

Apply Regional Economic Accounts using Data Visualization program in Egypt

Mahmoud El-Sarawy

Statistician

NSO (CAPMAS)

Egypt

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INTRODUCTION

- ◉ Using modern methods to display large amounts of data is very important.
- ◉ With a good set of images that keep these key success factors in mind.
- ◉ A regional Economic account is a useful tool in the economic and social analysis.

Data visualization

- ◉ Data is the basic raw material needed to create information.
- ◉ We can convert data into information when we add meaning by providing a context for the data.

Data visualization (Cont)

The features of good information are:

- Accurate
- Timely
- Useable
- Complete
- Precise

Data visualization (Cont)

Advantages of data visualization

- Data visualization makes it easier to understand graph and photo than numbers
- It saves time since a “picture is worth many words”
- Using of visual presentation of numbers can reduce confusion .
- Visualizations look better and attract more attention than the textual format.

Data visualization (Cont)

How and when can we use data visualization

- ◉ INFOGRAPHIC become a new way to provide information for people to understand it easily.
- ◉ Data visualization software can be used to present data in many areas.

Data visualization (Cont)

Tableau Public program

Tableau Public is a free data storytelling application. Create and share interactive charts and graphs, stunning maps, live dashboards and fun applications in minutes, then publish anywhere on the web. Anyone can do it, it's that easy—and it's free.

Public tableau program

The image shows the Tableau Public software interface. At the top, the title bar reads "Tableau Public - Book1". Below it is a menu bar with "File", "Data", "Worksheet", "Dashboard", "Analysis", "Map", "Format", "Window", and "Help". A toolbar contains various icons for navigation and editing, including a "Show Me" button on the right. The main workspace is divided into several panes: "Data" on the left with a "Connect to Data" button, "Columns" and "Rows" at the top, and "Filters" and "Marks" on the left side. The "Marks" pane includes a dropdown menu set to "Automatic" and buttons for "Color", "Size", "Text", "Detail", and "Tooltip". The central workspace contains a grid with four cells, each containing the text "Drop field here". On the right side, a "Show Me" dialog box is open, displaying a grid of various chart and map icons. At the bottom of this dialog is a "Connect to data" button. The bottom status bar shows "Sheet 1" and some navigation icons.

The importance of regional economic account

- Regional economic account is very important as it describes the highlights of relations and links between economic activities.

The importance of regional economic account (Cont)

Constructing the regional economic accounts may help in achieving a lot of goals such as:

- ◉ Optimize the resources which available within the region.
- ◉ Integration between the different regions in the country.
- ◉ The balance between revenue and expenditure for the region.
- ◉ Measuring the volume of production , consumption , output and supplies at the level of each activity in each region.
- ◉ Provide data base of resources and possibilities of each region.

Data visualization usage in regional economic account

- ◉ Greater Cairo Region:

Egypt consists of 27 Governorates and gathering 7 regions, Greater Cairo region contains the governorates (Cairo, Giza and Qaliopia)

Data visualization usage in regional economic account (Cont)

○ Egypt Map



Data visualization usage in regional economic account (Cont)

