

**FINANCING RENEWABLE ENERGY TECHNOLOGIES FOR END USERS: THE  
ROLE OF STRATEGIC PARTNERSHIPS BETWEEN FINANCIAL INSTITUTIONS  
AND ENERGY SERVICE COMPANIES IN ENHANCING UPTAKE OF SOLAR  
CREDIT**

**BY**

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**Declaration**

I, Amon Muchiri, do declare that this research project is my own original work. It has not been submitted to any college, institution, or university for the award of any academic certificate other than the Institute for Development Studies, University of Nairobi.

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## **List of Abbreviations**

RETs - Renewable Energy Technologies

ESCOs – Energy Service Companies

SEFA – Sustainable Energy for All

RBV – Resource Based View

KBV – Knowledge Based View

TCE - Transaction Cost Economics

ESMAP - Energy Sector Management Assistance Program

K-Rep – Kenya Rural Enterprise Program

PVMTI – Photovoltaic Market Transformation Initiative

SHS – Solar Home Systems

NGO – Non Governmental Organization

CBO – Community Based Organizations

GEF - Global Environment Facility

UNDP – United Nations Development Program

UNEP – United Nations Environment Program

KUSCCO - Kenya Union of Savings and Credit Cooperatives Energy lending program

LPG – Liquid Petroleum Gas

KWFT – Kenya Women Finance Trust

MESPT – Micro Enterprise Support Program Trust

IDCOL - Infrastructure Development Company Limited

SELCO – Solar Energy Company

REEEP – Renewable Energy and Energy Efficiency Partnership

CARITAS – Catholic Relief

WWF – World Life Fund



GIZ - Gesellschaft für Internationale Zusammenarbeit

IFC – International Finance Corporation

## **Abstract**

*There is consensus in literature that stimulating an off grid energy market can provide impetus in promoting access to modern forms of energy for low income households. Acquiring off grid energy solutions like solar home systems has, however, proved difficult for the energy poor because of high startup costs. However, there is a lot of literature that suggests microfinance has the potential of accelerating uptake of solar by offsetting these costs. Analysis of various financing models offered in various countries in the Global South shows mixed results. While in countries like Bangladesh and India financing schemes have achieved scale, in the case of Kenya, previous financing models by financial institutions and development organizations have not. A closer analysis of successful financing models shows that there has been significant involvement of energy companies in the provision of solar credit through partnerships with credit providers. Despite this, the role of energy companies in accelerating uptake of solar credit and solar technology has not been thoroughly discussed. In studies done on Kenya's financing models, the nature of these partnerships and their implications on uptake of solar energy has not been explored. This study fills this gap. It looked at the nature of strategic partnerships between financial institutions and energy companies and how they are impacting the uptake of solar credit.*

*The study carried out 5 in-depth case studies of partnerships between local Kenyan financial institutions and energy companies. Since the number cases to be studied were very limited, no sampling was done. Instead, the study opted to do a full census. The aim was to understand the relationship between these partnerships and the uptake of solar credit. Interviews were done with senior managers in financial institutions and their partner energy companies using a semi structured questionnaire. Interviews with key informants in the energy and financial services space were also conducted. The study found that strategic partnerships between financial institutions and energy companies had a positive effect on the uptake of solar credit. The partnerships have led to extensive sharing of resources including financial support, distribution networks for solar products, and manufacturing assets. The study also found that sharing of knowledge through the partnerships has been significant in most cases. Banks have benefited from the expertise of energy companies in the energy market. This exposure has helped them develop financing packages that meet the needs of targeted consumers. Energy companies on the other hand are accelerating sales of solar systems in low income communities by leveraging on the credit options offered by financial institutions. The study also found that institutional size, networks in targeted communities, and loan size had an effect on uptake of solar loans.*

## **CHAPTER 1: INTRODUCTION**

### **1.1. Background of the Study**

The United Nations in 2011 launched the Sustainable Energy for All global development agenda. The Agenda aims to achieve universal access to modern forms of energy by 2030. The Sustainable Energy for All initiative of the UN was introduced in recognition that there can never be sustainable development without sustainable energy access and consumption (SEFA, 2011).

Access to modern forms of energy is an important determinant of development in developing countries (SEFA, 2011). As a result, Access to clean, affordable, and renewable energy has been recognized as part of the Sustainable development goals. Efforts at the international and local level to enhance energy access have been quite robust. 80 countries around the world including Kenya have adopted the SEFA commitment (Ordano, 2017). Kenya, in particular, has set ambitious targets on developing energy infrastructure and promoting access to modern energy solutions. In an action plan prepared by the Ministry of Energy and Petroleum, the country is targeting to achieve 100% universal access to electricity by 2022, universal access to modern cooking solutions by 2022, and to increase the share of renewable energy in the national grid to 80%. The ministry of Energy and Petroleum estimated that in 2015, 68% of the population in Kenya still did not have access to clean renewable energy. Kenya's target to reach 70% access to electricity by 2017 also failed to materialize (MoEP, 2015).

Achieving universal energy access is however a global challenge. The State of Energy Access Report by the World Bank (2017) notes that there are over 1.06 billion people around the world who do not have access to electricity. Over 3 billion people still rely on traditional biomass fuels for cooking and kerosene for lighting. The current progress in expanding access to energy is unlikely to achieve universal access by 2030 (World Bank, 2017).

#### **1.1.1. The Role of Off-grid Energy Solutions**

In recognition that government led projects alone cannot achieve universal access to modern energy solutions, the SEFA (2011) agenda has proposed a cross sector partnership approach that brings together government, private sector, and civil society. The role of the private sector in

particular has been mentioned as a viable way in stimulating and developing an off-grid energy industry that can serve the bottom of the pyramid market.

The World Bank (2017) report on the state of energy access argues that, while efforts in promoting energy access should be targeted towards remote underserved communities, traditional means of providing access to energy like grid expansion are not viable in such situations. The cost of grid extension in these areas that tend to be sparsely populated is high. The economic returns resulting from such grid investments are also very negligible from the point of view of many governments. Off grid standalone energy solutions like solar home systems driven by the private sector are therefore needed (World Bank, 2017).

However, development of an off grid solar electricity market requires a lot of investments. The International Energy Agency estimates that total investments of \$640 Billion are needed over the next two decades if universal access to energy will be realized by 2030. This represents 300 – 500% more than the current total energy sector investments around the world. It's also 30% of total global development aid, little of which goes towards funding energy related projects. The private sector could help meet the investment gap needed to achieve universal energy access. However, lack of incentives and perceived high risks have made investment in renewable energy by the private sector in developing countries slow (Craine, Mills, & Guay, 2014).

### **1.1.2. Background of the Research Problem**

Standalone off grid energy solutions like solar home systems have been promoted as means to reduce energy poverty in developing countries but the high upfront costs often associated with such systems puts them out of the reach of many poor households (Mwaura et al., 2014; Malla & Timilsina, 2014; Lambe, et al., 2015). Therefore, overcoming this cost barrier is very important. There is potential for using microfinance to off-set the cost and enable low income households access modern energy solutions (Allderdice, Winiecki, & Morris, 2007; Rao et al., 2009; Groh & Taylor, 2014; Craine, et al., 2014). But existing literature on financing models for renewable energy technologies shows mixed outcomes. In the Kenyan context, studies show that a big share of traditional consumer finance solutions offered by financial institutions have failed to achieve the desired scale. In other countries like Bangladesh, consumer financing programs have been very successful (Kabutha et al., 2007; Pode, 2013; Rolffs et al., 2014).

Understanding why these mixed outcomes have been reported is the general focus of this research. Literature reviewed in Chapter 2 shows that financing programs that are largely driven by Energy Service Companies in partnership with financial institutions and other credit providers have achieved relatively better outcomes compared to financing schemes in Kenya that were driven by commercial banks. This paper attempts to understand whether such partnerships could be the answer to the failures of bank driven financing schemes for renewable energy technologies.

## **1.2. Problem Statement**

The potential role of end user finance in accelerating uptake of renewable energy technologies by offsetting the high startup costs required to acquire such technologies has been discussed in existing literature (Allderdice, Winiecki, & Morris, 2007; Rao et al., 2009; Groh & Taylor, 2014; Craine, et al., 2014). However, empirical evidence on the performance of various end user financing models for RETs shows mixed outcomes. While in some countries financing solutions have been very successful, in others they have totally failed to achieve expected outcomes. The case of Kenya in particular has been quite underwhelming. Case studies of financing models for RETs by financial institutions paint a picture of failure or just a small measure of success (Kabutha et al., 2007; Pode, 2013; Rolffs et. al., 2014). But in other countries success has been achieved. Evidence of outcomes for various financing schemes in Uganda, Bangladesh, India, and Swaziland show that credit schemes for RET in those countries have led to widespread or improved uptake of RETs (REEEP, 2010; Pode, 2013; Lasschuit & Westra, 2013; Bhandari, 2014; Da Silva et. al, 2015).

