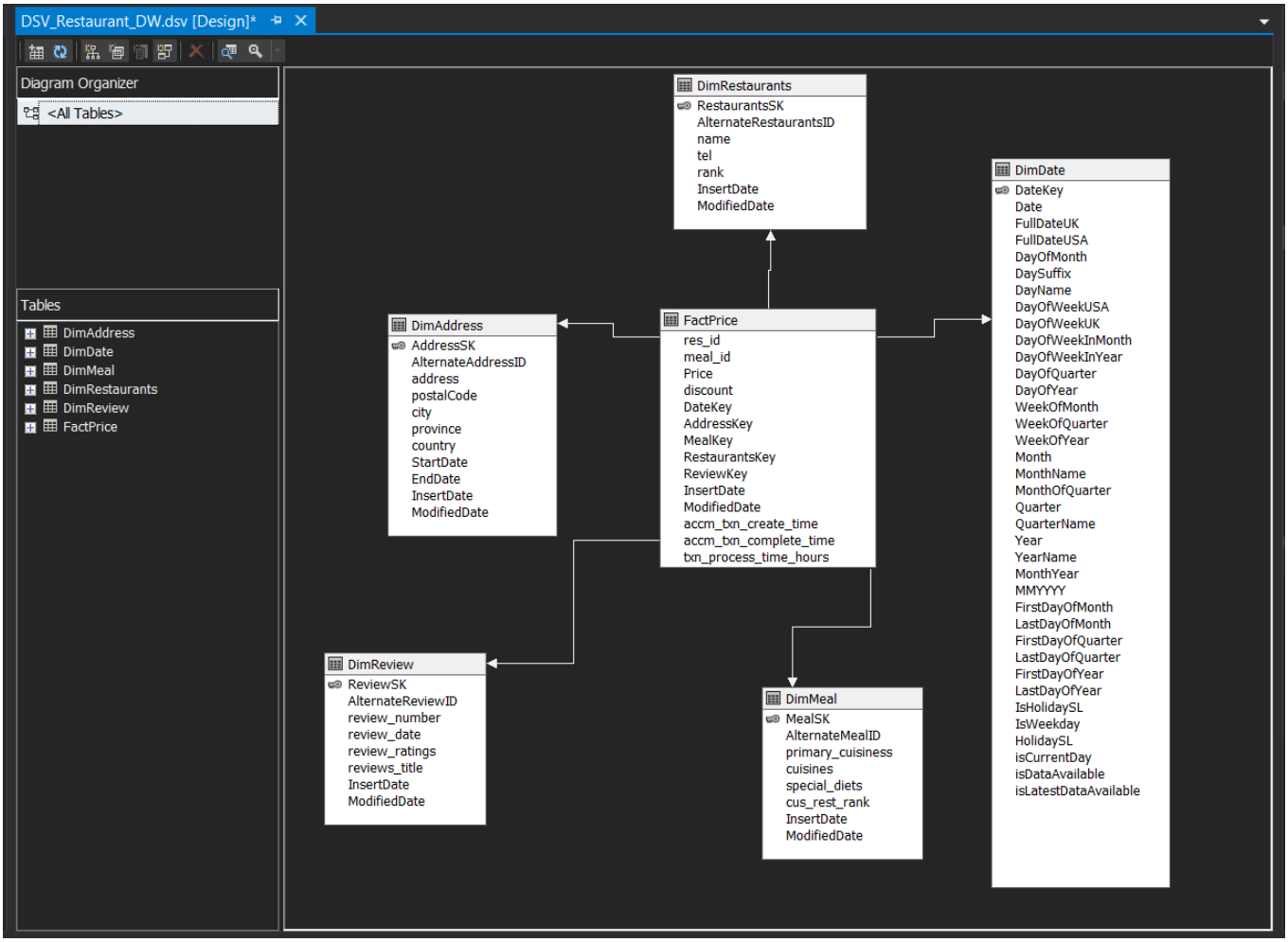


The data set follows a Star Schema and following figure shows the created data source view.

SSAS Cube

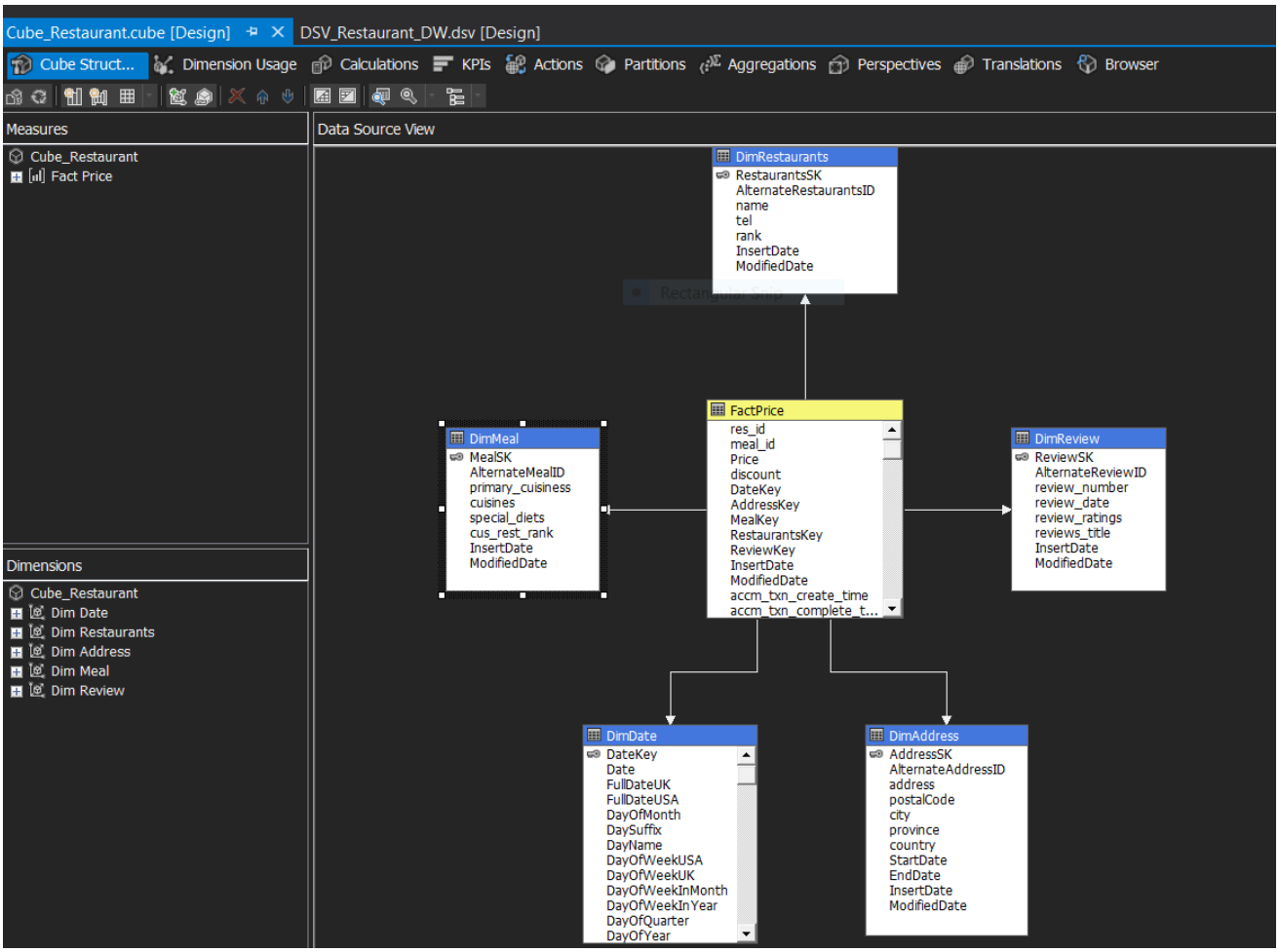
In here first create data source view using previous implemented data dimensions and fact table.