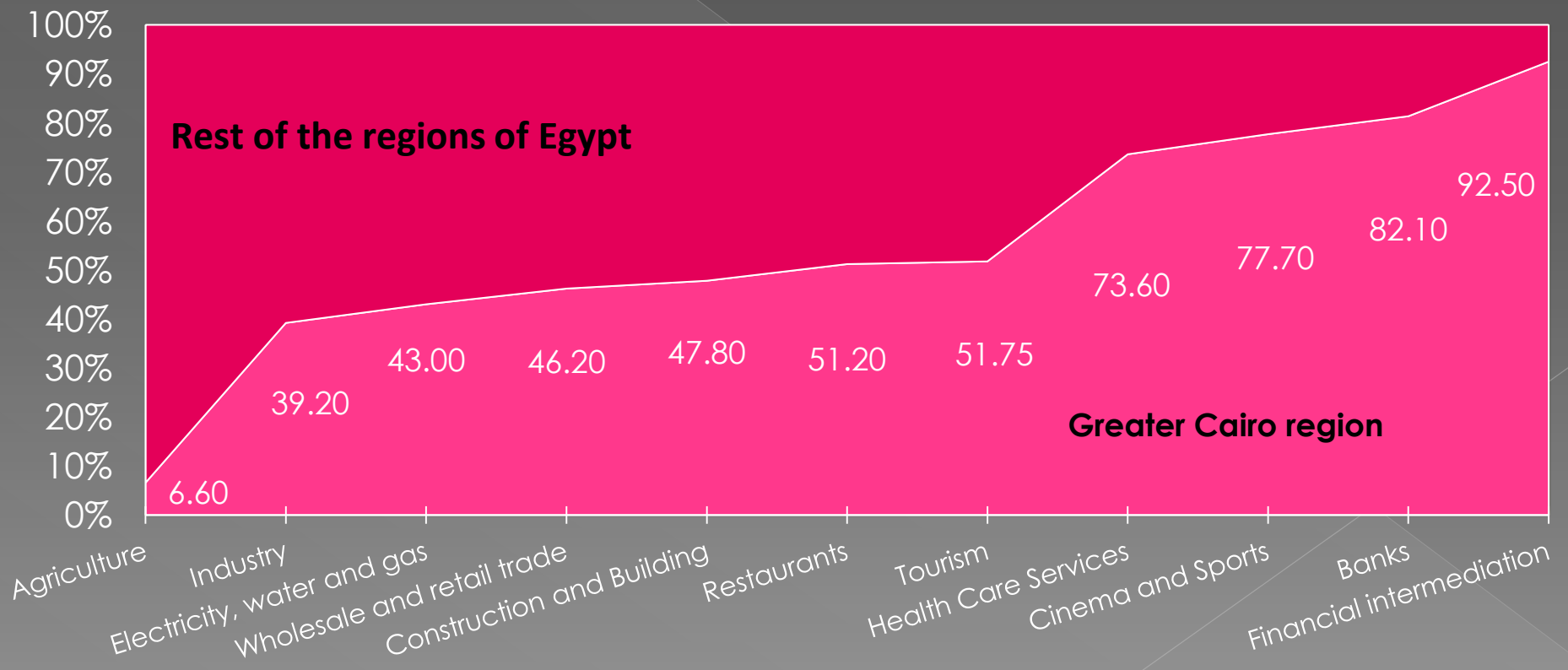
Greater Cairo Region

Governorate	Greater Cairo Region	All Egypt Regions	Greater Cairo Region
			÷ All Egypt Regions
Population	21002274	83,667,047	25
Area(km ²)	88137	1.002.000	8.7
Population density (people per km ²)	238	83.5	-

Data visualization usage in regional economic account (Cont)

Visualization of regional economic data

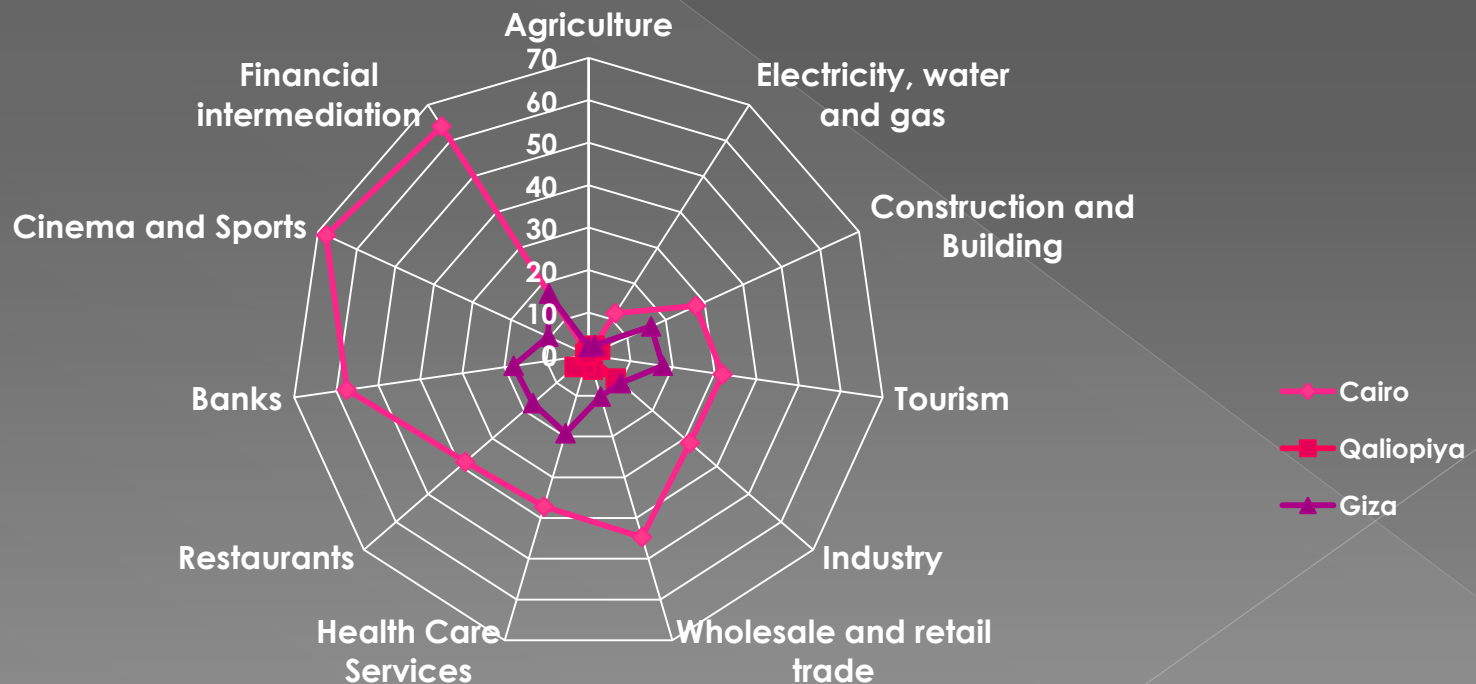
The relative distribution of production structure of economic activities



