

# ESTIMATION DEMAND FOR 5G NETWORKS

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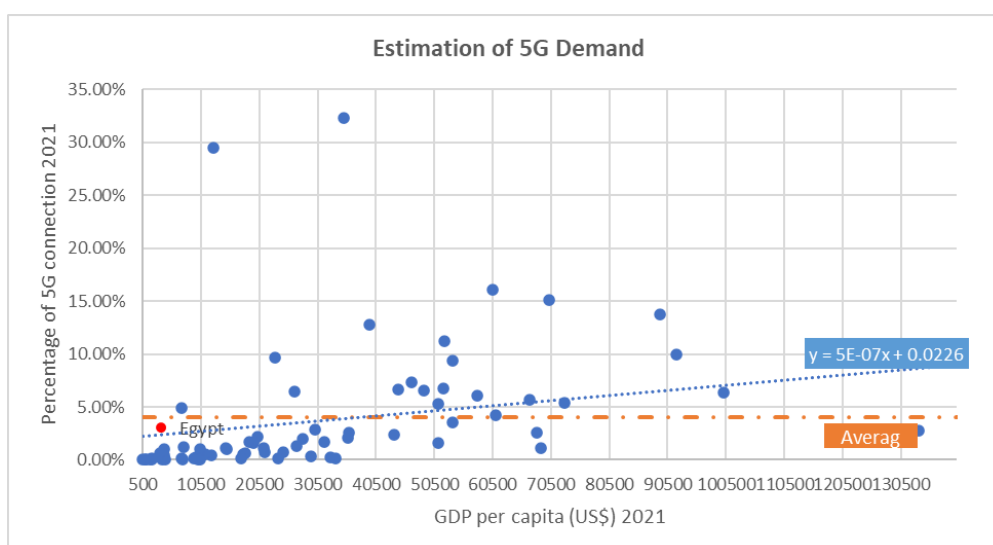
## INTRODUCTION

Based on Dr. Raúl L. Katz's studies in broadband economics and policy. He has developed various models to analyze broadband demand, including a model based on regression analysis.

Regression analysis is a statistical technique to estimate the relationship between two or more variables. In the context of broadband demand, regression analysis can be employed to identify the factors influencing the adoption and usage of broadband services. The model can provide insights into market demand and forecast future trends by examining the relationship between these variables.

## RESULTS

The model assumes that the demand for broadband is a function of the price of broadband, the income of consumers, and the price of substitutes for broadband. The model can estimate the demand for broadband in a particular market or region.



Noting that several demand models can be used by considering many factors such as willingness to pay, etc., the reason for choosing this model is to study the significance of the GDP per capita and the number of 5G users on demand.

A simulation for Katz's model has been built to estimate the 5G demand in Egypt.

Based on the conducted model, Egypt's demand for 5G is 3%, while the world average is 3.8%.

For more insights, check the Telecom Analysis website: <https://telecomanalysis.org/>

Data source:

- World Bank GDP per capita current US\$
- GSMA 2021

## ABOUT THE AUTHOR



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Rolla Hassan is a Senior Manager, International Regulation at the Egyptian National Telecom Regulatory Authority (NTRA). She has 17 years of experience in various projects, including global and regional trends and Policies and Analysis studies related to telecommunications regulations, digital security, and digital economy taxation, with experience working in an international organization. Ms. Hassan holds an MSc in Electronics and Telecommunications Engineering from the Arab Academy for Science, Technology, and Maritime Transport (AAST) Egypt. She has obtained her Ph.D. studies from Nile University in 2023. Rolla can be reached at [rolla.hassan@telecomanalysis.org](mailto:rolla.hassan@telecomanalysis.org).