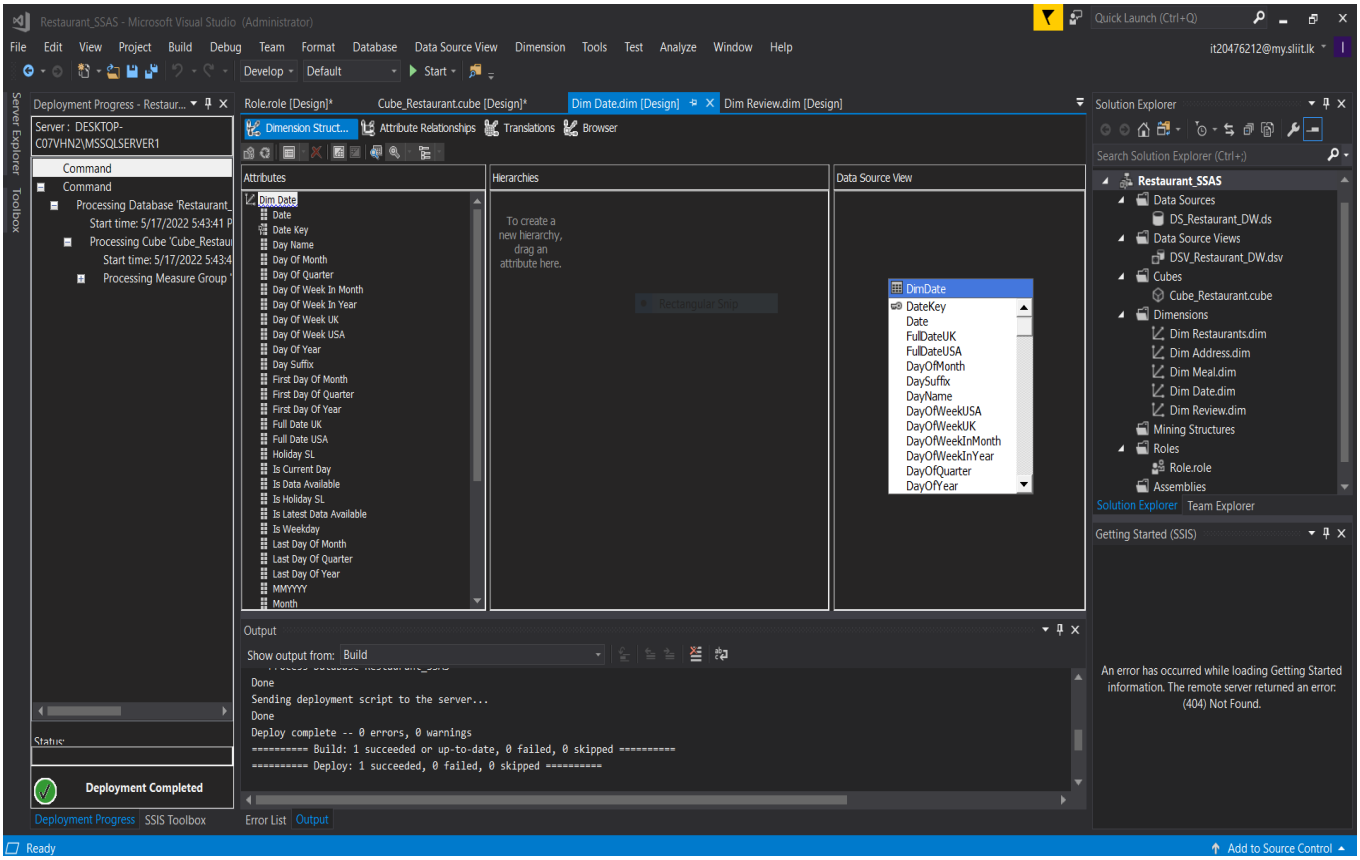
Then create Data Cube,

In here I choose Fact Price as measure group, dimDate, dimRestaurants, dimReview, dimMeal and dimAddress as dimensions.

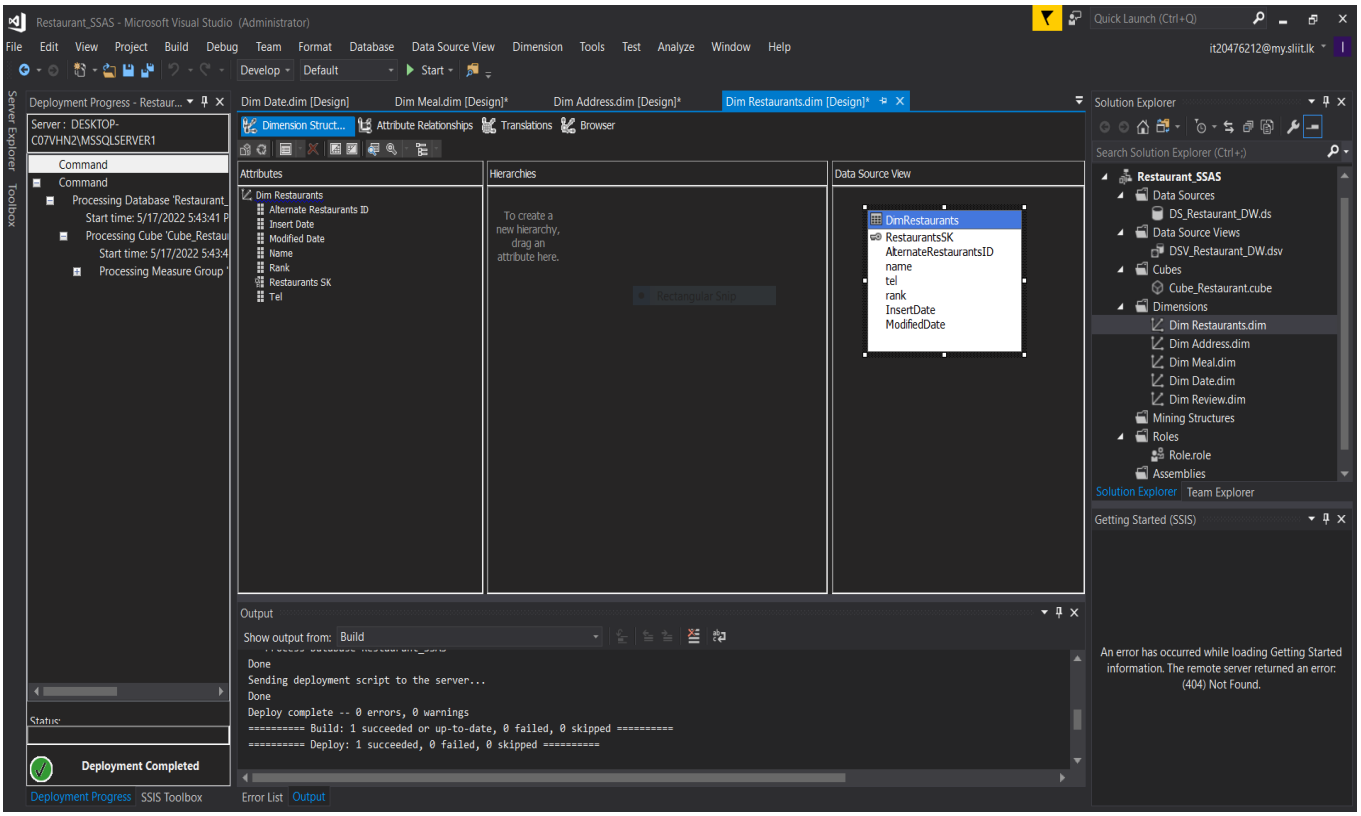


After that configure all the dimension with proper way.

