

1. INTRODUCTION

“Its trees were burned decades ago, its hills leveled and the fresh ponds drained and filled [...]. Reaching out urbanizing tentacles from its island home, the city has become a megalopolis [...]: a slab of primordial granite and metamorphic rock bounded on all sides by water, squatting like a steel and stone spider in the midst of its web of bridges, tunnels, tubes, cables and ferries. [...]here seems to be no limit to the people crowding here. They press in from the outside and raise their families, and their children and their children’s children raise families, until this city is populated as no other city has ever been in the history of the world”.

Harry Harrison (1966: 11)

1.1 AIM OF THE STUDY

Hardly any other city in the world grew as fast during the last decades as the capital of Bangladesh. Due to the political violence in the aftermath of the declared independence in 1971, Dhaka’s population growth reached a peak with annual rates of 8.9 percent. This meant nearly a doubling of the city’s population in not more than eight years. Although the urban growth rate decreased gradually to 3.5 percent (World Bank 2007), Dhaka’s pace of urbanization has remained high until today due to ongoing rural-urban migration (Siddiqui et al. 2000). Every year, the city becomes the new residence of approximately 450,000 people. In 1951, Dhaka had a population of 336,000 (BBS 1951 after Islam 2005). Today there are roughly 14.2 million¹ (Islam 2010): 42 times more inhabitants than before.

When I visited Dhaka for the first time, I was simply shocked by the mere number of people who moved back and forth through the labyrinth-like road networks. I remember very well one of my first CNG² rides through the city. It was August and while the monsoon rainfalls got less and less, heat and dust reconquered mastery over the city. Out of my vehicle I saw an old looking woman who sat under a sunshade and mashed bricks in order to sell the obtained “soil” as filling material. Behind her two garbage collectors searched through mountains of foul-smelling waste for items still usable. Not two meters away, a white-collar professional sat in his air-conditioned four-wheel drive truck behind shadowed

1 While the first figure refers to the area of the Dhaka City Corporation (DCC) with an extension of 145 square kilometers, the latter number refers to Dhaka Metropolitan Development Planning Area (DMDP) with a size of 1,528 square kilometers.

2 The autorickshaws in Dhaka are run by compressed natural gas, from which the name “CNG” stems from. The vehicles were converted at the behest of the government, mostly on private workshops, from the mid-1990s onwards in order to reduce air pollution and greenhouse gas emissions in Bangladesh’s cities (Rahman 2006a).

window glass focussing on the screen of his laptop computer. In roughly one hundred meters height behind him I realized the vitreous façade of a skyscraper under construction. ... I felt like someone had transferred me into the unsettling dystopia “Make Room! Make Room!”, in which Harry Harrison (1966) described the hardships of human life in a world driven by overpopulation and depleted resources, in which only a small elite can afford vital means while the masses of people suffer from the harsh consequences of environmental pollution, ongoing supply crises and extreme poverty.³

In subsequent years, I realized that I was not alone with this feeling. In the literature, megacities in the Global South are regarded as risk areas (Kraas 2008). Due to the concentration of people, their unprecedented growth rates, their complexities, and their dynamism, these agglomerations are seen as one of the major challenges of contemporary urbanization (Kraas 2010).⁴ From a development perspective, the concern is about the expected loss of urban governability, the uncontrolled spread of informality, crime and violence, and the inexorable increase of deprivation and vulnerability (Bronger 2004; Kraas & Mertins 2008; Satterthwaite 2005). Of central concern in this regard is the supply of megacities with resources essential for survival, such as water, energy or food. Megacities are seen to be particularly prone to supply crises (Kraas 2003). Against this background, I assume, one major proposition drives the entire international research initiative: Megacities are taken to be synonymous with human misery and hardship, whereas a seemingly “natural” link is established between the concentration of people and an expected urban crisis.

