Chapter 5

The Era After Oil:
Knowledge-Intensive Cities on the Arabian Gulf

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ABSTRACT

This chapter investigates seven Gulf cities (Kuwait City, Manama, Doha, Abu Dhabi, Dubai, Sharjah, and Muscat) that have grown rich due to large reserves of oil and natural gas. Now, with the threat of ending resources, governments focus on the development towards a knowledge society with knowledge-based industries and knowledge-intensive cities. The authors analyzed the cities in terms of their "smartness" or "informativeness" by field research on-site, a quantitative survey and in-depth qualitative interviews (N = 34). They studied prototypical building blocks of a city of the knowledge society, namely infra-structures (digital city, smart, green and sustainable city, creative city, and knowledge city), economy, politics and administration, location factors, as well as physical and digital spaces. Especially Doha in Qatar is well on its way towards becoming an informational city, but also Dubai and Sharjah (both in the United Arab Emirates) received good scores.

INTRODUCTION

In the heat of the Gulf region 50 years ago, the desert dominates the landscape, the beaches are almost empty, and the few people living there work as pearl divers, fishermen, traders or peasants. Replaced by glittering facades, high-end hotels, artificial islands, huge shopping malls, and the tallest constructions of the world, the region nowadays attracts people from all over the world. The catalyst for this development was the detection of huge amounts of oil and gas resources in the 1930`s leading to prosperity (Figure 1).
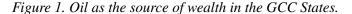
The states of the Gulf Cooperation Council (GCC) are nowadays aware of ending resources and declining demand of oil- and gas-burning countries due to electric mobility and enhanced ecological awareness. Additionally, new oil production methods as hydraulic fractioning, increasingly used, for instance, in the United States of America, intensify competition on the oil markets. The oil price fluctuation and its decline over years jeopardize the wealth of the GCC States.

How do the countries of the Gulf region and their cities respond to this drastic change? Are they, like so many other cities in the world, trying to reach the status of a 'smart' or an 'informational' city? Is it indeed a target of these very wealthy oil-based cities to set up a knowledge economy and become a knowledge society? We are going to look behind the glimmering facades of the Gulf cities and describe and analyze their status as informational cities, i.e. as cities of the knowledge society. It is no methodological problem to concentrate on cities (instead of the entire state or emirate) because in all states and emirates there is only one big city region dominating the whole country. Our study was done by field research on-site and by applying a customized questionnaire and interviews (N = 34) concerning questions about important aspects of cities of the knowledge society, namely infrastructures, economy, politics and administration, location factors as well as (physical and digital) spaces (Barth et al., 2017a).

BACKGROUND

What do we refer to when we speak of 'smart cities', 'informational cities' or 'cities of the knowledge society?' The field of research concerning the smart city concept is still emerging (Nam & Pardo, 2011b). A consistent definition of 'smart city' does not exist due to a variety of conceptual variants (Nam & Pardo, 2011a). Many definitions focus mainly on the technological perspective including the use of ICT. There are two concepts available in the latest literature: (1) the concept of a smart city in a broader sense and (2) the concept of a smart city in a narrower sense (Fietkiewicz & Stock, 2015). The concept in the

Figure 1. Oil as the source of wealth in the GCC States.

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