A critical look at the literature reveals an emerging pattern. In cases where consumer financing models were able to achieve significant success, the involvement of energy service companies through elaborate partnerships with credit providers was observed (REEEP, 2010; Pode, 2013; Lasschuit & Westra, 2013; Bhandari, 2014; Da Silva et. al, 2015). Conversely, analysis of financing models offered exclusively by commercial banks and other financial institutions reviewed in this study failed to achieve the desired success (Kabutha et al., 2007; Pode, 2013; Rolffs et al., 2014; Singh, 2017). The literature reviewed in this study suggests that financing models that have integrated Energy Service Companies as important partners in providing end

user loans are bound to succeed compared to traditional consumer finance schemes offered exclusively by banks.

Despite the important role of strategic partnerships between ESCOs and credit providers in enhancing uptake of end user loans for RETs, the literature has not fully explored this. Strategic partnerships are agreements between companies (partners) that are created to achieve common interest objectives. They often involve cooperation between two or more companies at various levels (Mockler, 1999; Pellicelli, 2003). According to Pellicelli (2003), the term “Strategic” is used to define alliances or partnerships that are of mutual benefit to the firms involved. Pellicelli (2003) also notes that Strategic partnerships have three distinct characteristics. A strategic partnership would involve two or more organizations making an agreement to achieve goals of common interest while the two companies remain independent. Organizations in the partnerships share control and management of the alliance. The partners involved contribute using their own resources and capabilities to the development of one or more areas of the partnership (Pellicelli, 2003).

There is both theoretical and empirical basis for strategic partnerships in financing renewable energy technologies at the end user. On one hand, theoretical perspectives on strategic partnerships posit that performance of organizations is likely to improve through strategic alliances with other relevant organizations. Empirical evidence of case studies in India, Bangladesh, Uganda, and Swaziland also appears to suggest that such alliances can play a central role in enhancing the performance of bank driven consumer finance for RETs (REEEP, 2010; Pode, 2013; Lasschuit & Westra, 2013; Bhandari, 2014; Da Silva et. al, 2015). This study seeks to understand to what extent is the performance of solar loans offered by financial institutions a function of strategic partnerships with Energy Service Companies.

### **1.3. Research Questions**

The main objective of this study was to understand existing partnerships between financial institutions and Energy Service Companies and the role they have played in improving uptake of solar credit. The study attempted to answer one broad question: To what extent have strategic partnerships between financial institutions and Energy Service Companies impacted the performance of solar loans offered by financial institutions? Specifically, the study aimed to answer the following specific questions:

1. What is the nature of the existing strategic partnerships between financial institutions and Energy Service Companies in Kenya?
2. What is the Uptake of solar loans offered by financial institutions in Kenya through strategic partnerships with Energy Service Companies?
3. To what extent have strategic partnerships between financial institutions and energy Service companies improved the performance of solar loans?

#### **1.4. Research Objectives**

The study aimed to understand the existing partnerships between financial institutions and Energy Service Companies, and the effects of such partnerships in improving performance of solar loans. The study also has the following specific objectives:

1. To understand the existing strategic partnerships between financial institutions and energy service companies in Kenya
2. To understand the performance of solar loans offered through such partnerships
3. To understand how strategic partnerships have impacted the performance of solar loans offered by financial institutions

#### **1.5. Justification for the Study**

Access to clean renewable energy is part of the Sustainable Development Goals. Access to modern energy solutions can have positive implications on health and wellbeing, education, poverty eradication, and climate change. However, as of 2015, 68% of Kenyans still didn't have access to modern energy services (MoEP, 2015). Although the government has invested heavily on grid expansion, this is not enough to achieve universal access by 2022 as per the Ministry of Energy and Petroleum targets.

The role of the private sector in filling this gap is therefore clear. One of the key areas of private sector involvement is in providing end user loans for off grid RETs. Due to the high cost of off grid energy solutions like solar home systems, credit schemes to offset costs have been proposed as important determinants in accelerating uptake. However, the history of Kenya in consumer financing for RET is not good. Although innovative financing schemes are emerging, traditional consumer finance offered by financial institutions in the past failed to achieve scale. This paper is important because it looks at end user financing as an important dimension in the energy

access debate. It provides insights on how cost challenges in off grid energy solutions can be overcome in order to accelerate access to off grid energy solutions like solar.

## **1.6. Organization of the Paper**

The first Chapter of this paper gives a simple background of the development problem and the research problem. It also highlights the questions that are going to be answered and the objectives the paper aimed to achieve. Chapter 2 highlights existing relevant literature surrounding the research topic. This includes both theoretical and empirical aspects of the research. It also discusses the relevance of the paper within the contest of the literature reviewed. Chapter 3 focuses on the research methodology and the conceptual framework. It also highlights the type of data needed to answer the research questions and how such data was collected and analyzed. The paper then highlights in detail all the key findings in Chapter 4. Chapter 5, the final chapter, provides a list of key conclusions from the research and recommendations for policy and future research.



## CHAPTER 2: LITERATURE REVIEW

In this chapter, I discuss in detail existing literature relevant to the research. We begin by first of all highlighting the theoretical basis for the paper. Two theoretical perspectives are discussed – the Resource Based View and the Knowledge Based View. The Chapter also looked at various case studies of end user financing models in different parts of the world. A total of 10 cases were discussed in this section.

### 2.1. Theoretical Literature

Strategic partnerships between organizations can be viewed through a number of theoretical lenses. However, in this particular study I will focus on two main theoretical approaches; the resource based view of strategic partnerships and the Knowledge Based View of strategic partnerships. Although these theories are distinct in their approach, the study adopted a combination of all of them as its theoretical framework.

#### 2.1.1. Strategic partnerships and resource sharing - a resource based view perspective

The main contestation of the Resource Based View of strategic firm partnerships is based on the premise that firms can generate value if they pull resources together (Das & Teng, 2000; Kabue and Kilika, 2016). Strategic partnerships between firms will therefore be pursued to share resources. RBV views resource endowment in a firm as the main determinant of performance. Each firm has unique and heterogeneous resources known as strategic resources (Wernerfelt, 1984). Wernerfelt (1984) and Barney (1991) argue that it is the variance in strategic resource endowment among firms other than products that determines competitive advantage. Barney (1991) posits that in order for such resources to be considered strategic, they need to have four distinct attributes.

1. Resources must be **Valuable** in the sense that they help exploit opportunities in the firm's environment or quash threats
2. **Rare** in the sense that the resources are only exclusive to the firm or rare among firm competitors
3. **imperfectly imitable** in the sense that firm resources cannot be acquired by other firms that don't have them
4. **Substitutability** in the sense that there is no other alternative equivalent resource that does not possess qualities of rarity and Imitability

Critiques of RBV have however found this view to be limited in its application. Miller (2003) in particular argues that the resources a firm needs to achieve sustainable competitive advantage are those that are hard to acquire. This argument is also somewhat reinforced by Eisenhardt & Schoonhoven (1996) who note that firms need resources to acquire resources, or to develop strategic assets that lead to sustainable competitive advantage. Eisenhardt & Schoonhoven (1996) have also argued that attaining resources in a firm that meet all the strategic characteristics captured by Barney (1991) is practically impossible. As such, firms can often be in a state of vulnerability and uncertainty. Kabue and Kilika (2016) also add a perspective by noting that since firm resources are more often common than rare and more homogenous than heterogeneous, firms must combine resources in order to eventually develop rare and imitable processes that lead to sustained competitive advantage. From this critiques, it can be argued that, while strategic firm resources are extremely important in determining performance, the process of developing such resources is often difficult in practice. As such, firms may decide to join forces or pursue joint ventures that complement each other's resources.

