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Financing energy SMEs in Ghana and Senegal: Outcomes, barriers and prospects

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HIGHLIGHTS

- Analysis of the AREED 'demonstration effect' in Senegal and Ghana.
- Commercial financial backing for SMEs remains a serious challenge for entrepreneurs.
- Structural issues that increase the financial risk of investing in energy SMEs.
- High transaction costs of investing in SMEs.
- Longer supply chains and slower pay-back periods for capital-intensive technologies.

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ABSTRACT

The article presents the findings of primary research carried out in Ghana and Senegal, which revisited the main assumptions behind the African Rural Energy Enterprise Development (AREED) initiative (2002–2012), and other donor-backed programmes, designed to promote small and medium-sized energy enterprises (energy SMEs). These assumptions were (1) that the lack of affordable local financing presented the most significant barrier to setting up and expanding energy SMEs, and (2) that these barriers would be overcome by a 'demonstration effect' whereby successful businesses, supported by donor-backed programmes, could in turn influence the commercial financial sector to invest in energy SMEs, thus triggering a virtuous circle of growth and profitability.

1. Small and medium-sized enterprises (SMEs) in less developed countries

Definitions of SMEs vary from country to country, according to the size of the economy, the structure of its corporate sector and any relevant policy frameworks. However, SMEs are most often defined by the total number of employees, total investment and sales turnover. Many academics refute the use of purely quantitative measures for the definition of an SME, instead choosing to emphasise a company's organisation and behavioural characteristics, such as their degree of legal independence, small-scale decentralisation, generally flatter organisational hierarchy, higher degree of informality, smaller market power and lower level of technological sophistication (Biggs, 2002; Senderovitz, 2009; Brytting, 1991). Storey (1994) elaborates on these qualitative definitions of SMEs, identifying key economic characteristics such as owning a small share of the market, the inability to influence price levels, a limited customer base and the general lack of performance monitoring. Further, control of SMEs tends to be the responsibility of just one or two people and provide products and services that are marginally different from those of larger firms, and SMEs are less likely to undertake research and development than larger firms or undergo significant structural change.

According to the African Economic Outlook for 2005, a qualitative definition of SMEs based on the profile of the individual entrepreneurs and their strategy is more relevant and useful than purely quantitative criteria, when analysing African economies. Here, 'micro enterprises' are defined as family businesses that use simple technology and perform activities for the subsistence of the enterprise, i.e. the family. 'Small enterprises' are those whose owners possess some managerial and specific technical skills. They may rely on family members but they are usually registered, pay taxes and may even participate in a professional organisation. 'Medium-sized enterprises' involve substantial working capital, specific technology and therefore a medium to long-term vision on the part of the entrepreneurs. Such medium-sized firms are mostly formalised and pay regular taxes (AfDB and OECD, 2005). Within the African context, the definition of an SME also greatly varies, with basic

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quantitative definitions varying significantly between countries. A study conducted by Calice et al. (2012) in Kenya, Tanzania, Uganda and Zambia found that 69% of banks in the surveyed countries defined SMEs solely in economic terms where size of loan and company turnover are the key criteria. Only 19% of banks in the sample considered number of employees when lending to SMEs.

1.1. Contribution of SMEs to economic growth

In many developing countries, SMEs constitute a significant portion of the national economy. Therefore, much effort has been focussed on SME development as a means to fostering economic growth that is more labour-intensive, entrepreneurial and competitive (Ayyagari et al., 2007). In the Republic of Congo, nearly 80% of enterprises employ less than five people. In Kenya, SMEs collectively employ around 3.2 million people and contributed about 18% of total GDP in 2003. In Nigeria, SMEs account for 95% of the enterprises in the organised manufacturing sector and around 70% of industrial employment. In Morocco, SMEs account for 93% of total enterprises, 38% of production, 33% of investment, 30% of exports and 46% employment. Even in South Africa – a more developed economy – micro and very small enterprises accounted for over 55% of total employment and 22% of GDP in 2003 whereas small enterprises accounted for 16% of both employment and production and medium and large firms accounted for 26% of employment and 62% of production (AfDB and OECD, 2005).

Tadesse (2009) maintains that the relatively low financial capital needs of SMEs foster an 'efficient use' of capital, highlighting that financial capital is a high-cost factor of production in most developing countries. They even make the case that SMEs are inherently more sustainable to the extent that they tend to make use of available local resources, i.e. local suppliers and customers, minimising transport needs (Tadesse, 2009).