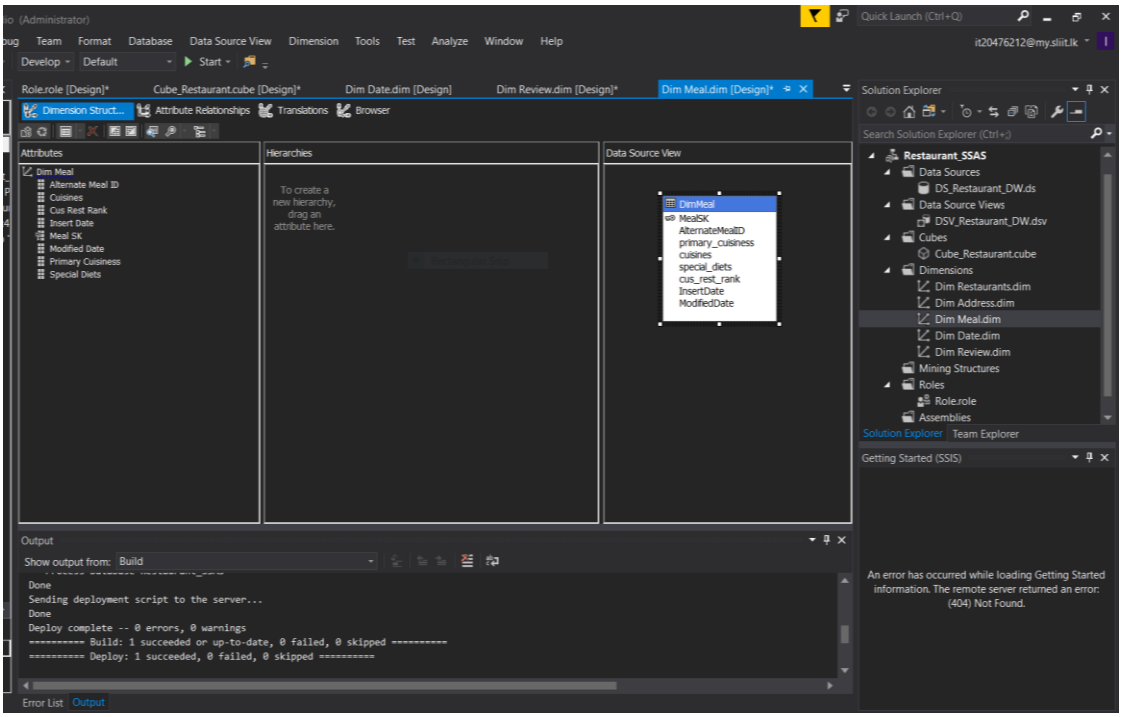
- DimDate


Restaurant_SSAS - Microsoft Visual Studio (Administrator)
Dim Date.dim [Design]
Dimension Struct...
Attribute Relationships
Translations
Browser
Attributes
Hierarchies
Data Source View
To create a new hierarchy, drag an attribute here.
DimDate
DateKey
Date
FullDateUK
FullDateUSA
DayOfMonth
DaySuffix
DayName
DayOfWeekUSA
DayOfWeekUK
DayOfWeekInMonth
DayOfWeekInYear
DayOfQuarter
DayOfYear
Solution Explorer
Restaurant_SSAS
Data Sources
DS_Restaurant_DW.ds
Data Source Views
DSV_Restaurant_DW.dsv
Cubes
Cube_Restaurant.cube
Dimensions
Dim Restaurants.dim
Dim Address.dim
Dim Meal.dim
Dim Date.dim
Dim Review.dim
Mining Structures
Roles
Role.role
Assemblies
Output
Show output from: Build
Done
Sending deployment script to the server...
Done
Deploy complete -- 0 errors, 0 warnings
========== Build: 1 succeeded or up-to-date, 0 failed, 0 skipped ==========
========== Deploy: 1 succeeded, 0 failed, 0 skipped ==========
Deployment Completed
An error has occurred while loading Getting Started information. The remote server returned an error: (404) Not Found.
Ready

