

New frontiers on the rise: Dynamics and trends in the renewable energy sector in Africa

Supervisors: [Dr Charles Mbalyohere](#), [Prof Dev Kodwani](#) and [Prof Ali Ataullah](#), Department for Accounting and Finance, The Open University Business School

Project description:

Several studies have investigated how dynamic capabilities (DCs) enable technology start-ups to adapt to environmental turbulence in advanced markets (e.g. Gelhard et al., 2016; Helfat et al., 2009; Teece, 2007) and, increasingly, in the largest emerging markets (e.g. Dixon et al., 2014; Li & Liu., 2014). Fragile emerging markets may however require more sophisticated adaptation beyond the sensing, seizing and reconfiguration capabilities seminally proposed by Teece (2007).

In Uganda, for example, the off-grid solar power sector initially experienced minimal state interference, given a national energy policy that prioritized hydropower (Mbalyohere et al., 2017). It is only when confronted by the increasing penetration of solar power, and the global campaign to promote more use of renewable energy, as a strategic response to climate change, that the Ugandan government reviewed its priorities. Consequently, first movers were confronted with explicit institutional and political involvement much later whereas new entrants experienced it from the start. While some first movers and new entrants adapted well, others struggled. The proposed project will therefore examine how energy start-ups of diverse origins and configuration have adapted their DCs to the institutional changes and/or developed new ones and why some have performed better than others in adapting to the African market. The findings will contribute to the emerging knowledge base surrounding solar power use in African and other developing countries. Further, it will serve as a basis for making policy and strategy recommendations to various stakeholders in the continent's energy industry, including governments, development aid agencies and energy firms.

The study is informed by two indicative research questions:

- 1) How can energy start-ups in the renewable energy sector in Africa's new frontier markets configure their market entry and adaptation strategies to enable sustainable success?
- 2) Why do some energy start-ups perform much better than others in sustainably entering and adapting to these markets?

Some of the most important indicative objectives the study will consequently pursue are the following:

- i) To establish how energy start-ups in the renewable energy sector in Africa's new frontier markets configure their market entry and adaptation strategies to enable sustainable success?
- ii) To establish why some energy start-ups perform much better than others in sustainably entering and adapting to these markets?

iii) To disseminate the findings of the study using highly ranked conference/journal papers and impact workshops (attended by representatives from the start-ups and development aid agencies, academics and other practitioners)

iv) To develop expertise in the faculty hosting the research at The Open University in a sector that is increasingly important to international development aid strategies

Theoretic focus and contribution:

In extant research, innovation and adaptation have been recognised as fundamental capabilities that should be considered in the strategies developed by energy start-ups (e.g. Dixon et al., 2014). But while the specific capabilities needed in generally institutionally-stable environments have been widely studied, the complex nature of environmental dynamism (Li and Liu, 2014) in new frontier markets implies that extant findings based on highly institutionalised and open economies may not be directly applicable.

The study will hence primarily investigate the diverse forms of market entry and adaptation (Gelhard et al., 2016; Helfat, 2009) by energy start-ups to Africa's new frontier markets over a ten-year period (2010-2020) and how these adaptations have evolved in this period. Further, it will extend into how these energy firms are positioning themselves to succeed in future in a fast-growing sector on the African continent. Not least, the study will interface with urgent international initiatives and programmes to adapt Africa's energy needs to global climate change dynamics. Most importantly, the study will draw on growing thinking at The Open University about financing strategies, infrastructure development and regulatory questions in key sectors in emerging markets more broadly (Kodwani, 2009). The project will also pay close attention to cultural difference between countries within the context of investment (Ataullah et al., 2014).

Methodology of the study:

While the student will ultimately make the requisite methodological choices best suited for the study, an in-depth case study approach as a pilot in the early stages will be useful in identifying the most important issues and refining the research design. This would then inform the development of a quantitative survey to attain generalizability of the findings. A combined resource-based (e.g., Grant, 1991; Peteraf, 1993; Teece, 2007) and an institutional (e.g., Peng et al., 2008) theoretic perspective is proposed as theoretical basis of the investigation, thus offering an opportunity to integrate two of the most influential theories in management to extend their utility in an African new frontier market context.

In the interest of nurturing independent and compelling research skills, there will be room to refine the indicative questions provided above further as informed, not least, by the pilot findings using 1-2 countries and the emerging thinking of the researcher in interaction with the supervisors.

Practical impact and importance of the study:

In addition to the potential contributions from a theoretical lens, there are some practical considerations that further underline the room for impact and importance.

Firstly, given the growing strategic role of fast-growing African new frontier economies to the whole continent and, increasingly, the global economy, a study that illuminates the strategies that are critical in the fundamentally important renewable energy sector is of multiple benefit. As an example, Uganda is increasingly being selected as a springboard for entry in the wider Great Lakes region, given its locational advantages (Mbalyohere et al., 2017). Insights from it are therefore of wider relevance in the region.

Secondly, in light of millions of people in Sub Saharan Africa still lacking reliable, affordable and sustainable access to electricity and given global efforts to change the situation (for example through the UK government's flagship 'Energy Africa Campaign', which seeks universal access to electricity in Africa by 2030), the insights from the study also have direct relevance for such development agendas. They can, for instance, inform donor governments, through their aid agencies, about how they can better support the start-ups and the governments involved.

Finally, the possibility to directly engage with some of the start-ups and the aid agencies involved, both during data collection in the field and during collaborative workshops at the lead institution (The Open University), offers an opportunity for the study to be relevant to practitioners and to strengthen the interaction between academia and practice.

The study, in conclusion, positions the research applicant to play an important role in developing a dynamic research agenda and activity portfolio around the theme.

About the supervisors:

Dr Charles Mbalyohere

Charles is a lecturer in strategic management. He has extensively researched on the nonmarket Strategy of multinational enterprises (MNEs) in Sub-Saharan Africa, with particular focus on the energy sector during pro-market reforms. He has thereby illuminated the interaction between MNEs and emerging institutions and the organisational capabilities that characterise these interactions. His recent interests include the dynamic capabilities of energy start-ups in Africa's off-grid energy sector, especially the adaptability to fragile institutional conditions. His papers have featured in leading journals like the Journal of World Business, the Journal of International Management and the Academy of International Business Insights.

Prof Dev Kodwani

Dev is the Executive Dean of the business school and professor in finance and accounting. His current research focuses on the evolution of regulatory institutions in India, corporate governance and ethics. He has been examining the reforms in the electricity, water and telecommunications industries in the UK and India. He is currently engaged in research on corporate governance, institutional endowments and regulatory capabilities in India. His other research interests include behavioural finance, governance, management and accounting in utilities, and derivatives.

Prof Ali Ataullah

Ali is a professor in finance and accounting. His current research interests include corporate diversification, within-firm allocation of resources, security issuances, public procurement and mechanism design. He has worked on other topics in corporate finance such as insider trading, financing constraints and asset sell off, and bank efficiency and productivity. Not least, he has published in academic journals of international excellence, including Abacus, Accounting and Business Research, British Journal of Management, European Financial Management, European Journal of Finance, Financial Review and Human Resources Management (US).

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