Some academics claim that SMEs have other advantages over their large-scale competitors in that they are able to adapt more easily to market conditions given their generally broadly skilled technologies and flexible organisation, meaning they can better withstand adverse economic conditions (Kayanula and Quartey, 2000). Since SMEs are generally more labour intensive than larger firms they therefore have lower capital costs associated with job creation. By the same logic they are more likely to succeed in smaller urban centres and rural areas, where they can contribute to a more even distribution of economic activity in a region and can help to slow the flow of migration to large cities. Due to the regional dispersion of SMEs and their labour intensity it is argued that small-scale production units can promote a more equitable distribution of income than large firms, although this claim is made without empirical basis (Kayanula and Quartey, 2000; Abor and Quartey, 2010).

1.2. Financing SMEs in sub-Saharan Africa

The lack of access to affordable finance is often cited as the most significant barrier to the establishment and expansion of SMEs in sub-Saharan Africa, especially for businesses operating in new or relatively unknown sectors, including energy products and services (Denton, 2006; Mehlwana, 2003). Using data from the World Bank's Enterprise Survey which covered 13,685 companies across 38 sub-Saharan countries, Kuntchev et al. (2012) categorised enterprises into four categories: 'fully credit constrained', 'partially credit constrained', 'maybe credit constrained' and 'not credit constrained'. According to this categorisation, Kuntchev et al. (2012) found that among small firms, 28.8% are fully credit constrained, 30.3% are partially constrained, 10.9% are maybe constrained and 30.5% are not credit constrained. Among medium firms, 15.4% are fully credit constrained, 27.3% are partially constrained, 21.2% are maybe constrained and 36.1% are not credit constrained. Among large firms, 10.1% are fully credit constrained, 19.5% are partially constrained, 29.2% are maybe constrained and 41.2% are not credit constrained. These figures indicate a strong correlation between the size of a business and their access to credit, where smaller businesses are more likely to be credit 'constrained', reflecting the difficulties faced by small business entrepreneurs in securing loans from commercial sources. To a large extent, these figures reflect the higher risks typically associated with lending to smaller businesses, as well as the bank's lending bias to larger, more established businesses, that are generally able to leverage greater sources of private investor capital.

Given the fundamental importance of finance in the setting up and running of SMEs, it is useful to distinguish the main sources of external finance. For the purchase of fixed assets (capital goods) there are two main types of finance: equity (where the investor buys a share of the company value) and debt financing. Debt financing can be divided up into 3 types: formal debt financing which includes banks and other financial institutions; trade finance which includes obtaining credit from suppliers or customers and; informal credit from family, friends and moneylenders.

Using the World Bank Enterprise Survey data, Kuntchev et al. (2012) found that of the small businesses in sub-Saharan Africa that obtained external financing, 6.3% took the form of equity, 48.5% was formal external debt, 17.4% semi-formal financing and 27.8% informal financing. As can be seen in Table 1, the share of formal external borrowing increases as the size of the companies increase, with the levels of informal financing falling to 7.8% for large companies. As Kuntchev et al. (2012) point out, SMEs in sub-Saharan Africa rely much more on trade credit and informal sources of financing than businesses in other regions. Kauffmann (2005) characterises this high reliance on informal borrowing as unpredictable, insecure and offers little scope for risk sharing due to a local, regional or sector-based focus for lending.

The reasons for the high level of informal financing are not necessarily clear or obvious and vary between countries and sectors, and hence this issue formed one of the lines of enquiry in this research. However, Kauffmann (2005) highlights that formal financial institutions in sub-Saharan Africa are generally less willing to lend to SMEs due to the high risk of default, insufficient competition, poor guarantees and a lack of information about SMEs ability to repay loans (Kauffmann, 2005). Furthermore the financial sector in most African countries remains underdeveloped, shareholding is not commonly practiced and long-term commercial financing is virtually unheard of for SMEs. As such it is often left to non-banking intermediaries such as microcredit lending to 'fill the gap' in financing for African SMEs, however such intermediaries are limited in their ability to support customers when they expand (Kauffmann, 2005).

1.3. Government support for financing SMEs in sub-Saharan Africa

Some African Governments, such as in Kenya and Ghana, have attempted to remedy the lack of access to finance for SMEs by

Table 1
Sources of external financing for the purchase of fixed assets, sub-Saharan Africa.

Size of business	Equity external financing	Formal external debt	Semi-formal financing	Informal financing
Small (<20)	6.3	48.5	17.4	27.8
Medium (20–99)	6.4	59.1	21.2	13.3
Large (>=100)	7.8	71.1	13.3	7.8