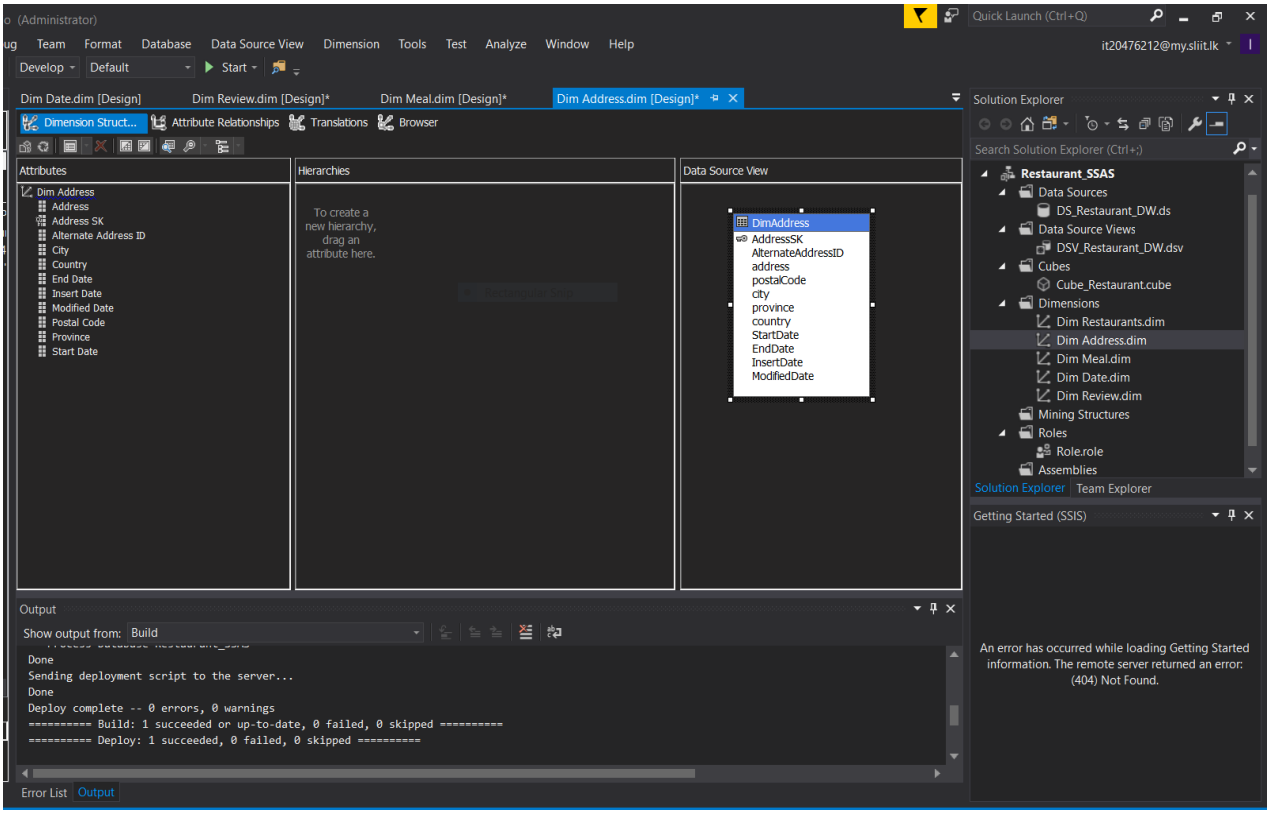
- Dim Restaurants



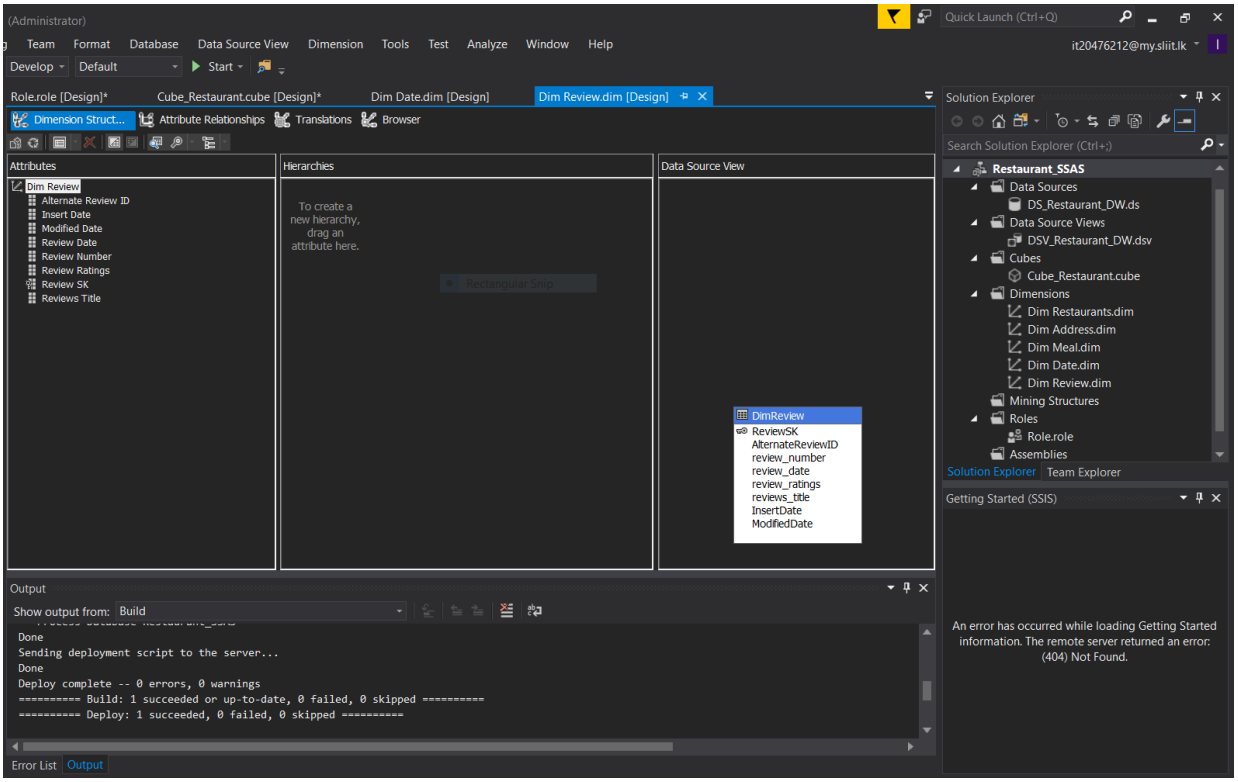
- Dim Meal



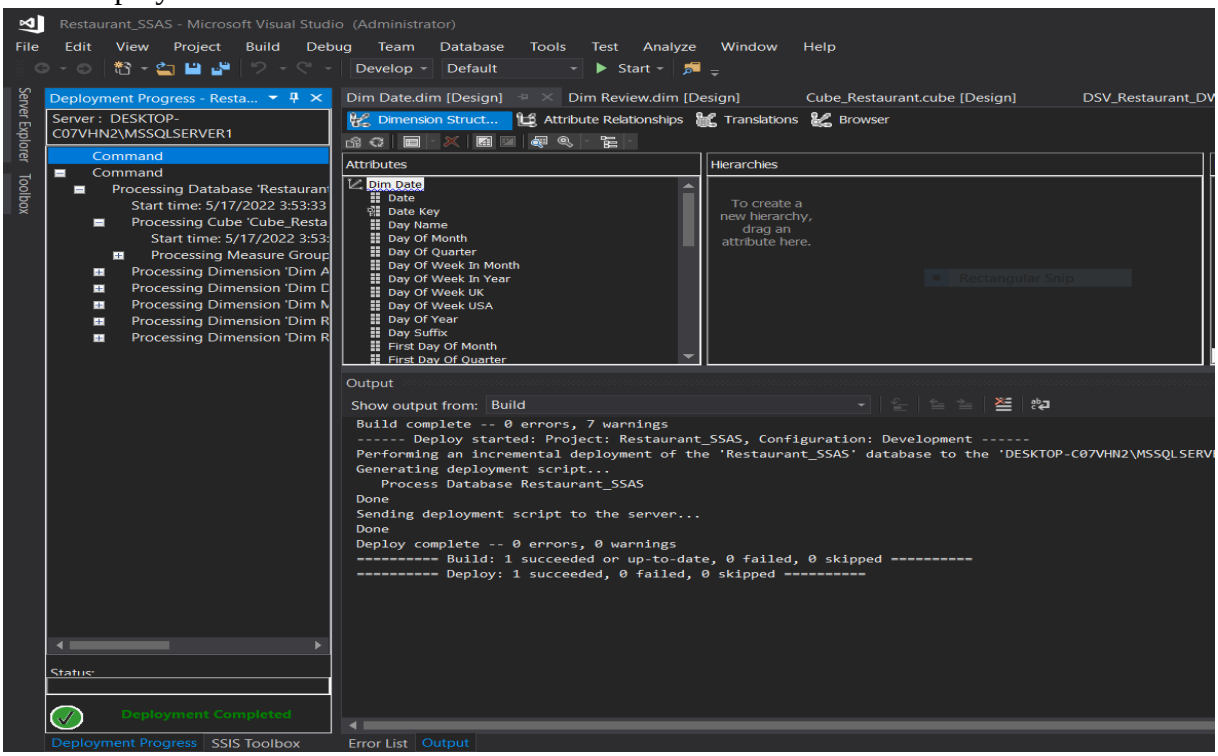
- Dim Address



- Dim Review

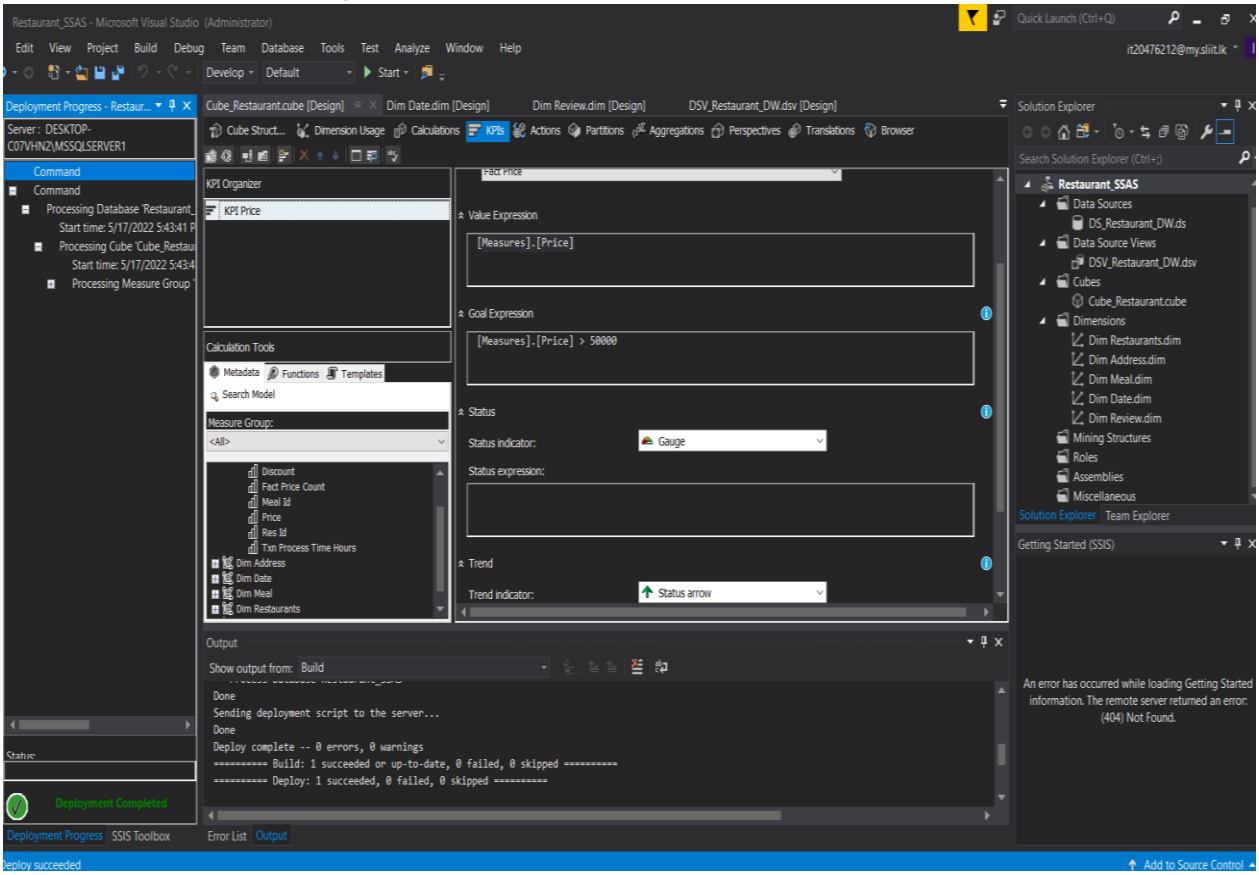


Then Deploy the Cube.

