


Chapter 9

FDI and the Gap of Clean Power Finance: The Case of Africa

Ahmed Rashed

 <https://orcid.org/0000-0003-2945-0921>

Universiti Malaya, Malaysia

Yong Chen Chen

 <https://orcid.org/0000-0002-1022-6615>

Universiti Malaya, Malaysia

Siew-Voon Soon

Universiti Malaya, Malaysia

ABSTRACT

Twin deficits in energy and financing are extensively detrimental in Africa which in turn entails foreign direct investment (FDI) to be effectively promoted. This study intends to examine the determinants of FDI in the clean power industry in Africa over the period 2003-2019. By using a robust model of FDI panel gravity fixed effects Poisson pseudo-maximum likelihood, a range of encouraging and reassuring results are found. Importantly, enhancing the awareness of the importance of renewable energy robustly attracts FDI in Africa. Moreover, as anticipated, geographical distance is not the main factor in influencing the decision made by foreign investors. Moving forward, improving renewable energy education with the timely availability of data promotes awareness in society and thus may facilitate the development of the clean power industry in Africa in the near future.

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INTRODUCTION

The power security issue is a precondition for economic development. Concurrently with announcements of reaching the electricity universal access and achieving electricity surplus by different countries worldwide, Africa is still incapable of meeting its people's power needs. Africa is an influential continent globally; the second-largest and fastest-growing population continent inhabited by a fifth of the world's people in 54 countries that is distributed into two central regions: North Africa (NA) and Sub-Saharan Africa (SSA). This labor and geographical wealth inadequately contribute to power security; almost 600 million Africans lived without power access and 900 million had no modern and clean cooking facilities in 2019 (IEA, 2019). Another example of an electricity insecurity issue is highly highlighted during combating coronavirus pandemic in which thousands of African hospitals were without power, leading to impeding social distancing (IEA, 2020). In other words, electricity frequent outages negatively affect the required environment for social distancing adoption in Africa, e.g., Africans could not stay connected at homes and continue to communicate with public services remotely; a situation that could force them to gather and communicate face to face. Generally, Africa forms only 4% of the global power utilization, achieving just 45% of the global access to power in SSA comparing with 98.5% in NA in 2019 (ADB, 2018; IEA, 2019; Pappis *et al.*, 2019). NA is wholly electrified; however, this region struggles to meet its growing energy needs.

Readers immediately may infer that electricity insecurity is detrimental to Africa. Since 2010, the continent's gross domestic product (GDP) constituted limited growth of 3.1% comparing with 3.5% globally. The acute shortage of power aggravates the situation. Thus, Africa loses about 2%-4% of its GDP per annum; which disrupts doing businesses in many African countries (IEA, 2019). Energy poverty, therefore, is harmful to Africa. So, what do African policymakers do now? Is a fossil fuel-based power expansion relevant? It is an unwise option of which it would contribute towards global warming.

Global warming is an international threat ascribed to fossil fuel burning. Africa is the most vulnerable to this phenomenon's effects as it highly depends on agricultural activities, enacts weak adaptation policies, has food insecurity problems, and faces rising poverty rates (Acheampong *et al.*, 2019). Thus, it is unwise that Africa treats its power deficit by fossil fuel burning. Put differently, in Africa's attempts to mitigate its electricity insecurity challenges with considering the Paris Agreement [limiting global average temperature to below 2 degrees Celsius and improving renewable energy technologies use] and the UN Sustainable Development Goals [specifically goal 7 of reaching affordable and reliable energy for all, as well as goal 13 of combat climate change]; it should harness its renewable energy [RE] resources (Garcia, 2022). It is believed that managing African power insecurity by RE can put the continent on the right track. The International Energy Agency (IEA) cited that Africa can meet almost a quarter of its energy demand by 2030 if it harnesses its RE effectively (Aliyu *et al.*, 2018; IEA, 2019).

Here, the public may wonder, why is Africa still lagging in energy issues? The simple answer is because the RE financing gap, which renders a substantial part of clean power [CP] resources¹ untapped. Readers, thus, can easily understand that this gap is at the core of electricity insecurity issues in Africa. Additionally, for the information of the readers, African RE development is mainly funded by global financial assistance resources, which are basically insufficient. As a result, further RE financial needs are growing which entails inbound green foreign direct investment [FDI] to be promoted (Adesola *et al.*, 2018; IEA, 2019; Bunyaminu & Yakubu, 2022).

Against this backdrop, this study intends to propose insights and recommendations to accelerate and stimulate the FDI into the clean power industry [CPI]. Put differently, this chapter empirically examines

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