

# Chapter 1

## Transformation Opportunities Toward Knowledge- Based Urban Development and Its Challenges: Impact Assessment Study on Egypt

**Aly Abdel Razek Galaby**

*Faculty of Arts, Alexandria University, Egypt*

### **ABSTRACT**

*The current research discusses opportunities and challenges of knowledge-based urban development in Egypt, aims to monitor the actual opportunities provided by Egyptian policies for knowledge-based urban development, and highlights their most important challenges. The research relied on the impact assessment methodology, the opinion of some experts, analyzing secondary data, literature review, and statistical reports to track the paths of changes in knowledge-based development policies and their applications during the third millennium to reveal the most important challenges and constraints facing the experiences of knowledge cities and its precincts in the Egyptian society. The research concluded some recommendations to confront these challenges and push forward toward strengthening knowledge-based urban development in Egypt, based on what came from critical review of literature, theoretical perspectives, and policies and experiences of many countries of the world in this field.*

### **INTRODUCTION**

The transformation toward knowledge society, knowledge economy, knowledge cities and local knowledge precincts - as the embodiment of knowledge-based development - has become a global phenomenon and human experience experienced by humanity in recent decades. We have witnessed the actual transition toward knowledge-based urban development at multiple and different levels in many disciplines such as: economics, politics, sociology, urban planning, urban studies, etc. Besides the transformation in

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policies, strategies, and development plans, as well as the transformation in real experiences of different societies - developed and developing - which they have fought in search of solutions to their problems and a better reality for their people.

The research movement on knowledge-based urban development experiences - recorded by the literature - is a strong testament to this transformation, where the site of Academia.edu recorded (114,250) research paper in this field. This movement covered most of the continents and countries of the world, addressed the dimensions and issues of knowledge-based urban development, and set out from the continent of Australia, then North America, Europe and some countries in Asia, and finally, Africa especially Egypt. This research has been published in international scientific journals or presented at various conferences worldwide, and researchers have contributed to it such as (Yigitcanlar 2005,2008,2010,2013), (Velibeyoglu 2008), (Sarimin 2013), (Farahangi 2013), (Al Harigi 2013), (هبرددبوعو یبلج 2013), (هبرددبوع 2016), (Alreouf 2018), (Zaferkiyan & Kuksel 2018), (Galaby 2018), etc.

The Egyptian society was not isolated from these transformations, as the trend in Egyptian policies toward keeping abreast of global changes supporting development by relying on information and communication technology emerged since 1983 when it established the National Institute of Communications, and plans were later pursued until the launch of Egypt's Vision 2030 in 2015. The transformation in Development policies and experiences in Egypt toward knowledge-based development, knowledge-based urban development, cities of knowledge and the local precincts of the knowledge society - many opportunities, changes, and challenges took place in the structure of the Egyptian society and its cities today and in the future; This prompted us to define the problem of the current research in revealing the actual opportunities provided by knowledge-based development policies in Egypt to highlight the most important challenges. The current research divided into several themes: literature review, methodology, problematic and theoretical perspectives, transformation opportunities toward knowledge-based urban development and its changes in Egypt during the third millennium. finally, challenges of knowledge cities experiences and constraints of knowledge-based urban development.

## **1 LITERATURE REVIEW**

The topic of transformation opportunities toward knowledge-based development and the challenges of knowledge-based urban development has got the interest of many researches; However, some of them addressed the benefits or goals, the second concerned with the expected and unexpected results, and the third was concerned with the opportunities and constraints that impede knowledge-based urban development efforts.

Yigitcanlar (2005) analyzed the experience of Melbourne in Australia, as a city of knowledge, and reconsidered its science, technology and innovation initiatives and its policies for social and economic development. He explained that the city administration played an essential role in developing it as a knowledge city that has been recognized globally, characterized by entrepreneurship and competitiveness. Knowledge City strategies need to consider unique and competitive urban conditions, opportunities and challenges as issues must familiarize with them (Yigitcanlar, 2005). Also, The study of Yigitcanlar & Velibeyoglu (2008) for the policies of Australian Brisbane city -specially knowledge-based urban development- revealed several challenges: First, some of them relate to the shortage of knowledge-based urban development policies, provision of housing to young scientists and artists, living environments of creators and attract talent from abroad. Second, it is linked to the absence of a comprehensive approach

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