



Cairo University

**MEASURING THE ECONOMIC IMPACTS OF
TRANSPORTATION INVESTMENTS USING
REGIONAL ECONOMIC MODELING**

By

Manar Mahmoud Abou El-Ela Ahmed

A Thesis Submitted to the
Faculty of Engineering at Cairo University
in Partial Fulfillment of the
Requirements for the Degree of
DOCTOR OF PHILOSOPHY
in
Architectural Engineering

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Title of Thesis: **Measuring the Economic Impacts of Transportation Investments Using Regional Economic Modeling**

Key Words: Regional Economic Models; Transportation Investment; Economic Impacts; Economic Development

Summary:

Economic development and transportation often go hand in hand. Since, there is a definite, meaningful connection between economic growth and transportation networks. It is important to quantitatively analyze the economic impacts of transportation investments, so informed decisions can be made by transportation agencies.

Given such interest, the research is exploring this relationship, as well as investigating Regional Simulation Models to analyze the impact of transport investment. Several International Case studies are examined to conclude the lessons learnt and the needed requirements in an attempt to introduce it to the Egyptian Community through an Egyptian case study and presenting an initial perspective of the economic impact assessment in case of using the Regional Simulation Models. The main constrains of the study were the inadequate data, the complexity of the analysis, and the expensive cost of the models. All these difficulties made the analysis of economic development impacts more challenging to address.

Disclaimer

I hereby declare that this thesis is my own original work and that no part of it has been submitted for a degree qualification at any other university or institute.
I further declare that I have appropriately acknowledged all sources used and have cited them in the references section.

Name: Manar Mahmoud Abou El-Ela

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Signature:

To My Mother,

For her Inspiration,

Faith and persistence.

Acknowledgment

My gratitude goes firstly to **ALLAH** that gave me strength and wisdom to go through this experience and helped me to carry out this research that made me realize how capable I am to really assist in the development process of my country.

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