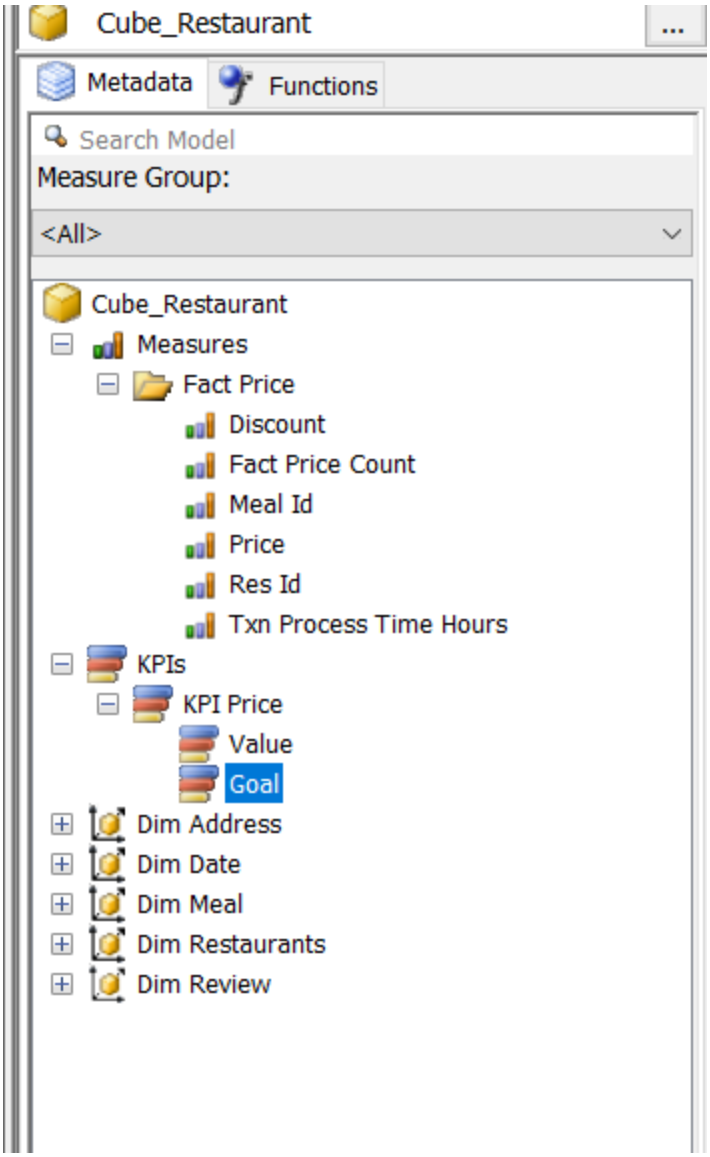


Create KPI

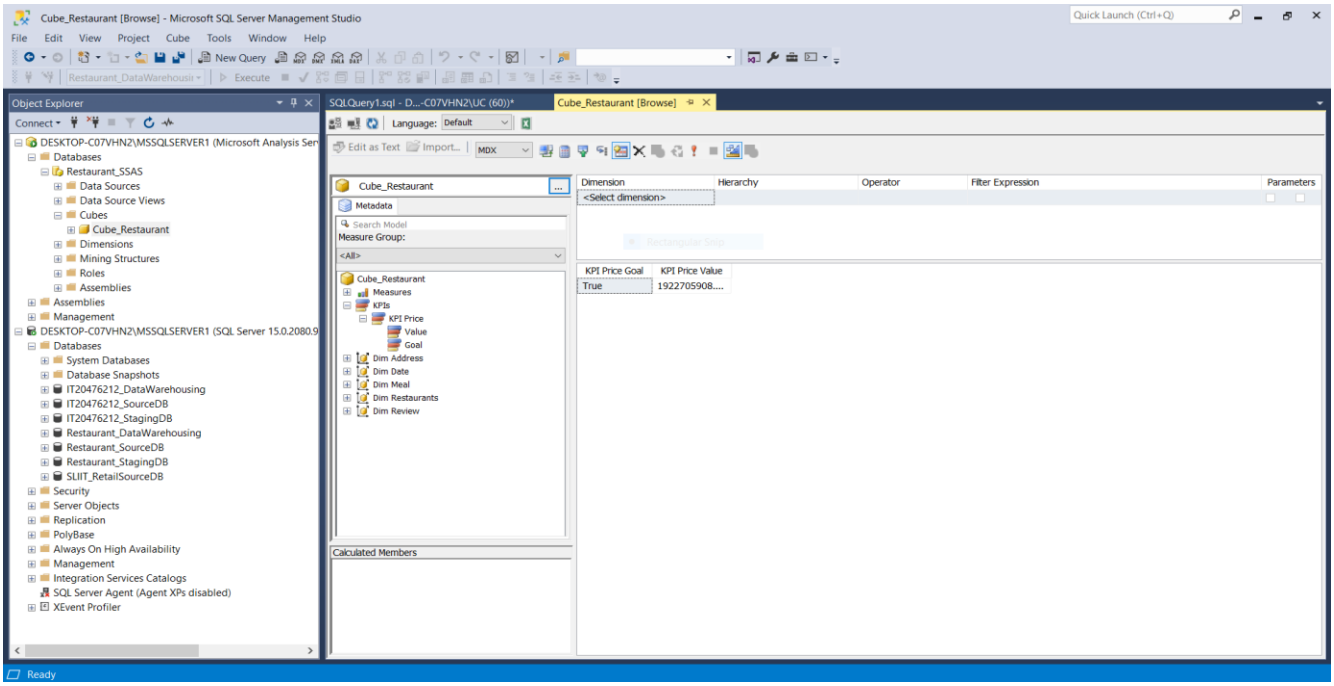
KPI Use for monitoring measures.