### **Types of resources shared in strategic firm partnerships from the RBV perspective**

The concept of resources in RBV has been subject to different definitions. For instance, Barney (1991) suggests that firm resources include; physical assets, capabilities, firm processes, firm characteristics, knowledge, and information controlled by a firm in order to implement strategies that improve its efficiency and effectiveness. On the other hand, resources can be viewed as all inputs needed in the production process (Grant, 1991). This may include things like capital, skills of employees, firm patents, brands, finance etc. But the paper makes a distinction between resources and capabilities. He argues that on their own, resources are not productive. Productivity in firm resources is achieved when there is coordination and combination of various resources. This is made possible by firm capabilities. Consequently, capabilities are defined as a firm's capacity to deploy a combination of resources using organizational processes in order to produce a desired effect. Therefore, capability in a firm enables utilization of resources.

Das & Teng (2000) identify two broad categories of resources that are shared under a strategic partnership in the RBV – Supplementary and Complimentary resources. Supplementary resources are those that are available to firms before the alliance and tend to be similar across partners in an alliance. The resources are therefore pulled together to achieve economies of scale.

On the other hand, complimentary resources are those that arise as a direct consequence of the partnership between the firms (Lambe et al., 2002). A more specific understanding of resources shared within a strategic partnership is captured by Das & Teng (1998) who identify four classes of resources. These include financial resources, technological expertise, physical assets, and managerial resources.

### **Financial resources**

Das & Teng (1998) note that the capital markets are imperfect in providing funding for firms involved in risky business ventures. Collaborative arrangements between such firms and those that understand the value of these risks are proposed as a way of providing financing.

### **Technological expertise**

Das & Teng (1998) also capture the relevance in technological collaboration by arguing that, technology, defined as expertise pertinent to a certain product, is a strategic resource. As such, firms may seek collaboration with other firms in order to gain access to such expertise

### **Physical assets**

Physical assets are indispensable in the value chain. They may include raw materials, components, or distribution channels.

### **Managerial resources**

Das & Teng (1998) finally define managerial resources as firm specific competence and know-how in important functional sectors such as operations, product marketing, planning and human resource management etc. Managerial resources are the skills, the knowledge, and the core competencies specific to each firm.

A proposition that we use in this study from the Resource based View of strategic partnerships can therefore be formed as: **An organization will pursue a strategic partnership with another organization in order to access and utilize specific strategic financial, technological, physical, or managerial resources that are needed to improve its performance.**

### **2.1.2 Strategic partnerships for organizational learning – the knowledge based view**

The main argument of the Knowledge Based View of firm partnerships is based on the notion that collaboration between organizations can be explored as a vehicle for organizational learning (Kogut & Zander, 1993; Tecce & Pisano, 1994; Mowery, Oxley, and Silverman, 2002; Grant & Baden-Fuller, 2004;). The knowledge based view is an extension of the Resource Based View of strategic firm partnerships but in this approach, knowledge is viewed as the most important strategic resource in an organization. Curado (2006) for instance sees knowledge in a firm as an important strategic resource that does not depreciate in value in a manner that traditional economic factors do. Strategic knowledge resources are those skills or competencies that are dynamic, intangible and they eventually lead to idiosyncratic firm development (Curado, 2006).

The KBV argues that a firm's ability to generate value is not so much based on existing physical or financial assets but more often than not based on intangible knowledge based capabilities (Theriou, et. al. 2009). Pemberton and Stonehouse (2000) reinforce this view by noting that the competitive success of an organization is largely based on its ability to develop new knowledge that lead to the development of core competencies.

Although knowledge based assets supersede physical resources in creating competitive success from the KBV approach, in order for such capabilities to be considered strategic they too must meet the four criteria of value, substitutability, Imitability, and rarity outlined in Barney (1991). Such knowledge is referred to as tacit. A more general definition of strategic firm capabilities is captured by Tecce et al. (1999) who argue that because firms operate in rapidly changing environments, strategic capabilities have to be dynamic as well. Consequently, Tecce et al. (1999) introduces the concept of "Dynamic capabilities". They define this as an organization's ability to develop, integrate, or reconfigure internal and external competencies to address rapidly changing business environments.

From this definition, it can be argued that competitive success and performance of a firm in the Knowledge Based View is determined by its "dynamic capabilities". Mowery, Oxley, and Silverman (2002) in fact observe that if the dynamic capabilities view is adopted as a strategy for firm success, then the central factor in its implementation is acquisition of new capabilities through organizational learning. Organizational learning allows the firm to acquire, to change and to preserve its organizational capabilities (Cook and Yanow, 1995).

Strategic firm alliances as tools of organizational learning have been proposed by various writers in KBV. Tecce and Pisano (1994) for instance note that collaborations and partnerships can be vehicles for new organizational learning and that such partnerships can also help firms recognize dysfunctional routines and work on strategic weaknesses. This assertion is also captured by Kogut & Zander (1993) who note that firms pursue strategic alliances because higher levels of integration provide a more effective means of transferring tacit knowledge. Although the motivations for knowledge based alliances between firms can vary, more often than not, strategic knowledge based partnerships are formed to facilitate the acquisition of technological expertise and capabilities (Mowery, Oxley, and Silverman, 2002).

Grant & Baden-Fuller (2004) however reject the idea that the only rationale for firm alliances is to simply “acquire” knowledge. They find this to be too simplistic. They posit that firms enter into partnerships in order to “access” knowledge and capabilities that support a more intensive exploitation of existing capabilities within each firm. They also argue that the primary advantage of partnerships for both partners is in accessing rather than acquiring knowledge. Strategic partnerships simply increase the efficiency with which knowledge is utilized.

Based on these various views of KBV, it can be argued that access to knowledge through strategic partnerships is aimed at developing dynamic capabilities that improve performance in partner organizations. From these perspectives, the KBV view of strategic partnerships can be theorized as follows: **An organization will pursue a strategic partnership with another organization in order to access and utilize the skills, the knowledge, and the core competencies of partner organizations to enhance its performance.**

### **2.3. Review of empirical literature on end user finance partnerships models for RETs**

This section analyzed empirical studies done on various end user financing models for renewable energy technologies. A total of 10 case studies were analyzed in this section. The review looks at experiences of financing models in Kenya, Uganda, and Swaziland. Financing models from Bangladesh, and India were also analyzed. The evidence reviewed here shows that end user finance had mixed results in promoting uptake of solar. In some cases, consumer finance models were very successful while in others they failed completely. In Kenya, case studies reviewed in

this section showed very little evidence of success. In countries like Bangladesh and India some financing models were very successful.

## **2.4. The experiences of financial institutions in Kenya**

Experiences with end user financing for solar home systems in Kenya have been extensively captured by Rolffs, Byrne, & Ockwell (2014). Their paper assesses the extent in which emerging solutions like Pay As you Go can help address the challenges encountered by traditional end user financing solutions. Their work has analyzed end user financing under two broad categories – those financed by international development partners and those financed by commercial banks operating locally. The study found that all these models failed to achieve scale. The following are the detailed case studies.

### **2.4.1. Financing models driven by multilateral development organizations**

#### **World Bank Energy Sector Management Assistance Program (ESMAP):**

The World Bank Energy Sector Management Assistance Program (ESMAP) was an end user financing model that was implemented by the World Bank in partnership with local commercial banks in Kenya. The banks would get financial support from the World Bank and then provide credit to end users for the purchase of solar home systems. The products were sourced from local solar equipment suppliers. The first pilot was launched with the Kenya Rural Enterprise Program (K-Rep) and the Cooperative Bank of Kenya. Rolffs, Byrne & Ockwell (2014) note that the program failed to evolve beyond the pilot phase. The SHS systems supplied under the scheme malfunctioned leading to significant loan defaults (Van Der Plas, 2000). The Program was eventually cancelled.

#### **GEF/World Bank Photovoltaic Market Transformation Initiative (PVMTI)**

The GEF/World Bank Photovoltaic Market Transformation Initiative (PVMTI) was also an initiative of the World Bank. The program availed \$30 million in funding to stimulate development of local PV solar markets in three countries including Kenya. The funding was channeled through three local financial institutions. The institutions would then provide end user loans to consumers for the purchase of SHS (Rolffs, Byrne, & Ockwell, 2014).

The institutions under the program included Barclays Bank, Muramati Sacco (Now Unaitas) and Equity Building Society (Now Equity Bank). The program did not scale beyond the pilot phase.

During the program's lifespan, only between 150 – 170 solar home systems had been installed. A number of challenges were identified. The process of identifying potential customers and processing loans was too inefficient. Solar home systems supplied were also faulty. Subsequently, the World cancelled all RETs financing programs in Kenya.

#### **2.4.2. Financing models driven by commercial banks**

Rolffs, Byrne, & Ockwell (2014) also studied cases of end user financing models for solar home systems driven by commercial banks and smaller Saccos in Kenya. The cases below were analyzed. Just like the programs supported by the World Bank, the success of these schemes was very negligible.