I gathered my first impressions of the megacity of Dhaka in 2007, a time when a rapid rise in food prices pushed hundreds of millions of people around the globe into hunger and poverty – especially in cities (Cohen & Garrett 2010; FAO 2011; Ruel et al. 2010). In Bangladesh, this global food crisis was exacerbated due to the fact that it was accompanied by an ecological and a political crisis. The ecological crisis resulted from the combined effects of the 2007 monsoon floods and Cyclone Sidr (November 2007) and brought devastation, destroying much of the paddy crop in Bangladesh’s North and South (Webster et al. 2010). Consequently, the country had to import large quantities of food grain just when world market prices started to rise to unprecedented heights. In consequence, the “rice nation” of Bangladesh was particularly sensitive to the global food price hike of 2007/2008 (FAO 2011; World Bank 2010). This economic crisis most severely

3 Cf. the quote at the beginning of this chapter.

4 This fact is reflected in a number of interdisciplinary research programs that work on the topic since 2005, among them “Risk Habitat Megacity” (German Helmholtz Association), “Emerging Megacities: Research for the Sustainable Development of the Megacities of Tomorrow” (German Ministry of Education and Research), “Megacities-Megachallenge: Informal Dynamics of Global Change” (German Research Foundation), “Urbanization and Global Environmental Change” (International Human Dimensions Program), “Urban Resilience” (Resilience Alliance), and most recently “North-South-Network on Urban Self-Organization. Public Life in Europe, India and China” (European Union).

affected the country's urban poor, because they primarily rely on their cash income for accessing food, and thus face difficulties if prices rise rapidly while their income does not (Zingel et al. 2011). In addition, 2007 and 2008 were marked by a political crisis in Bangladesh, as the 2006 elections were suspended and a caretaker government took control. This military-backed interim government was supposed to remain in power for three months, until free and fair elections could take place. In fact, it ended up maintaining control of the country for two years in an effort to re-establish law and order and eradicate corruption throughout the political-economic system. Yet most visible among the interim government's actions were large-scale slum clearance drives and evictions of informal markets, which again affected the livelihoods of the urban poor severely (IGS 2008; Siddiqui et al. 2010).

This multidimensional crisis had devastating effects in the country's capital, the megacity of Dhaka. Nevertheless, a large-scale catastrophe was prevented. Although Dhaka's supplies were repeatedly disconnected as a result of production shortfalls and road blocks due to flooding, there was always enough food in the city (Keck et al. 2012). Even though the interim government evicted thousands of hawkers, street food was still available and the sale of prepared food was not substantially disturbed (Etzold 2013). And finally, even though the prices of staples rose by more than 100.0 percent within two years (MoA 2009), most of the urban poor found ways to endure the crisis (Zingel et al. 2011). Against this background, I want to raise the following questions: Who are the people who constitute Dhaka's food system? How did they make it robust enough to avoid a catastrophe of even larger dimensions? And what hardships did they bear in building and maintaining this resilience? By answering these questions on the basis of empirical evidence, I attempt to contribute to the deconstruction of megacities as synonyms for human misery and hardship – not by overlooking poverty, exclusion and vulnerability that without doubt exist in Dhaka, but by highlighting people's strengths, their confidence and their capacities to hang on despite all difficulties.

1.2 OUTLINE OF THE STUDY

Geographers have contributed a lot to improve our common understanding of food systems and food security worldwide. With this study I want to add to this knowledge. I do this by diverging from other studies in three respects: 1) With a focus on the food system of Dhaka, I place attention on food security in cities in contrast to other studies that focus on rural areas (cf. Adhikari & Bohle 1999; Bohle et al. 1993; Devereux 2007; Dittrich 1995; Raithelhuber 2001; Rettberg 2009; Tröger 2004; Van Dillen 2004; Watts 1983). Even though in recent years, a number of studies on urban food systems have been put forward (Bohle & Adhikari 2002; Gertel 1995, 2010; Lohnert 1995), until today, food distribution in cities is least understood (Bohle et al. 2009). 2) While most of the above mentioned studies put the focus either on food production and food-short regions or on food consumption and food-insecure people, I concentrate on the locations where food

enters the city, i.e. on wholesale markets, from where food flows into the various channels of the intra-urban food system. By doing so, I seek to meet Maureen Mackintosh's (1990) call to study "real" food markets that she perceives as crucial link in the food system which determines who eats, how much and when. 3) Instead of asking for those factors and dynamics that make food systems vulnerable (cf. Blaikie et al. 1994; Bohle et al. 1994; Chambers 1989; Swift 1989; Watts & Bohle 1993), I shift attention to the resilience of Dhaka's food system (cf. Bohle et al. 2009; Ericksen et al. 2010; Le Vallée 2008). From this vantage point, the focus of this study shall be directed toward people's strengths to cope with and recover from adversities despite their limited resources and to their potentialities to develop institutions that improve their individual welfare and foster societal robustness toward future crises. I do this by emphasizing the particular role that wholesale traders play for feeding a megacity like Dhaka in the face of stress and crisis. By taking rice and fish as cases, I am in a position to compare the merchants' situations in markets for perishable and non-perishable goods.