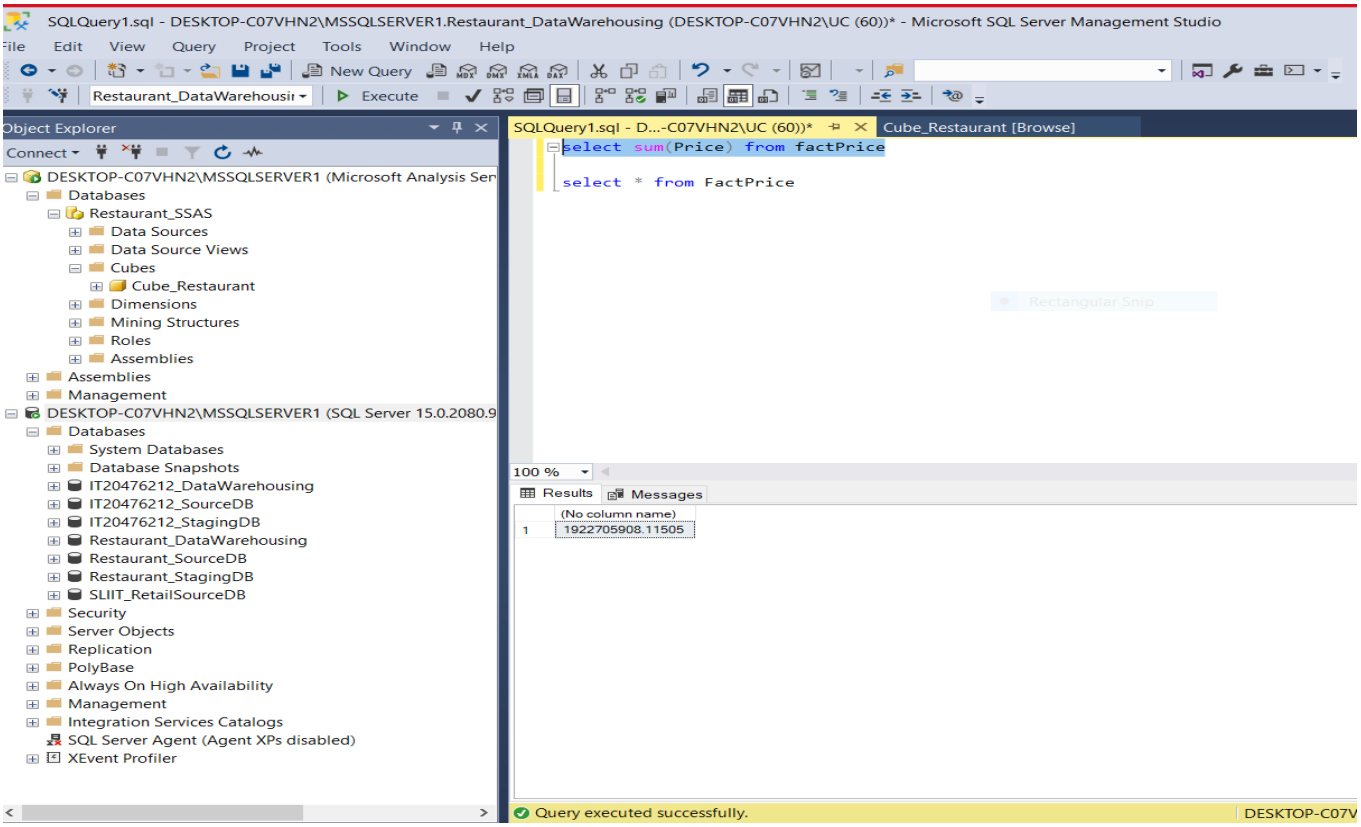


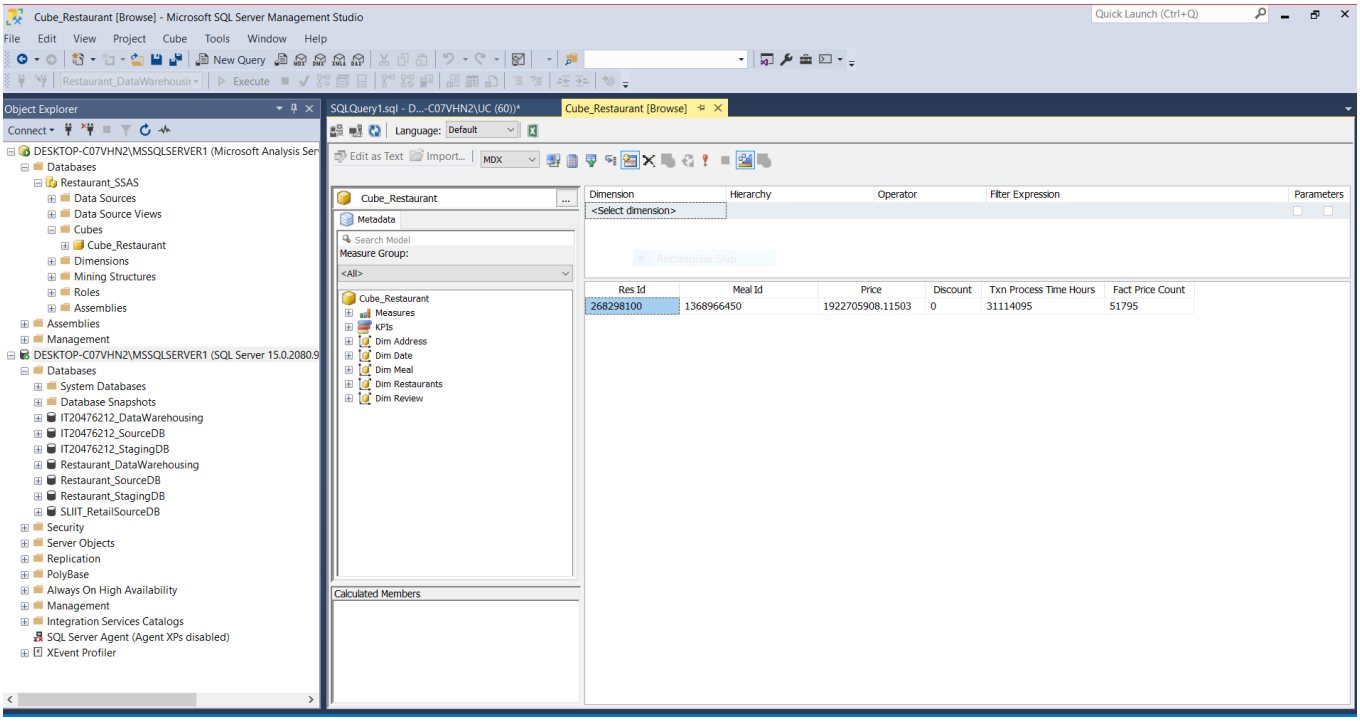
Created KPIs were demonstrated below.



After deploying of this Cube look like this,


Cube_Restaurant [Browse] - Microsoft SQL Server Management Studio
Object Explorer
Cube_Restaurant [Browse]
Ready

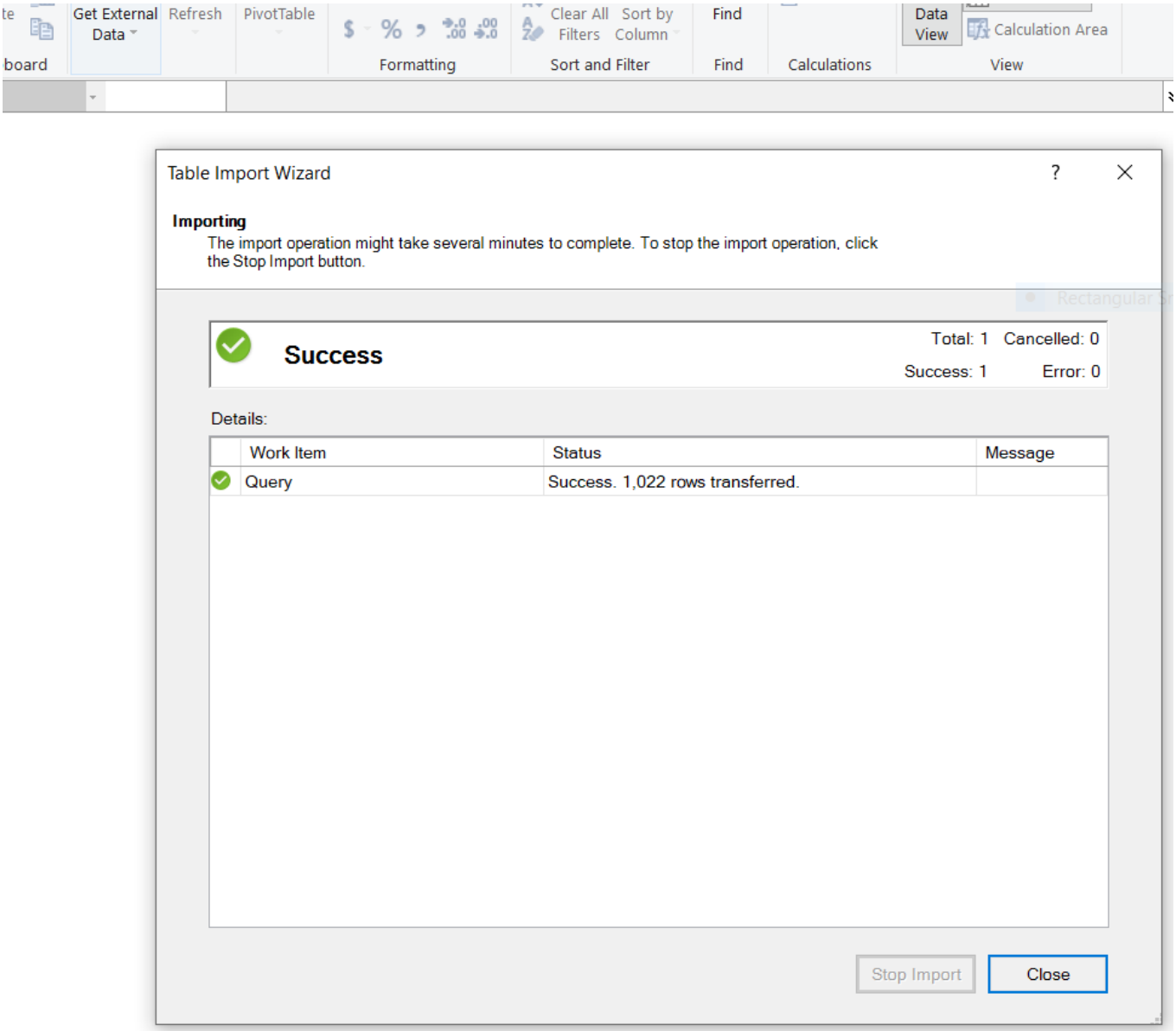

SQLQuery1.sql - DESKTOP-C07VHN2\MSSQLSERVER1.Restaurant_DataWarehousing (DESKTOP-C07VHN2\UC (60))* - Microsoft SQL Server Management Studio
Object Explorer
SQLQuery1.sql - D...-C07VHN2\UC (60))*
Cube_Restaurant [Browse]
select sum(Price) from factPrice
select * from FactPrice
Results
Messages
(No column name)
1922705908.11505
Query executed successfully.