##### **Michimikuru Sacco solar electrification project:**

The Michimikuru SACCO solar electrification project was a small scale microcredit program that was designed to promote access to solar home systems. The Program was managed by a local NGO called Solarnet and it was fully funded by a \$30, 000 grant from the UNDP and GEF (Global Environment Facility) Small Grants Programme (Rolffs, Byrne, & Ockwell, 2014). The program did not scale beyond the pilot phase. Only 150 solar home systems were installed under the credit program. The reasons for failure were not clearly captured but it's very likely that the program ran into supply chain challenges and low product quality issues.

##### **The Kenya Union of Savings and Credit Cooperatives (KUSCCO) Energy Lending Program:**

The Kenya Union of Savings and Credit Cooperatives (KUSCCO) financing model for solar home systems and LPG gas was exclusively implemented by Saccos under the umbrella body. KUSCCO also got technical support, grants, and capacity building from PVMTI and Shell Foundation's Breathing Space Project for LPG and biogas. KUSCCO launched the microcredit program in 2003 (Kabutha et al., 2007). The program failed to scale and was later scrapped.

Only a paltry 50 solar home systems had been installed under the program. A number of challenges were identified. The logistics of supplying the SHS systems through a network of Saccos across the country were too complicated. The local supplier used also lacked nationwide distribution for the SHS system. Loan processing was very inefficient and the Saccos involved in distribution lacked expertise in energy services.

### **Kenya Women Finance Trust (KWFT) Energy lending program:**

The Kenya Women Finance Trust started an energy lending program in 2013. The financial institution was looking to offer LPG and Solar home system loans to its customers (Rolffs, Byrne, & Ockwell, 2014). The program was supported by a grant from the Shell Foundation Breathing Space Fund. KWFT partnered with a local supplier to deliver the systems. Rolffs, Byrne, & Ockwell (2014) found the program did not scale as expected. The credit scheme ran into product quality issues too.

### **Faulu Kenya deposit taking microfinance (fkdtm) energy lending program:**

The Faulu Kenya Deposit Taking Microfinance (FKDTM) energy lending program was extensively studied by Kabutha et al. (2007). The study was cited by Rolffs et al. (2014). Generally, the scheme aimed to offer LPG and solar home system through credit for end users. The program failed. Only 150 SHS were sold under the scheme. Lack of expertise in energy lending was cited as one of the reasons for failure.

## **2.7. Case studies of successful partnerships in end user financing**

The significance of integration of energy service companies in the provision of credit for RETs is clearly brought out in the case studies below. The cases are considered to have been successful in promoting access to solar technology and would achieve a significant level of scale compared to financing models offered in Kenya.

### **2.7.1. Grameen Shakti and IDCOL Microcredit Program – Bangladesh**

The Grameen Shakti energy microcredit program is run by Bangladesh's Infrastructure Development Company Limited (IDCOL), a government agency charged with promoting efforts in rural electrification. IDCOL has received credit support from multilateral development organizations and Grameen Bank of Bangladesh (Pode, 2013 & Bhandari, 2014). The program is considered one of the most successful energy microcredit programs in the world.

IDCOL works with Partner Organizations (who supply and install the SHS) that have roots in various rural areas. The World Bank and other development agencies have provided soft loans to the Bangladeshi Government. The loans are granted to IDCOL and the government agency channels them through Partner Organizations who in turn offer credit to end users and collect the repayments (Pode, 2013). The Partner Organizations are supposed to generate demand for Solar

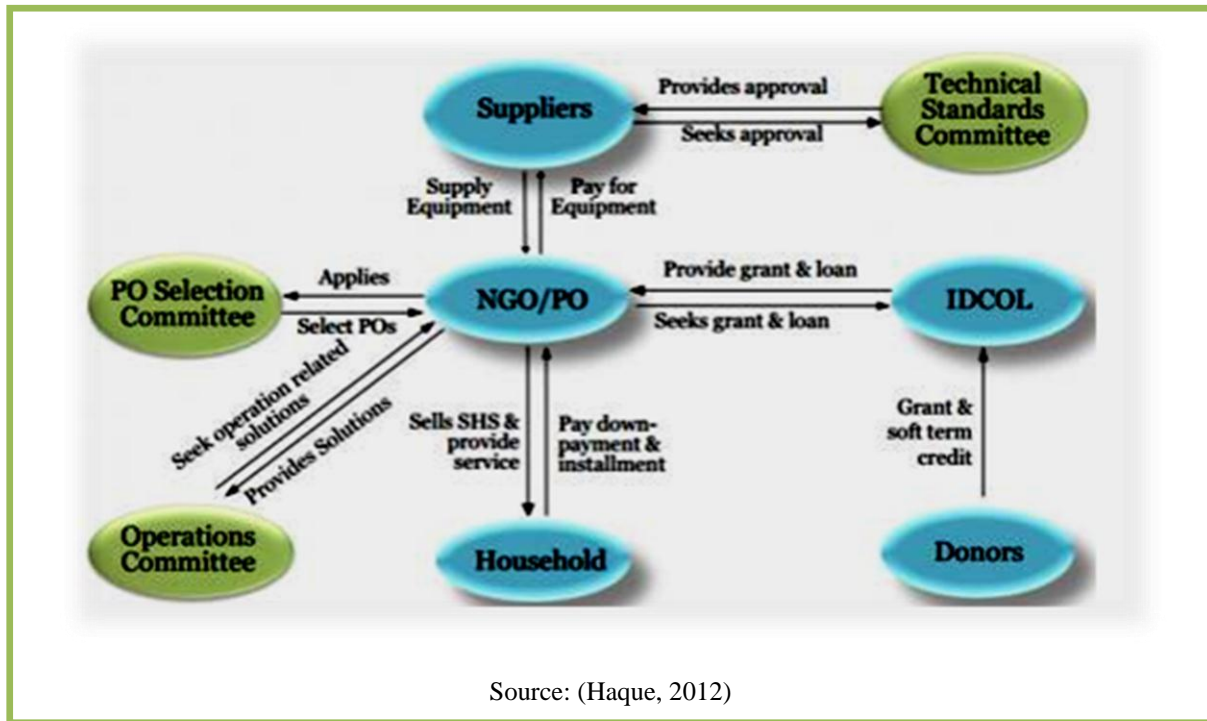


Home Systems, educate the public through awareness programs, install the SHS, and provide after sale maintenance services for the SHS sold (Pode, 2013). The POs buy the solar home systems from IDCOL approved suppliers to ensure quality. IDCOL according to Bhandari (2014) works with 47 partner organizations around the country.

Grameen Shakti is one of the Partner Organizations working under IDCOL. It's a fully owned subsidiary of Grameen Bank of Bangladesh. Grameen Shakti is an energy service company and has credit partnerships with both IDCOL and Grameen Bank. The case study by Bhandari (2014) shows that the IDCOL program has led to the installation of over 2 million solar home systems directly benefiting 10 million people in rural Bangladesh. Almost half of all these installations were done by Grameen Shakti, a partner organization under IDCOL, and a fully owned subsidiary of Grameen Bank, the largest microfinance institution in Bangladesh.

The Bangladesh case shows an elaborate partnership framework between credit providers like the World Bank/IDCOL and Grameen Bank of Bangladesh with 47 partner organizations that serve as energy service companies. The role of POs in this partnership framework is relatively expanded. They identify customers for SHS, provide the credit to the end user, supply the product, provide after sale maintenance, and collect payments. The partner organizations also generate demand for the SHS and have created awareness on the systems. This is a partnerships framework where ESCOs are playing a lead role in credit provision. The credit providers which in this case are IDCOL and Grameen Bank of Bangladesh simply facilitate access to loans by partner organization. They are not directly involved in the distribution of loans to end users, supplying products, or collection of repayments. This kind of partnership was not observed or highlighted in the case studies done by Kabutha et al. (2007) and Rolffs et al. (2014) while analyzing consumer finance schemes for solar systems in Kenya. The figure below highlights a graphic view of the partnerships in the Bangladeshi credit program.

**Figure 1: Partnership framework for Grameen Shakti/IDCOL Solar Microcredit scheme**



### 2.7.2. SELCO Solar Program – India

The IDCOL/Grameen Shakti solar microcredit scheme received extensive government support and this has been identified as a key reason for its success. There is also need to look at end user financing models for renewable energy technologies that are fully driven by the private sector. The case of SELCO India analyzed by REEEP (2010) is very relevant to this scenario. SELCO India is a fully owned subsidiary of US private company SELCO (Solar Electric Company) headquartered in Chevy Chase, Maryland. SELCO was founded to provide clean, affordable, and reliable solar power systems to households and businesses in areas where access to other forms of electricity is nonexistent. SELCO India is headquartered in Bangalore and has established 45 Energy Centers.