Data visualization usage in regional economic account (Cont)

Visualization of regional economic data

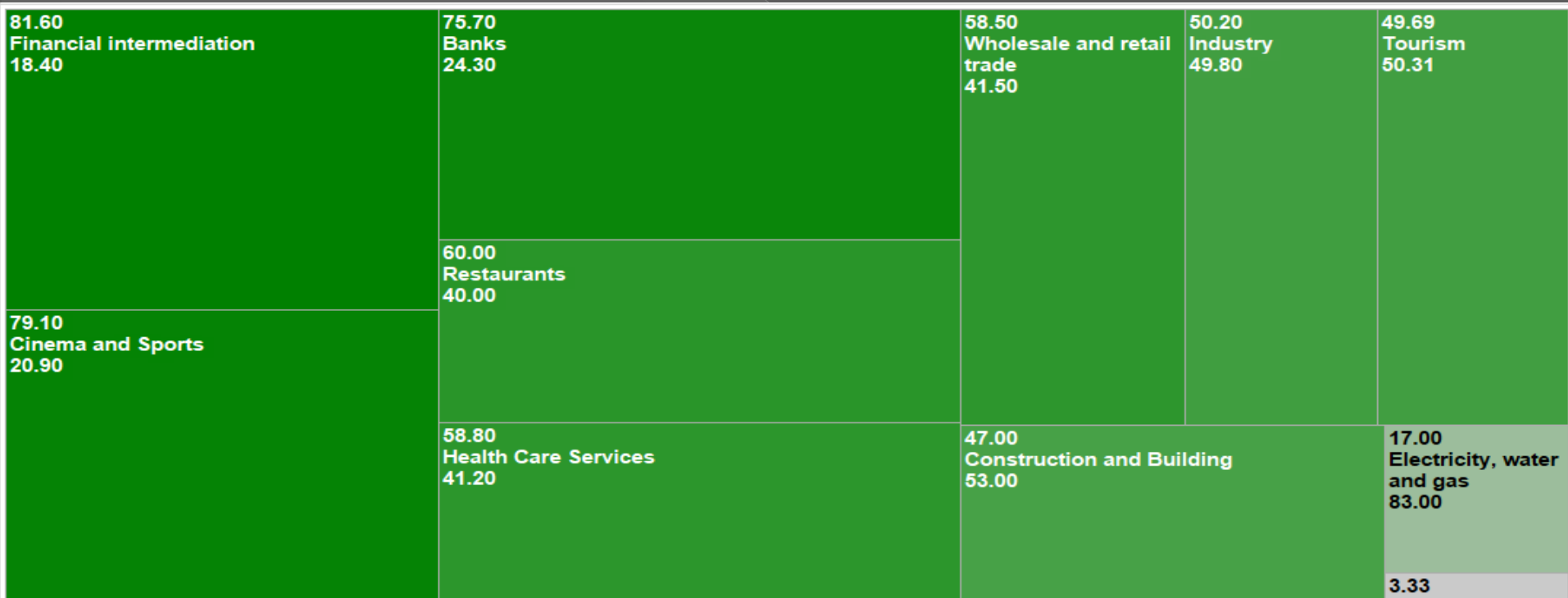
The relative distribution of the wages structure of economic activities inside Greater Cairo region