OLAP Operation

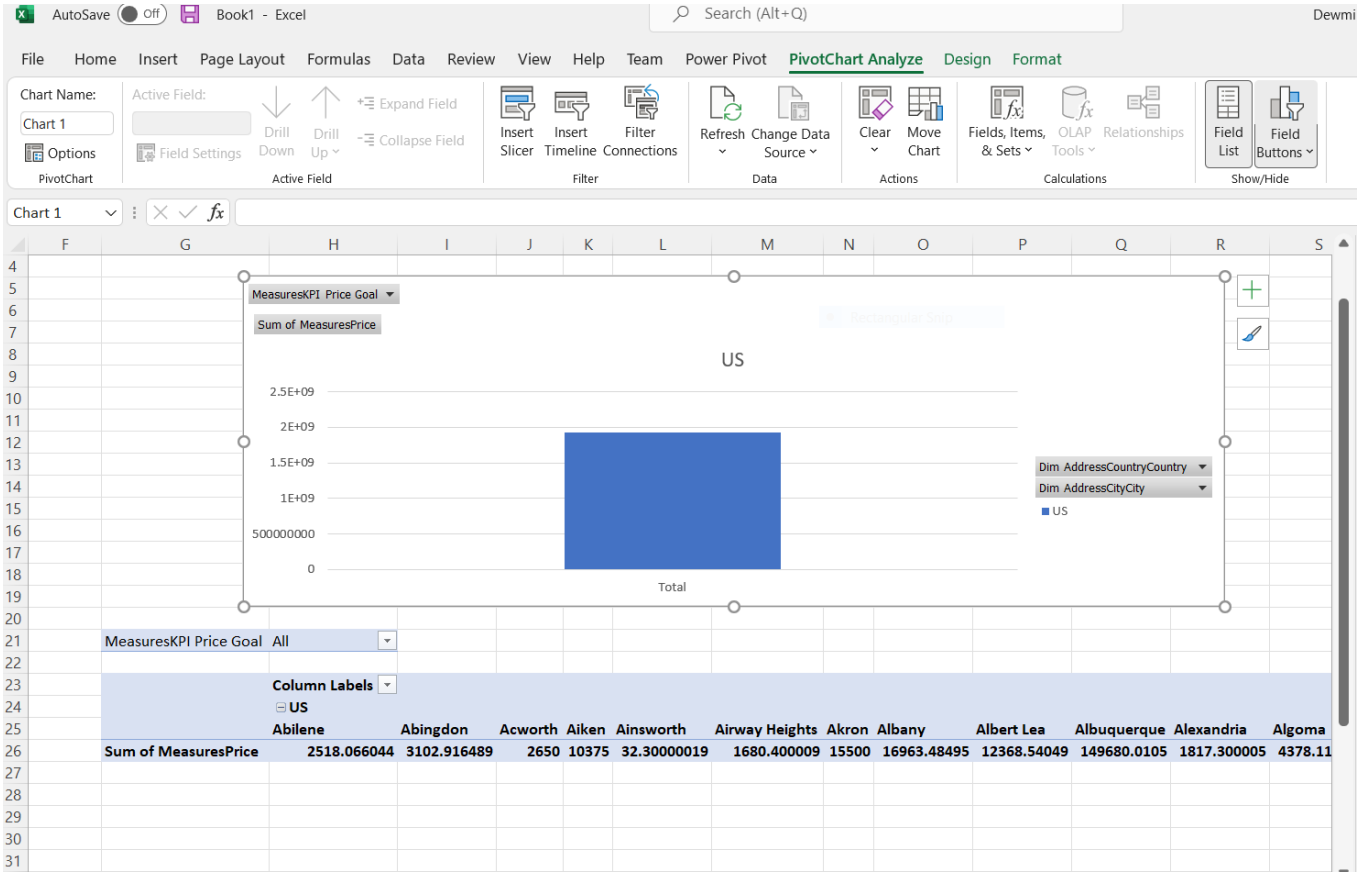
Using Excel 2016 Power Pivot we can do all OLAP operation

The SSAS cube “Restaurant_SSAS” which was created in the above step was then connected to the Excel using the MDX query.



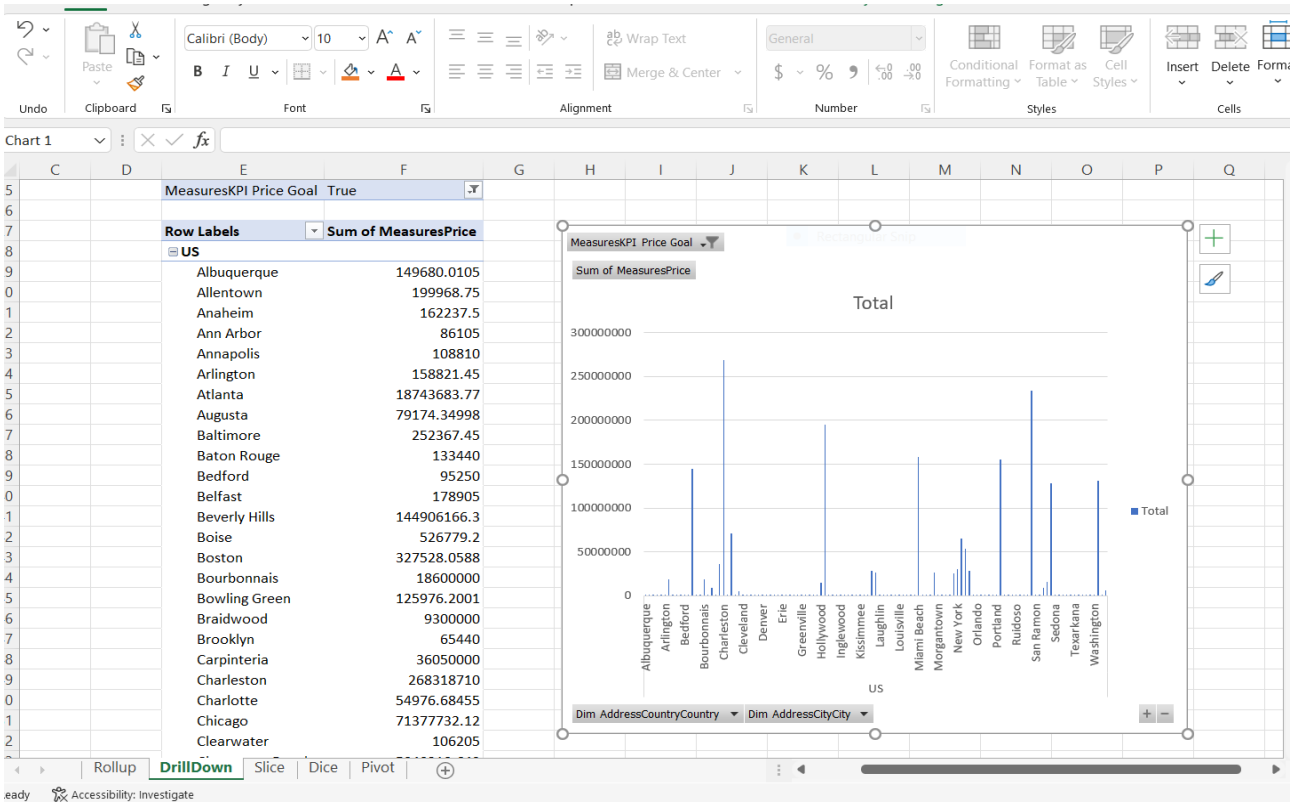
Roll Up

The roll-up operation performs aggregation on a data cube, either by climbing up a hierarchy or by climbing down a hierarchy



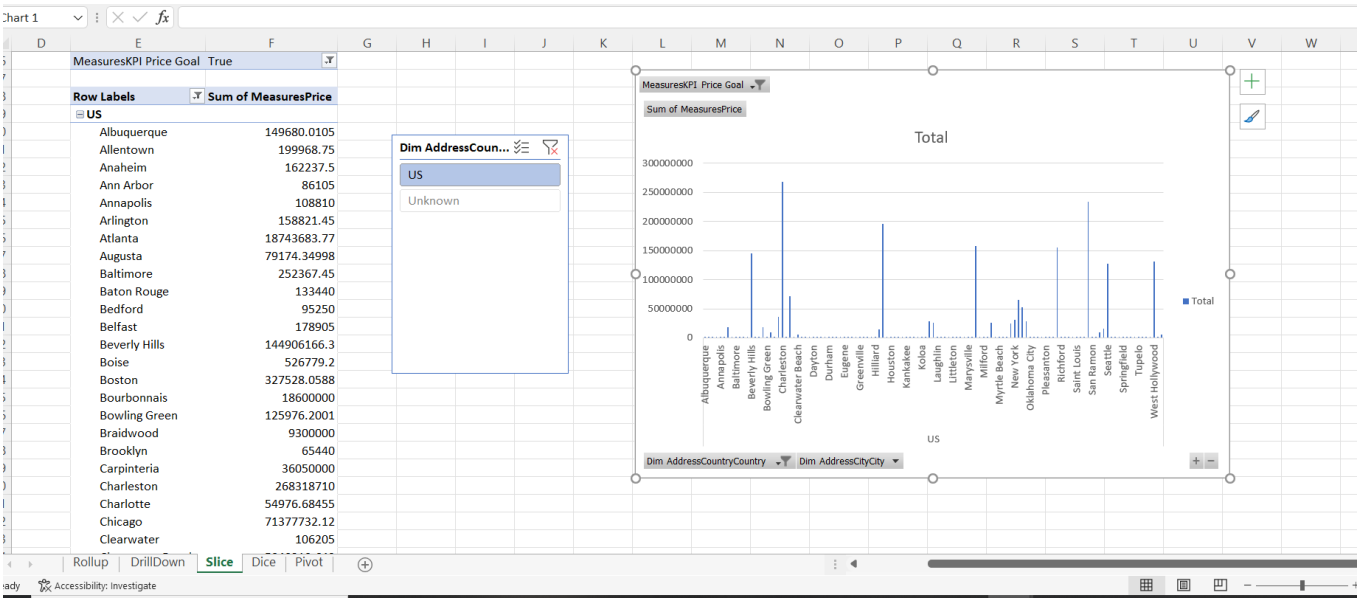
Drill-Down

The Drill down operation is the reverse of roll up. It navigates from less detailed data to more detailed data.