SELCO has created a credit program to help end users finance the purchase of SHS as part of its growth strategy. The company has partnered with rural banks and microfinance organizations to

provide the necessary credit to customers. A look at SELCO's India website shows that the company has partnered with a total of 19 banks and microfinance institutions in India.

SELCO takes the lead role in identifying potential customers for SHS. The company is responsible for marketing its products and generating demand. The credit for SHS is offered directly by SELCO through a credit facility that is availed by its 19 partner financial institutions. The energy service company manages that credit basket (REEEP, 2010). It decides who gets loans and who doesn't. The banks simply provide the capital needed to deliver SHS loans. SELCO is also responsible for collecting the repayments (REEEP, 2010). In the Kenyan case studies, financial institutions played all these roles (Kabutha et al., 2007 and Rolffs et al., 2014). The role of Energy Service Companies in the provision of solar loans by Kenyan financial institutions is either nonexistent or not captured by the case studies.

The significance of these credit partnerships in SELCO's India business model is quite huge. REEEP (2010) notes that over 90% of total SELCO India solar product sales were financed by end user loans from these institutions. The SELCO Solar program has not only managed to achieve scale but the business model has been profitable. The REEEP (2010) case study found the company has achieved profitability on annual sales of over \$3 Million.

### **2.7.3. Barefoot Power Light Up a Village Program – Uganda**

The Barefoot credit model in The Light up a Village Program (LUAV) in Uganda has been analyzed by Da Silva et al. (2015). Barefoot Power is an Australian based solar energy company that works in East Africa. In 2012, Barefoot launched the Light up a village program (LUAV), an initiative that was designed to accelerate penetration of solar lighting systems in Africa by actively involving community members in lighting up their villages (Da Silva et al., 2015).

Barefoot Power sourced funds privately to establish a revolving credit facility. The facility was to be managed in partnership with local CBO partners and SACCOS in Uganda's rural areas. 3 SACCOS, 14 CBOs and 1 faith based organizations were used. Their role was to distribute the revolving fund and collect repayments on behalf of Barefoot. Targeted households were funded in groups. As of 2014, Barefoot had connected 7000 households through the credit model. This was just 18 months since the program was started in 2012. Barefoot is looking to replicate this model in Kenya, South Sudan, and Rwanda (Da Silva et al, 2015). In its efforts to replicate the

success of the LUAV program in Kenya, Barefoot is partnering with development partners like CARITAS, WWF, and GIZ to establish a credit basket that will be offered to end users. A quick scan on the company's website also showed that Barefoot had received funding from the EU and the Church of Sweden to scale its solar lighting program in Uganda.

The Da Silva et al. (2015) study shows that there is an established partnership between Barefoot (an Energy Service Company) and credit providers. In this case however, credit providers are not commercial banks as in the case of SELCO. Nonetheless, Barefoot is taking a greater role in managing that credit facility. It has established a mechanism of distributing the loans and collecting the payments through a local network of CBOs and two SACCOS. Just like in the SELCO and Grameen Shakti cases, the role of credit providers in this partnership has only been reduced to providing the capital needed to sustain the credit facility for end users. Management of that fund is solely left on the energy service company. This again highlights the significance of ESCOs integration in promoting the uptake of solar loans. As Da Silva et al., (2015) noted above, in 18 months the Barefoot LUAV solar credit program had benefited 7000 households. The same cannot be said of bank driven financing programs in Kenya. The Kabutha et al. (2007) and Rolffs et al. (2014) case studies show that no single credit scheme in Kenya installed more than 200 SHS.

#### **2.7.4. Solar International Swaziland Microcredit Program for Solar Home Systems – Swaziland**

Experiences with end user credit in RETs have also been studied in Swaziland. Lasschuit & Westra (2013) in a study to assess the solar PV market in Swaziland analyzed a financing model offered by a local solar company in partnership with a Dutch bank. The Swazi company was known as Solar International Swaziland and it was part of a joint venture between local companies and financiers from the Netherlands. Dutch Triodosbank provided the financing to enable Solar International Swaziland offer solar home systems on credit. After the credit program was introduced, there was significant improvement in sales for the SHS. The study found that Solar International Swaziland had tried to sell SHS in Swaziland before but with little success. After the credit plan was introduced, sales rose from just 20 a year to 170.

This was below the target of 500 SHSs a year but it was still a significant improvement. Lasschuit & Westra (2013) note that in this model, Dutch Triodosbank provided a loan of \$150,

000 to Solar International Swaziland at an Interest of 14%. On the other hand, Solar International Swaziland offered credit at 22% to end users. A deposit of 25% was required for the SHS and the repayment was structured over a period of three years. The default rate was 3%. The Solar International Swaziland SHS credit program was a success. There were a few challenges with product quality and after sale maintenance though.

The nature of this partnership is different compared to the ones above too. While in the case of SELCO, Grameen Shakti, and Barefoot the ESCOs directly managed a credit facility available through a partnership with a credit institution, in the case of solar international Swaziland, the Dutch Triodosbank provided the loan directly to the ESCO at an interest. Solar International Swaziland used the loan as part of its own capital to provide financing for SHS to its customers. However, the financing scheme was entirely driven by the ESCO, a similar attribute of the four other cases analyzed above. This is part of the evidence in this study that when ESCOs take a bigger role in credit provision, uptake of solar loans significantly improves.

## **2.8. The relevance of this study in the context of the literature reviewed**

A closer look at the case studies of solar microcredit programs offered by financial institutions in Kenya as captured by Kabutha et al. (2007) and Rolffs et al. (2014) reveals a pattern. Financing models in Kenya were almost exclusively offered by commercial banks and other financial institutions. These schemes failed. But failures in end user financing solutions for RETs offered exclusively by commercial banks and financial institutions have also been captured in other countries. Singh (2017) while analyzing a government led microcredit program for solar home systems in India found that uptake of solar loans and subsequent adoption of solar home systems was very negligible under this scheme. The credit program was run by India's Ministry of New and Renewable Energy. The loans for SHS were provided through a network of rural banks across the country. Singh (2017) concluded that the reason why the program failed to achieve the expected scale was simply because credit was offered directly by commercial banks. These findings were also backed by Pode (2013) who analyzed the same Government led program and concluded that the level of success was not good enough.

Pode (2013) also looked at a financing partnership program between UNEP's Energy Division and two commercial banks in India – Canara and Syndicate. UNEP Energy Division raised \$7.4 million as a credit facility to enhance uptake of SHS in rural areas in India. The loans were to be

distributed through 2076 branches of both Canara Bank and Syndicate Bank. Outcomes for the program were also not good. Although initially there was steady uptake of solar home system loans, the scheme failed to scale to the expected level. Pode (2013) noted that product quality offered through the scheme was questionable and that customers complained about hectic bank processes.

A comparison between the bank driven financing schemes that failed and the schemes that were successful reveals another pattern. Case analysis of financing models that were able to achieve widespread scale showed that there was significant involvement of Energy Service Companies. The Grameen Shakti/IDCOL program in Bangladesh, the SELCO program in India, the Barefoot Power program in Uganda, and the Swaziland Solar International program analyzed above were all able to achieve a measure of success. One unifying attribute of all these programs is identified. In all cases, there was a bigger role for the Energy Service Companies in the provision of credit. This study therefore aims to establish to what extent is the performance of these programs a function of strategic partnerships between financial institutions and Energy Service companies. How does this apply in the Kenyan case? In the case studies done for Kenya, the nature of these partnerships is not brought out or discussed. The paper will fill this knowledge gap.

## **2.9: Strategic Partnerships – Concepts and Measurements**

Strategic partnerships are agreements between firms created to achieve common interest objectives (Mockler, 1999; Pellicelli, 2003). The term “Strategic” is used to define alliances or partnerships that are of mutual benefit to the firms involved. Strategic alliances have mostly been defined on the basis of why they are created. Frankel, Whipple, and Frayer (1996) for instance define strategic partnerships as the process where partners in a given partnership willingly change or modify their business practices in order to reduce wastages, duplication, and ultimately improve performance. Romeris (2009) notes that such partnerships are simply relationships between organizations aimed at successful implementation of a strategic plan.