This study exhibits the following structure: In the second chapter, I present key theoretical considerations and develop the conceptual framework that serves as guideline for the latter analysis. In the first part, I provide an outline to the contemporary *geography of food systems* and its current debate on vulnerability and resilience. In the second part, I compose a people-centered approach to *social resilience* which stands opposite to systems-oriented interpretations of resilience that are popular in the current debate on food systems and global environmental change. In the third part, I anchor the notion of social resilience in neoinstitutional organization theory and transfer it from development studies to economic geography in order to make it fruitful for the study of *real markets*. Real markets – the focus of part four – are understood as partly localized, partly virtual social spaces that comprise a set of institutions and a number of actors who are mutually interlinked by social relations, who possess divergent power resources, and who organize repeated exchange of goods while following the general aim to ensure the survival of their business organizations (Fligstein 1996, 2001; Fligstein & Dauter 2006). Three levels of analysis are distinguished for the study of food markets in Dhaka, i.e. *practices*, *networks* and *arenas*, which together reflect actors' structural and their institutional embeddedness. In the fifth part, eventually, I summarize the findings of the theory chapter and specify the concern of this study: This is to study the *economic resilience* of food wholesale traders to business related risks and political uncertainties with the aim to understand the specific role they play for Dhaka's food system.

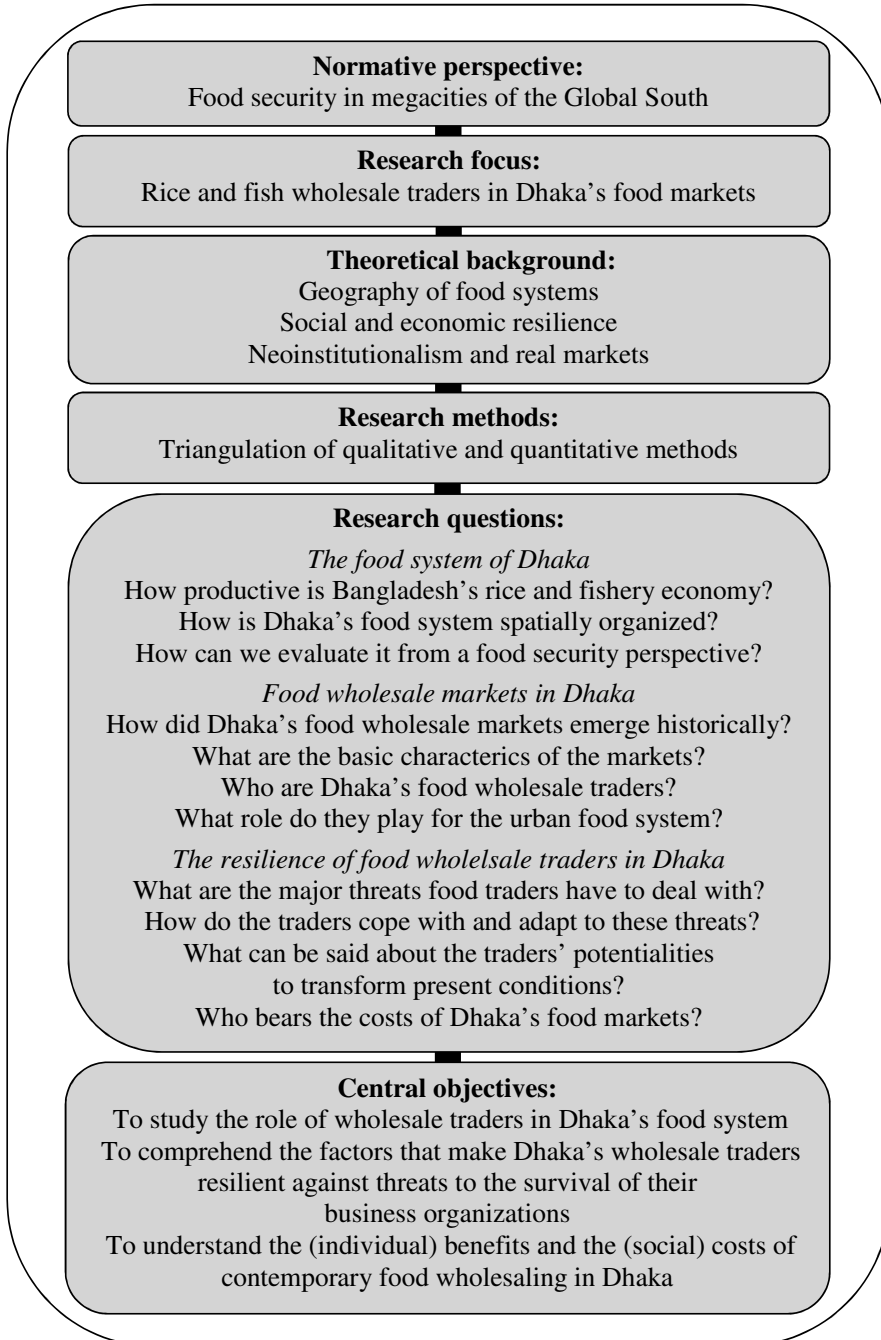
In the third chapter, I depict the methodology of the study. For data collection and analysis I resorted to the *triangulation of qualitative and quantitative research methods*. Mappings provided insights into the spatial organization, recent developments and present dynamics of the megacity's food system. Observations, guided interviews and focus group discussions were of great use for getting insights into the everyday practices and personal perceptions of the wholesalers, and for revealing prevalent governance modes in Dhaka's food markets. Venn-diagrams, a participatory research tool, were of particular avail for understanding