Data visualization usage in regional economic account (Cont)

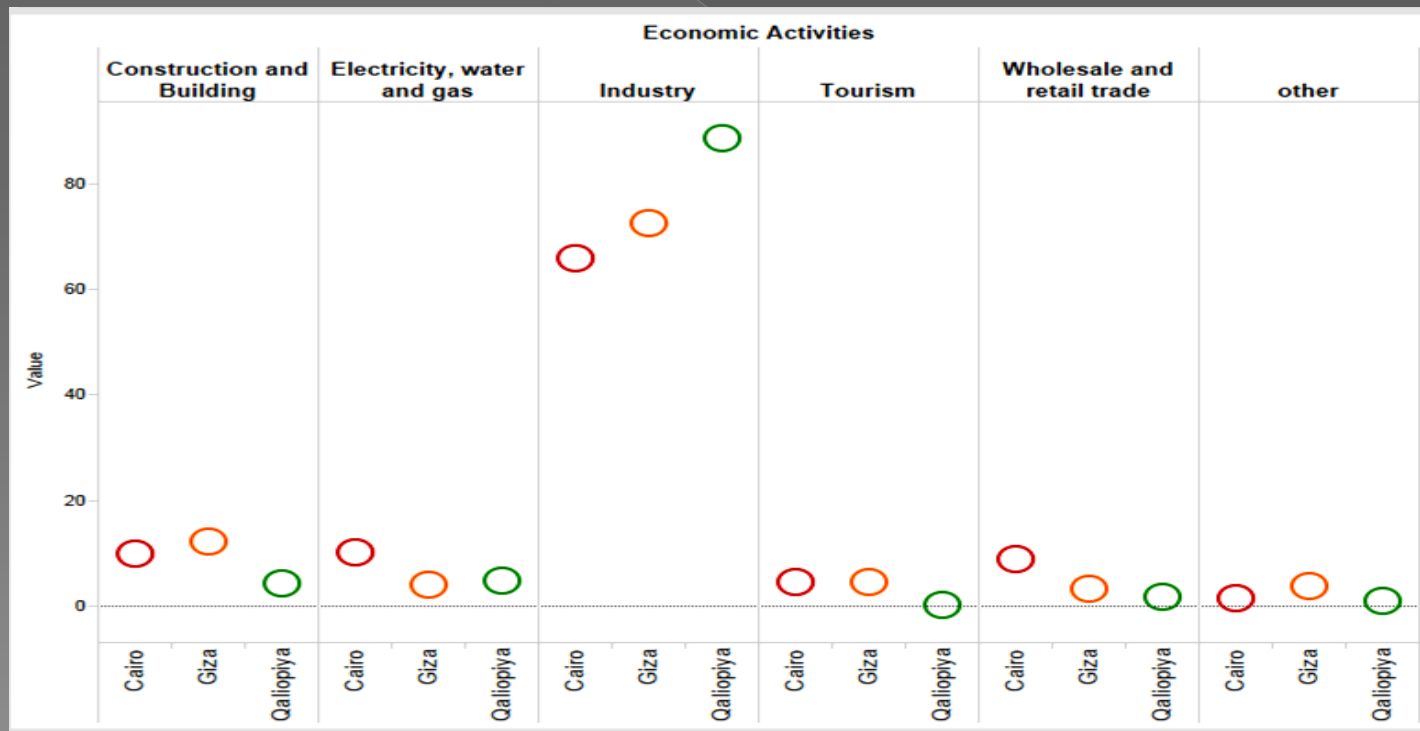
Visualization of regional economic data

Tree map for the relative distribution of the wages structure of economic activities



Data visualization usage in regional economic account (Cont)