But a more refined definition of strategic partnerships and perhaps the most relevant to this study is brought out by Yi Wei (2007). He sees strategic firm alliances as partnerships that offer organizations a chance to join forces in order to tap into a mutually beneficial opportunity. Strategic firm alliances can also be broadly viewed as either short term or long term agreements.

Douma (1997) for instance defines firm partnerships as a temporary contractual relationship between two or more organizations that remain independent. The partnership is designed to reduce uncertainty in the achievement of individual partner strategic goals (Douma, 1997). Dussauge & Garrette (1995) also view strategic firm partnerships as temporary agreements whose rationale is limited only to the implementation of specific projects. Faulkner (1995) however sees such partnerships as long term agreements involving continuous investment towards developing long term collaborative advantage.

Taking into account the various definitions of strategic partnerships in literature, this study defines partnerships as a relationship between two or more organizations designed to tap into a mutually beneficial opportunity by pulling resources together and aligning common interests.

### **Measurement and Operationalization**

There is debate on strategic alliance literature as to which measurement indicators are ideal in understanding alliance success or failure. The literature covers different approaches. Some performance measurements focus on the objectives for alliance formation, and the extent in which those objectives have been met after partnership establishment. Others view partnership success in terms of the outcomes of the collaborative process (Nielsen, 2002).

Early empirical studies on strategic partnership have assessed performance of alliances in financial terms. Nielsen (2002) notes that metrics such as cash flow, profitability, sales growth, and cost competitiveness have been used in early empirical literature to measure alliance success. But financial metrics alone are inadequate. Kogut (1988) for example argues that strategic partnerships are pursued for multi-dimensional reasons and not necessarily profit making. For example, strategic partnerships can be pursued to gain credibility and access certain markets (Kogut, 1988). Financial metrics against such objectives may therefore be misleading. Geringer and Herbert (1991) also note that strategic alliances may be evaluated as failed by managers in spite of good financial performance depending on the initial partnership objectives.

But Goerzen and Beamish (2005) maintain that despite the multi-dimensional motivations of pursuing strategic partnerships, economic results always dominate the interests of the partners involved. In line with this argument, while Anderson (1990) agrees that financial measurements are needed, he argues that financial performance can only evaluate a single dimension of

partnership success. He also notes that getting accurate and reliable financial data may be difficult since firms are often reluctant to divulge such sensitive financial information.

On the other hand, McKinsey (2002) propose four broad measurement categories. These four categories include financial fitness, strategic fitness, operational fitness, and relational fitness. Financial fitness according to McKinsey (2002) is concerned with the financial performance. This measures metrics such as sales growth, revenue, and profit directly resulting from the partnership. Strategic fitness are non-financial measures but essential in the performance of partner firms. They include measures such as market access, new product launches, and knowledge transfer. Operational fitness broadly measures outcomes against set goals during alliance formation (McKinsey, 2002). To what extent has the partnership achieved the goals set during formation? Relational fitness on the other hand looks at subjective indicators that track growth of perceived trust between firms and cultural alignment.

Kauser & Shaw (2004) also argue that while there is no consensus in literature on the best ways to measure firm partnerships, performance measures can be divided into three broad categories: (i) Financial measures, (ii) objective measures and (iii) subjective measures. They note that Financial measures reflect the fulfillment of the economic goals of the strategic alliance and can be measured using a range of financial indicators including profitability, return on investment (ROI) and cost competitiveness. Kauser & Shaw (2004) however note that because of the limitations of financial metrics, researchers have formed objective and subjective measurements too. Objective measurements they argue can be viewed as the survival, duration, or stability of the partnership. These measures have however been criticized due to their limited scope. For instance, some researchers have argued that in order to properly assess the performance of strategic alliances based on the metrics of survival and stability, the partnership must either have been terminated or failed (Park and Gerado, 1997 cited by Kauser & Shaw, 2004). This becomes very problematic since some partnerships are long term. The metric of duration is also challenged by (Park and Gerado, 1997 cited by Kauser & Shaw, 2004) who argue that firm partnerships can either be long term or short term depending on the strategic goals they intend to achieve. As such, using the duration of the alliance as a measure of performance might be misleading.



Kauser & Shaw (2004) introduce subjective measurement categories. They note that the most commonly used subjective measure of partnership performance is satisfaction among partner organizations. Satisfaction as a measurement variable does provide a better understanding of partnership performance compared to both financial and objective measures discussed above (Geringer and Herbert, 1989; Anderson, 1990 cited by Kauser & Shaw, 2004). In addition to this, a paper by Geringer and Herbert (1991) found that subjective or perceptual assessments of partnership performance such as partner satisfaction correlated with the objective financial performance metrics. In this regard, Kauser & Shaw (2004) propose a subjective measurement approach that incorporates both perceptual and objective measures whereby the satisfaction of managers regarding various aspects of the partnerships is measured.

Partnership success has also been operationalized in terms of resource acquisition and capability learning. This approach is interesting because the theoretical approaches of KBV and RBV used in this paper posit that firm partnerships are pursued as vehicles to acquire resources and access capabilities. Yuan (2009) in a survey to assess the choice of partnership control mechanisms in relation to alliance motivations and its influence on partnership performance interviewed 607 Chinese firms in various provinces. The study used two measures of alliance success – resource acquisition and capability learning. The survey operationalized resource acquisition based on three key metrics. It defined resource acquisition first as the attainment of tangible material resources from the alliance members. Consequently, resource acquisition as a variable was operationalized in terms of financial support for either partner, access to partner products and services, and access to partner physical assets.

On capability learning, the (Yuan) 2009 study measured the variable in terms of technology transfer, new product or service development, and access to new markets. Capability learning is also captured in Nielsen (2002) in a study to assess performance of strategic partnerships among 48 Danish firms. The study viewed capability learning as the level of knowledge transfer and knowledge development measured in ordinal likert scales starting from 1='Worse than expected' to 3='Better than expected' (Nielsen, 2002).

Capability learning has also been operationalized in terms of innovative outputs by Kogut et al, (1994) in a study to assess the role of strategic partnerships and startup innovation in the biotechnology industry. Innovative output in the study is operationalized as the number of

patents issued since partnerships were established. But Deeds and Hill (1996) find this problematic. They argue that patents are more of inputs required for innovation as opposed to outputs. As such, Deeds and Hill (1996) use new product launches as a measure of innovative output.

### **Discussion on Measurements**

From the analysis above, this paper identified four measurement variables in empirical literature for assessing strategic partnership success: Financial Performance, Resource Acquisition, capability learning, and Relational measures. Financial performance looked at the extent in which the partnership has achieved its economic goals. Resource acquisition looked at the extent in which organizations have acquired important resources from partners. Capability learning on the other hand looks at the level of organizational learning resulting from the partnership. Relational measures refers to the subjective assessment by partnership managers on the extent they are satisfied with the said partnership.

There are some challenges though with some of these measurements. For instance, getting sensitive financial information to measure financial performance of alliances could be challenging as explained by Anderson (1990). In order to correct this, the study adopts an approach taken by Kauser & Shaw (2004) but with some modifications. The measurement approach by Kauser & Shaw (2004) uses subjective measurements that incorporate objective metrics. The study was done in the UK and looked to assess the performance of 114 strategic partnerships in the country. First, respondents were asked to evaluate, on a five-point scale (1 = very dissatisfied; 5 = very satisfied), how satisfied they were with a total of eleven metrics related to the partnership. These eleven measures included:

1. Market share
2. Sales growth
3. Profitability
4. Access to market
5. Cost control
6. Competitive position
7. Technology

8. Product design
9. Marketing
10. Distribution
11. Return on Investment

This paper adapted this approach for two reasons. First, it helped to reduce the challenge of collecting sensitive data. Secondly, it has already been shown by Herbert (1991) that perceptual measures such as satisfaction correlated with objective metrics. We therefore used a five-point likert scale to assess satisfaction (1 = very dissatisfied; 5 = very satisfied) of partners in the alliance with the key performance metrics outlined in the table below. Although financial performance has been used in early literature to measure alliance performance as explained by Nielsen (2002), this research did not use this measure due to its sensitive nature and the challenge of accurate data collection. Financial performance data is also irrelevant in explaining the relationship between partnerships and uptake of loans. Additionally, we also decided to ignore relational fitness as a measurement variable. We argued that from our theoretical framework, partnerships are pursued as vehicles for acquiring resources and capability learning. These are the inherent objectives of any partnership. Measuring how these metrics perform can be used to infer satisfaction among partner organizations. The data can also be used to determine the extent in which partnership objectives have been met. In line with this, the paper aimed to establish the extent of satisfaction among partners on the metrics of resource acquisition and capability learning. We believed that from the discussion above, these were the more relevant measures in understanding how partnerships may affect uptake of solar loans.