the meaning of the merchants' business relations. Standardized surveys allowed for testing the representativeness of findings of the ethnographic field work, and proved to be indispensable for capturing the different structures of the wholesale traders' business networks.

The empirical results of this study are presented in the chapters four, five and six. The fourth chapter ("*The food system of Dhaka*") serves to equip the reader with the research context and illustrates the current situation and robustness of Dhaka's food system. In the first part, I retrace Dhaka's history and its development from city to megacity. In part two and three, I introduce Bangladesh's rice and fishery economy, present recent production figures and assess Dhaka's food system in terms of food availability and food accessibility. My principal research questions in this part are: How productive is Bangladesh's rice and fishery economy? How is Dhaka's food system spatially organized? And how can we evaluate it from a food security perspective? In chapter five ("*Food wholesale markets in Dhaka*"), I change the perspective and introduce Dhaka's food markets and its actors to the reader. In the first part, I present how the numerous wholesale markets for food emerged in Dhaka in the past century. Subsequently, I outline Dhaka's value chains for rice and fish in order to highlight the role that wholesale traders play for the urban food system. I complement this rather abstract description by more concrete figures on the very people who are involved in food wholesale trading in Dhaka and on their business organizations. My guiding questions in this section are: How did Dhaka's food wholesale markets emerge historically? What are the basic characteristics of these markets? Who are Dhaka's food wholesale traders? And what role do they play for the urban food system? After having answered these questions, the ground is prepared for discussing "*The resilience of food wholesale traders in Dhaka*" in chapter six. In a first step, I outline the food traders' embeddedness in their business networks and depict basic organizational patterns of the food wholesale business that are fundamental for the traders' *capacities to cope* with their everyday business. Afterwards, I ask for major threats to the more long-term survival of the business organizations in Dhaka's wholesale trade and present evidence on what I call the *adaptive capacities* of the traders. Finally, I shift attention to the wholesalers' position in the urban arena and to their potentialities for upgrading and development. Particular emphasis in this regard is put on the access to and appropriation of public places for marketing purposes, which turns out to provide key insights into underlying power structures of Dhaka's food markets and into the traders' so-called *transformative capacities*. My key questions in this part are: What are the major threats food traders have to deal with? How do the traders cope with and adapt to these threats? What can be said about the traders' potentialities to transform present conditions? And, finally, who benefits from the current system and who bears its costs?

The seventh chapter eventually provides space for a summary of findings and for some reflections on the meaning of this study for future research on megacities, urban food systems, real markets and social resilience. Figure 1 shows the research framework of this study.

Figure 1: Research framework



Source: Own draft