Understanding the varieties of green-driven growth: Cities and renewable energy in the Global South

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This dissertation is inspired by the wish to contribute to the academic body of knowledge vis-a-vis two major trends: urbanization and sustainability. The first trend refers to the growing importance of cities, a development that reached a critical milestone in 2010. By then, 50 per cent of the world’s population lived in urban areas. According to the United Nations, this figure is set to rise to 67 per cent by 2050. This shift will particularly be felt in the Global South: the amount of urban dwellers in the developing world is expected to increase significantly. The most urgent societal challenges will arise in cities that can be found outside Europe and beyond the OECD. If we are to understand the way societies will change because of the urban challenge, we therefore need to investigate the urban context of medium-size cities in the Global South, where demographic and economic growth is fastest.

The second trend can be described as a growing interest in creating a more sustainable way of living. There is a major drive to re-think the way we manage the world’s natural resources. The growing awareness of a looming scarcity in terms of water, energy, food and other resources, coupled with the anticipated consequences of unimpeded Climate Change, have brought about a global call for greater sustainability. As a consequence, there is much interest among social science scholars in addressing the governance challenges that underpin societal transition processes, and various aspects of sustainability transitions are being investigated more in-depth. The future of energy stands out as a major field of interest. However, much of this work focuses on the existing energy systems in today’s industrialized economies; energy transitions in the Global South remain understudied. This is an important omission.

Taken together, urbanization and sustainability transitions call for a new research agenda, as global sustainability is increasingly becoming a question of urban sustainability in the developing world. This holds particularly true in regards to future energy supplies. If the current trends continue, many more urban agglomerations will need to provide a growing number of citizens with energy resources, be it for industry, households or transport.
This study therefore aims to contribute to this emerging field of enquiry: understanding the dynamics that underpin sustainable energy transitions in the context of cities in the Global South.

The academic relevance for this study stems from the need to add an international development studies perspective to the field of economic geography on the one hand and in the sustainability transitions literature on the other. Economic geography, in particular the world city network discourse, has thus far paid little attention to the way cities in the Global South are integrated in international business networks. London, Tokyo and New York dominate the current top-city rankings and related research projects, and most research initiatives on city networks take so-called Advanced Producer Services (APS) as a starting point. Cities in the Global South remain beyond the scope of most enquiries. The sustainability transitions discourse, which is a more recent field of enquiry, has a similar weakness when it comes to developing countries. Low-carbon initiatives in OECD cities have become a common research subject, whereas cities in the Global South have remained at the sideline of scholarly interest. In this study, I therefore look more in-depth at the role of renewable energy in medium-size cities in the Global South – where energy demand is expected to grow fast due to demographic and economic change. The research question is formulated as follows: What is the role of cities in the Global South in shaping local economic development in the context of the global economy’s gradual shift towards a greater share of sustainable energy?

This dissertation consists of five separate, interconnected papers. Two were published in, two submitted to leading peer-reviewed journals, and one was published in a peer-reviewed book. Each of the five papers tackles a particular issue that relates to the theoretical discourse in economic geography or sustainability transitions. Papers 1 and 2 are positioned in the economic geography discourse and zoom in on the city as a business node within a global business network of office locations. Paper 3 looks at the political and economic maneuvering space for a city and introduces the idea of green-driven growth. Papers 4 and 5 are placed within the sustainability transitions discourse.