**Table 1: Summary of Measurement variables**

	<b>Resource acquisition</b>	<b>Capability learning</b>
	<ul style="list-style-type: none"><li>• Financial Support</li><li>• Access to partner products/ services</li><li>• Access to distribution networks</li></ul> <p>(Yuan, 2009)</p>	<ul style="list-style-type: none"><li>• Level of Knowledge transfer</li><li>• New product launch</li><li>• New market access</li></ul> <p>(Nielsen, 2002; Deeds &amp; Hills, 1996; Yuan, 2009)</p>

In summary, we discussed both theoretical and empirical aspects of the research. We concluded that strategic partnerships between different firms are pursued to acquire resources and to access capabilities. On our case study analysis, the literature showed that financing models where ESCOs took a greater role were able to achieve scale compared to models that were exclusively offered by financial institutions. We have also discussed the concept of Strategic partnership and how we measured it in the study. The paper simply looked at the extent in which resources and capabilities have been shared to determine partnership success.

## **CHAPTER 3: RESEARCH METHODOLOGY**

### **3.1. Research Design**

This study used a descriptive case study design. Both quantitative and qualitative data was collected to infer the relationship between the study variables. The objective of this study was to assess the nature of existing partnerships in end user financing for RETs and the extent in which said partnerships have improved performance of solar loans offered by financial institutions in Kenya. The independent variable in the study was Strategic Partnerships between Financial institutions and Energy Service Companies and the dependent variable was the uptake of solar loans.

### **3.2. Study Site**

This study was conducted in Nairobi, the capital city of Kenya. Since financial institutions were the main units of analysis, interviews were done on their main headquarters located in the city of Nairobi. Interviews were conducted on Energy Service Companies too working with said financial institutions at their headquarters in Nairobi. The city of Nairobi is Kenya's largest urban area and the country's administrative, economic, and financial hub. The city is home to many local and international organizations. Because of its status as Kenya's main financial and economic center, this study presumed that financial institutions in the population list will be based in the city.

### **3.3. The Unit of Analysis and Sampling**

The units of analysis in this study were financial institutions in Kenya that are currently offering an energy loan product in partnership with an Energy Service Company. Since there aren't many banks that offer energy lending in partnership with Energy Companies, we decided to do a full census. The population list included seven cases. However, due to time constraints we were only able to do five interviews. Our efforts to get interviews at Kenya Women Microfinance Bank and Housing Finance Corporation Kenya were not fruitful. The following table presents a list of the 7 cases we were focusing on.

**Table 2: List of Cases in the Study**

<b>Partnerships</b>	
<b>Financial Institution</b>	<b>ESCO Partner(s)</b>
1. Equity Bank	Orb Energy, D.light, Green Light Planet
2. Kenya Women Microfinance Bank	Orb Energy, Barefoot Power
3. Housing Finance Kenya	Davis & Shartliff, Chloride Exide
4. Greenland Fedha	Barefoot Power
5. ECLOF Kenya	Orb Energy
6. Musoni Microfinance	D.light
7. Letshego Microfinance	Orb Energy, D.light, Green Light Planet

*(Source: Fieldwork)*

### **3.4. Sources of Data**

Primary and secondary sources of data were used in this study. Primary data was collected from financial institutions and Energy Service Companies. On Data collection, the study used a semi-structured open ended questionnaire to collect data. Respondent were asked questions on resource sharing, capability learning, and uptake of solar loans. All respondents were senior managers in the financial institutions and the Energy Service Companies (see table 3 below for study respondents). The managers were asked to rate various aspects of the partnerships (resource sharing and capability learning) on a five-point likert scale. They were also requested to elaborate further on their likert responses for additional data.

**Table 3: Study Respondents**

<b>Name of Institution</b>	<b>Role at the company</b>
<b>Equity Bank</b>	General Manager in Charge of Energy and Environment Pillar at the Equity Group Foundation
<b>Greenland Fedha</b>	Head of credit and Operations
<b>Letshego Kenya</b>	Solutions and Partnerships Manager
<b>ECLOF Kenya</b>	Head of Marketing and Business Development
<b>Musoni Kenya</b>	Chief Innovations Officer
<b>Orb Energy</b>	Sales Manager
<b>Greenlight Planet</b>	Head of financial services partnerships

*(Source: Fieldwork)*

### **3.5. Data Needs Table**

The data needs table captures the data needed to answer the research question, the respondent from whom the data will be collected, and the instruments that will be used in its collection. The following data needs table was used for this study.

**Table 4: Data Needs Table**

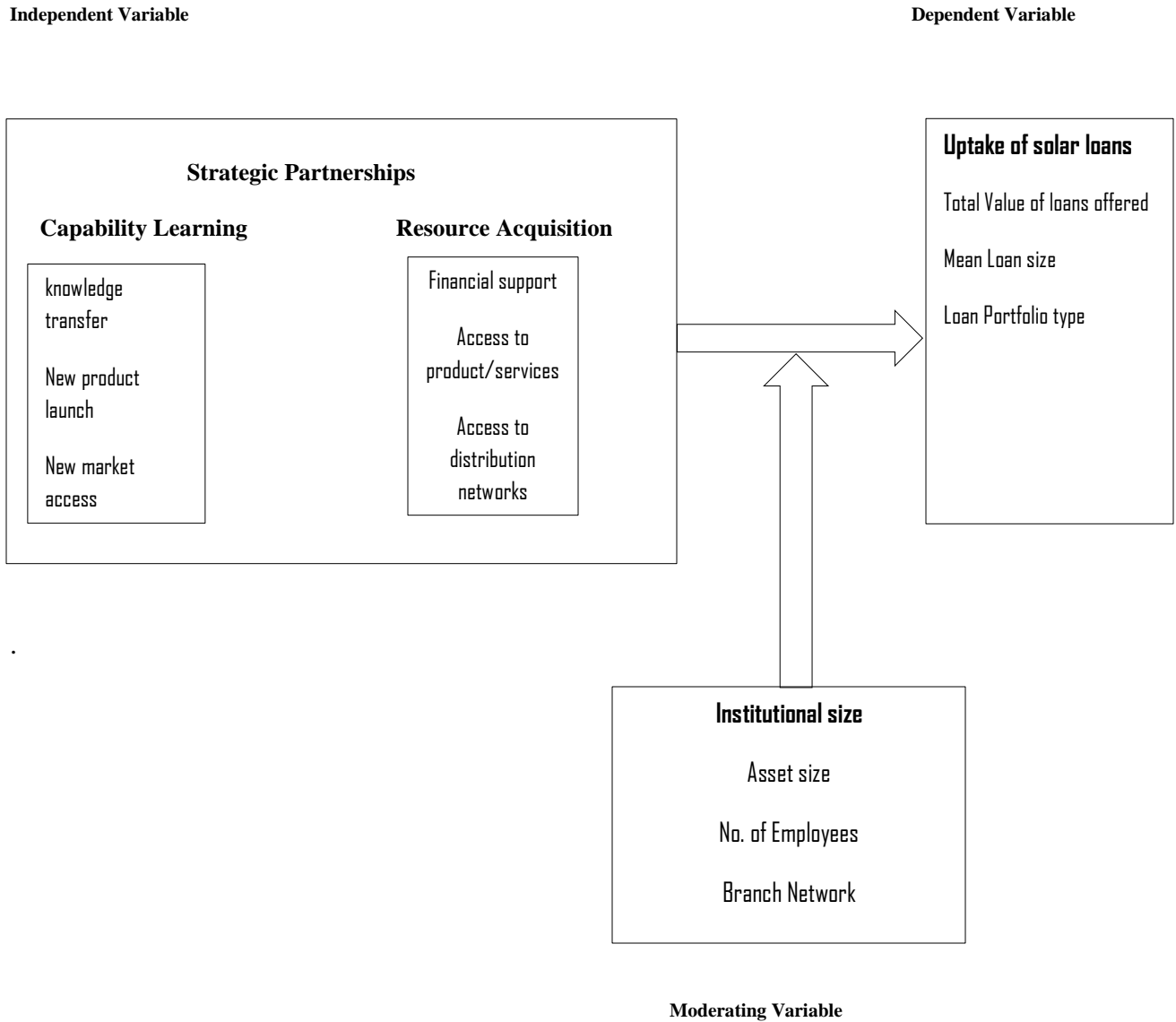
Variable	Data needed	Measurement	Type of Data	Source of Data
<b>Nature of Strategic Partnership</b>	<b>Capability learning</b> <ul style="list-style-type: none"> <li>• Knowledge transfer</li> <li>• New product launch</li> <li>• New market access</li> </ul>	Ordinal Likert scale	Qualitative	Respondent in FI and ESCO
	<b>Resource Acquisition</b> <ul style="list-style-type: none"> <li>• Financial support</li> <li>• Access to partner products/services</li> <li>• Access to partner physical assets</li> </ul>	Ordinal Likert scale	Qualitative	Respondent in FI and ESCO
<b>Uptake of Solar Loans</b>	<ul style="list-style-type: none"> <li>• Total Value of loans offered</li> <li>• Mean Loan size</li> <li>• Loan Portfolio type</li> </ul>	Ratio Ratio Nominal	Quantitative Quantitative Qualitative	Respondent in FI and ESCO
<b>Institutional Size</b>	<ul style="list-style-type: none"> <li>• Total Asset Value</li> <li>• No. of Employees</li> <li>• Branch Network</li> </ul>	Ratio	Quantitative	Respondent in FI and ESCO