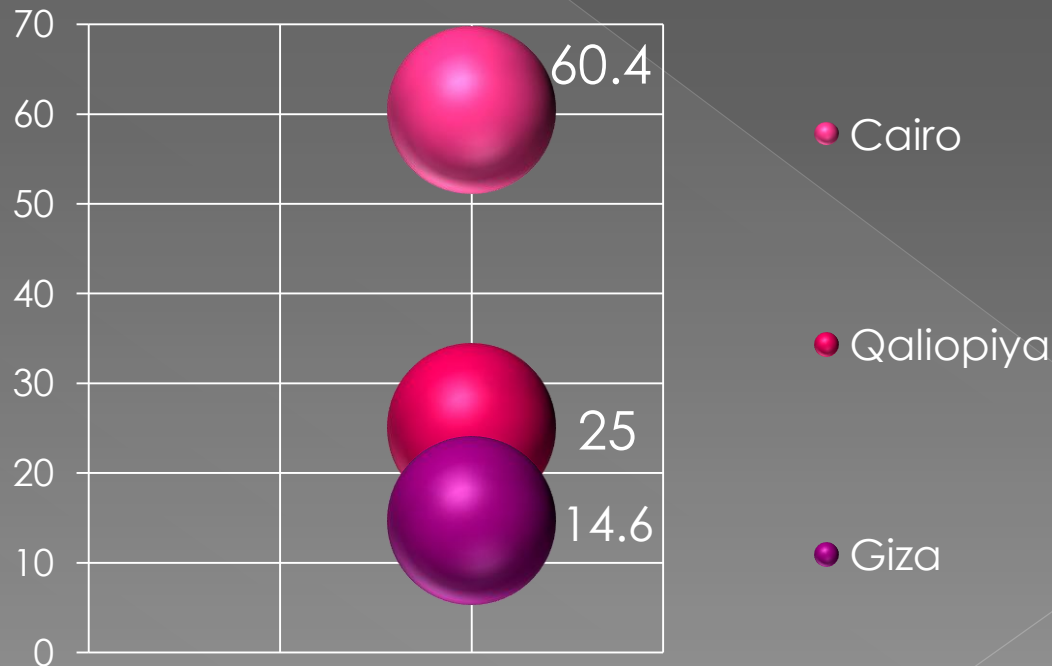
- Visualization of regional economic data
 - Packed bubbles shape for the relative distribution of the production structure at the economic activities level



Data visualization usage in regional economic account (Cont)

Visualization of regional economic data

The relative distribution of the governorates production structure in Greater Cairo region



CONCLUSION:

- The necessity of compiling economic accounts at the regional level is clear
- The need for statistics and data at the regional level to help in the creation of regional accounts.
- The need to use modern software to display data such as Tableau public to increase the understanding of statistical data for all users .

REFERENCES

- STOWERS, GENIE, (2013) "THE USE OF DATA VISUALIZATION IN GOVERNMENT." IBM CENTER FOR THE BUSINESS OF GOVERNMENT, USING TECHNOLOGY SERIES.
- REBECKAH BLEWETT, (2011) "THE IMPORTANCE OF DATA VISUALIZATION TO BUSINESS DECISION MAKING," DUNDAS DATA VISUALIZATION, INC.SUNDAY.
- SHARLEEN FORBES, (2010) "GETTING BETTER VALUE FROM OFFICIAL STATISTICS BY INCREASING AND IMPROVING THEIR USE".
- ———. 2009. HOW CAN OFFICIAL STATISTICS CONTRIBUTE TO THE ANALYSIS OF CLIMATE CHANGE IMPACTS, VULNERABILITY AND POLICIES? PAPER PRESENTED AT THE 57TH SESSION OF THE INTERNATIONAL STATISTICAL INSTITUTE, IN DURBAN, SOUTH AFRICA.
- FEW, STEPHEN, (2009) NOW I SEE IT: SIMPLE VISUALIZATION TECHNIQUES FOR QUANTITATIVE ANALYSIS. ANALYTICS PRESS.
- G.S. OWEN ET AL., (2008) "DEFINITIONS AND RATIONALE FOR VISUALIZATION," APR. WWW.SIGGRAPH.ORG/EDUCATION/MATERIALS/HYPERVIS/VISGOALS/VISGOAL2.HTML
- U. FAYYAD, G.G. GRINSTEIN, AND A. WIERSE, (2002) INFORMATION VISUALIZATION IN DATA MINING AND KNOWLEDGE DISCOVERY, MORGAN KAUFMANN.

Thanks

For further information

E-mail:

Mahmoud_sa@capmas.gov.eg