The overall narrative starts with a methodological paper, which applies the concept of peer cites for a new type of world city network assessment. The main argument here is that the predominant view on city networks
is biased towards the so-called advanced producer services (APS), such as
global accounting and legal advisory firms. The alternative is to look at a
city’s own interests and values, so that for example Durban’s maritime trade
business is considered an asset that links the city to the rest of the world –
independent of the city’s APS ranking. This notion is then taken one step
further in paper 2, which builds an argument for assessing the network
linkages between peer cities in India’s renewable energy sector. These peer
city connections create their own networks, and provide an alternative as-
essment that is markedly different to existing methodologies (which often
focus on city rankings). Paper 3 looks at renewable energy business devel-
opments in selected Indian cities and introduces a new nuance in the green
economy debate. It is argued that there is a difference to be made between
green-conscious growth on the one hand (where environmentally friendly
production is central) and green-driven growth (where the production of
environmentally friendly products is central). Paper 4 then discusses the
concept of green-driven growth in the light of the ongoing green economy
debate. It presents findings based on Cape Town’s experience with renewa-
ble energy and shows how the city’s ambitious sustainability vision evolved
from a radical environmental agenda into a more economic-driven agenda.
The final paper 5 looks at green-driven growth from a city network per-
spective, coming back to the world city network theme of papers 1 and 2. It
takes the sustainability policies in Morocco and South Africa as a starting
point in order to add empirical evidence to the assumption that a ‘varie-
ties of glocalisation’ approach helps enhancing our understanding of green-
driven growth. It includes a geographic analysis of the office locations in
the international business networks that are involved in the national tender
processes for renewable energy.

Based on the findings, I argue that green-driven growth in cities in the
Global South is best captured as a context-specific development, which re-
flects the political and economic position of a city within national policy
agenda’s and the global business networks. In this, the city has to be under-
stood both in its pro-active and in its passive roles. Paper 1 and 2 show that
global business networks ‘select’ business locations and thereby establish
linkages across cities, thus confirming the passive role of cities at the receiv-
ing end of decision-making in the global economy. At the same time, city au-
thorities can influence locational strategies and facilitate specific industrial
developments. In the case of renewable energy, cities increasingly claim the mandate to define a sustainability agenda, which carries the potential to attract renewable energy businesses in the city. Urban authorities therefore have a certain freedom to decide which renewable energy developments to embrace (paper 3). A more passive role can also be found when looking at cities as a scale within a national governance structure, in which the national authority still holds the main responsibility for the overall design of the energy system. The cases of Cape Town (paper 4 and 5) and Casablanca (paper 5) show the varieties that can be found in different national contexts.

These observations lead to a heuristic framework for green-driven growth, which brings together five interconnected aspects. First, the national context determines much of how city authorities can operate vis-à-vis other scales and in which policy fields they can introduce meaningful change. Second, the global context acts as an outside force, which impacts on the position of the city as a business location. Third, the city can decide on the level of action and to what extent it leverages its options as a political or economic actor. Pro-active city authorities invest time and resources in creating local and international networks, passive ones might not. Building a specific business hub for example is one way for a city to be more than a mere ‘recipient’ of global business decisions. This way they influence how national policies and business networks impact local (economic) developments. In this, there is a strong relationship with the specific national policy environment, which has to be taken into account. Fourth, green-driven growth depends on the multi-scalar (hybrid) arrangements that connect the city to different players at different levels. National funding agencies might be important in financing a wind farm (Cape Town), or city business hubs elsewhere in the country might prevent a city and its stakeholders from competing with peers (Casablanca). The more interconnected the renewable energy market, the more complex these arrangements become.

In turn, these four aspects shape the fifth aspect, what could be called ‘urban imaginaries’, which stand for the political vision that drives socio-economic change in the field of urban sustainability. These urban imaginaries are an important element in understanding the way city authorities act in an increasingly interconnected world, where knowledge transfer is fast and urban policies can easily ‘travel’ across territories to be applied elsewhere. I therefore propose to apply this heuristic framework for understanding
the way green-driven growth unfolds in a specific location. It is particularly useful for scholars in the field of international development studies because of the model’s attention to specific arrangements in a development context. The future of renewable energy, of the green economy, as well as the resulting consequences for sustainability policies will not be homogeneous. Depending on the context, sustainability is likely to mean different things in different parts of the world. In this light, the argument to highlight the role of cities and the existing ‘urban imaginaries’ vis-à-vis both national and global (business) stakeholders, as well as the call for investigating the hybrid arrangements that exist across these scales represents a timely contribution to the scholarly debate. The notion of ‘varieties of green-driven growth’ thus provides a guideline for future studies in economic geography in the context of urban sustainability transitions in the Global South.