MeasuresKPI Price Goal True
Row Labels
Sum of MeasuresPrice
US
Albuquerque 149680.0105
Allentown 199968.75
Anaheim 162237.5
Ann Arbor 86105
Annapolis 108810
Arlington 158821.45
Atlanta 18743683.77
Augusta 79174.34998
Baltimore 252367.45
Baton Rouge 133440
Bedford 95250
Belfast 178905
Beverly Hills 144906166.3
Boise 526779.2
Boston 327528.0588
Bourbonnais 18600000
Bowling Green 125976.2001
Braidwood 9300000
Brooklyn 65440
Carpinteria 36050000
Charleston 268318710
Charlotte 54976.68455
Chicago 71377732.12
Clearwater 106205
MeasuresKPI Price Goal
Sum of MeasuresPrice
Total
300000000
250000000
200000000
150000000
100000000
50000000
0
Albuquerque
Arlington
Bedford
Bourbonnais
Charleston
Cleveland
Denver
Erie
Greenville
Hollywood
Inglewood
Kissimmee
Laughlin
Louisville
Miami Beach
Morgantown
New York
Orlando
Portland
Ruidoso
San Ramon
Sedona
Texarkana
Washington
US
Total
Dim AddressCountryCountry
Dim AddressCityCity
Rollup
DrillDown
Slice
Dice
Pivot
Accessibility: Investigate

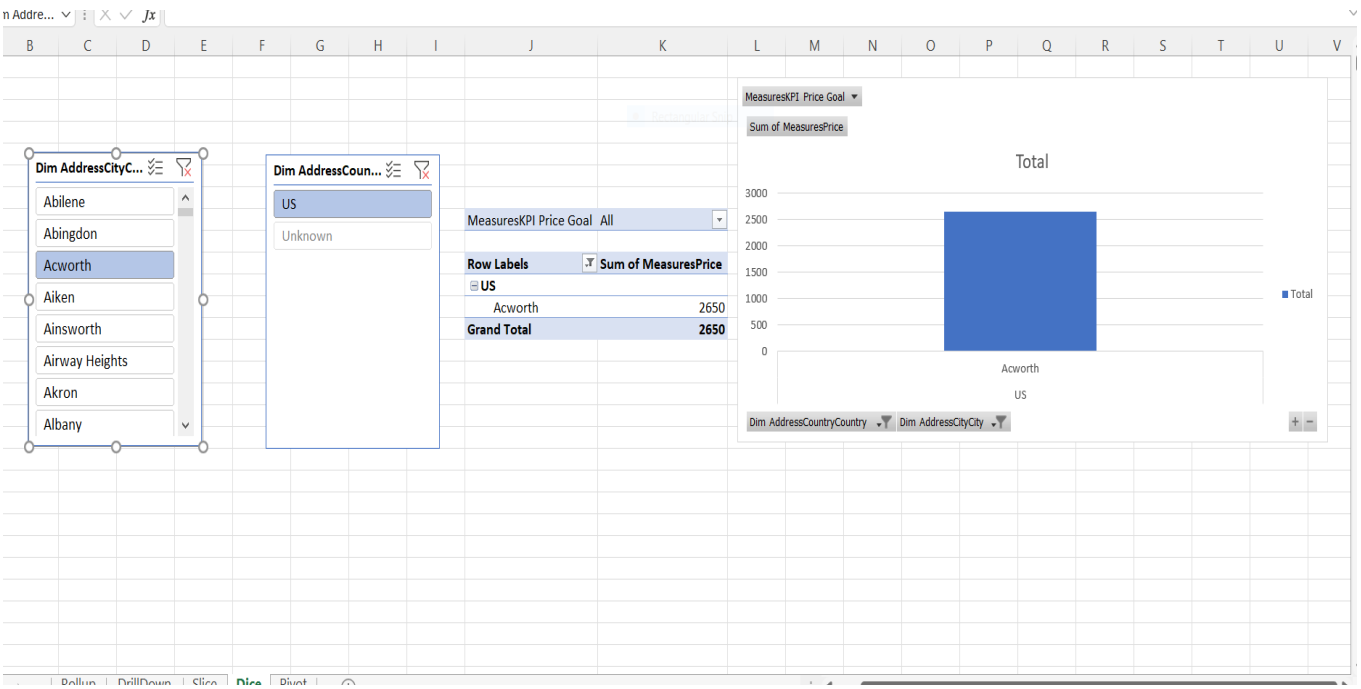
Slicing

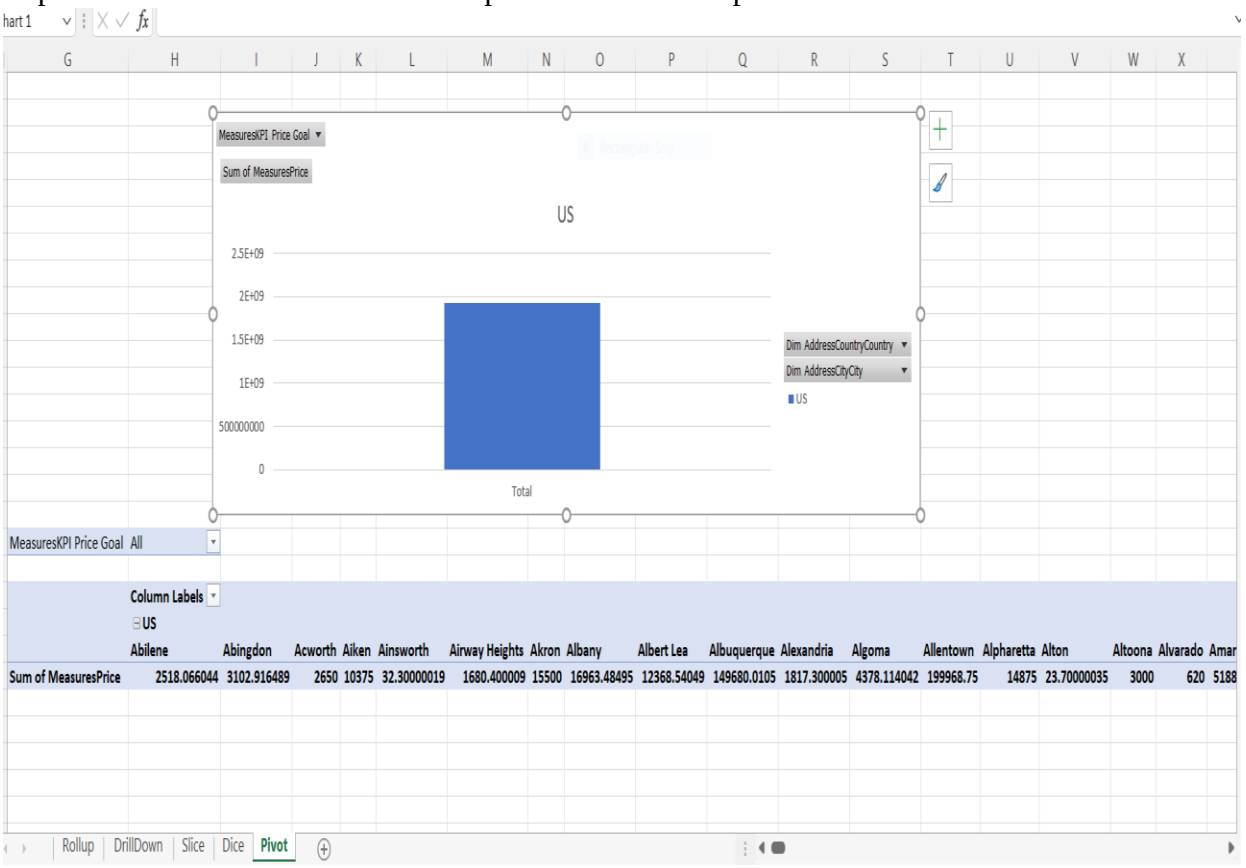
Slice performs a selection on one dimension of the given cube, thus resulting in a sub cube.



Dice

The dice operation defines a sub cube by performing a selection on two or more dimensions.



- Pivot

  In pivot the data axes were rotated to provide alternative presentation to data.