### 3.6. Conceptual Framework

This study used a combination of Knowledge based view of strategic partnerships and the Resource Based View as its theoretical framework. The theories conceptualize strategic firm partnerships as vehicles for resource sharing and capability learning. From these perspectives, we conceptualized the study as follows.



**Figure 2: Conceptual framework**



(Source: Author’s Conceptualization)

Strategic partnerships in this paper were conceptualized in two ways. First, partnerships are viewed as vehicles to facilitate sharing of resources between two or more organizations. Partnerships have also been conceptualized as tools for accessing capabilities and competencies from other organizations. A detailed explanation of measurement of these concepts has been captured in Chapter 2 above. In summary, our study measures partnership performance by looking at the extent in which resources have been shared and capabilities transferred. We then analyze how this affects the uptake of loans. The measures of capability learning and resource

sharing have been captured in the conceptual framework too. We have included institutional size as a moderating variable. Size of institution as shown in our findings may affect both partnership performance and uptake. A detailed discussion of this is presented in Chapter 4.

### **3.7. Data Analysis**

The nature of the data collected in this study was both qualitative and quantitative. The data analysis is divided into two sections. In section A, we used the data gathered in the cases to determine partnership performance. Due to the heterogenous nature of the underlying dimensions of strategic partnerships used in the paper, we developed a simple partnership typology to facilitate analysis. As a result, we classified partnerships into three broad categories, high performance partnerships, medium performance partnerships, and low performance partnerships. (See table 5 below for classification criteria). In Section B, we compare the partnership performance established in Section A with the uptake of loans and draw conclusions. We also compare the size of financial institutions to partnership performance and uptake of loans in this section. The operating proposition in our analysis is that high performing partnerships lead to high uptake while low performance ones lead to low uptake. We also argue that high performance partnerships have led to a strong degree of resource sharing and capability learning. The analysis is done on a case by case basis using typologies. Typologies are an organized system of types that can be used to categorize or sort cases. They are mostly used to refine concepts for the purpose of measurement and classification. The use of typologies in data analysis often leads to the formation of new variables that can easily be measured (Collier et al., 2012). The classification system in typologies can be based on emerging patterns in the data or pre-coded themes (Ratcliff, 2008). The classification criteria may also be generated from theory, common sense, or research objectives (Hatch, 2002). Hatch (2002) also notes that typologies are ideal in understanding rich artifact data and can help generate detailed descriptions of the phenomenon.

**Table 5: Partnership Classification criteria**

High Performance partnership	Medium Performance	Low performance
<ul style="list-style-type: none"><li>• Resource sharing is high</li><li>• Capability learning is high</li></ul>	<ul style="list-style-type: none"><li>• Resource sharing or Capability learning is medium</li></ul>	<ul style="list-style-type: none"><li>• Resource sharing is low</li><li>• Capability learning is low</li></ul>

*(Source: Author's conceptualization)*

As for measurement, we used a combination of resource sharing and capability learning to measure partnerships. The study gauges resource sharing in terms of access to financial support, access to partner products and services, and access to partner distribution networks. Capability learning on the other hand is measured in terms of knowledge transfer, new product launch, and access to markets.

### **3.8. Fieldwork Challenges**

All the respondents in the study were senior managers in financial institutions and energy companies. Due to the nature of their work and strictness of their schedules, it has very difficult to get access to all of them. Out of the seven cases that the study aimed to carry out, only five were done. The study also found that in some cases the information provided was too general due to data sensitivity. In some cases, important responses to the study were provided off the record and were not included in the final analysis. Most of the partnerships covered in the study were active during the data collection phase. Because of this, our findings may change in the future based on the dynamics of said partnerships.

### **3.9. Ethical Considerations**

The research was done under very high ethical standards. The purpose of the research was extensively explained to all respondents. Identification documents including a letter from the university were also provided. Interviews were scheduled through appointments only and were conducted in strict confidence. All the data collected in the study was used only for research purposes.

## **Chapter 4: Research Findings**

In this section, we analyzed the data collected in the study. The goal was to establish the nature of existing partnerships between financial institutions and energy service companies and their implication on uptake of solar loans. We begin our analysis by looking at the nature of partnerships. The data collected is used to determine partnership performance based on the criteria explained above in the methodology. A total of five partnerships were analyzed. They included; Equity Bank/Orb Energy/Greenlight Planet/D.light, Greenland Fedha/Barefoot Power, Letshego Microfinance/Greenlight Planet/ Orb Energy/D.light, ECLOF Kenya/Orb Energy, and Musoni Microfinance/ D.light.

### **4.1. Section a: the nature of existing partnerships between banks and ESCOs**

In this subsection, we determined the performance of strategic partnerships between financial institutions and energy companies. We used the measurements discussed in Chapter 2 to determine performance.

#### **1. Equity Bank Kenya**

We begin our analysis with the case of Equity Bank. Equity Bank is a licensed commercial bank based in Nairobi. Although the bank was founded in 1984 as Equity Building Society, it became a fully-fledged commercial bank in 2004. Equity Bank has operations in Kenya and other East African countries. As of 2015, the bank had 11.5 million customers. Social impact projects like the energy lending program are done through the Equity Group Foundation.

#### **Partnership Overview**

Equity Bank has partnered with D.light, Orb Energy, and Green Light Planet to provide financing for solar technology. The bank uses its network of agents across the country to facilitate distribution and access to the systems. Equity has negotiated with energy companies on behalf of its agents to access the kits. Loan application is done directly at the agents through a digitized platform. The loan is processed on-site. Once the client gets approval, the solar kit is availed at the agent immediately. If the system is not available at that particular time, the equity bank agents coordinate with the partner energy companies to have the kits delivered within 24 hours. The customer then picks it at the agent.

The banks provides financing for low end solar kits that range from KES 8, 000 – KES 20, 000 and more expensive systems that range from KES 120, 000 – KES 160, 000. Uptake of financing for these expensive systems has been very low. Uptake for low end solar lighting kits has been relatively higher. The Energy Service companies are also required to provide after sale services like maintenance and repairs for a limited time.

### **Partnership Performance**

We now analyze the data gathered for this case to determine the performance of the partnership. As discussed in Chapter 2 above, we are using resource acquisition and capability learning to measure the performance of strategic partnerships.

### **Resource Acquisition**

Our analysis of resource acquisition uses three measurements – Access to partner products and service, Access to financial support, and access to partner distribution networks. On financial support, we've determined that the bank has significantly benefited from its partnerships with ESCOs to access financial assistance. However, financial support has not been offered directly by the ESCO partners. Instead, the bank is leveraging on this partnership for demonstrating expertise in solar microfinance to potential financiers. As a result, Equity Bank has so far received around KES 50 Million from the International Finance Corporation under the Lighting Africa program. The money has been used to digitize application and processing of green energy loans including solar systems and clean energy stoves.

Our findings also show that access to partner products and services in this partnership is very high. The bank is leveraging on the manufacturing assets provided by ESCOs to deliver high quality solar products to its customers. All the solar products financed through Equity Bank are manufactured, branded, or co-branded by partner ESCOs. The ESCOs are also providing after sale maintenance for solar products. After sale maintenance is however done on a limited period after which customers will have to pay a small fee for it. On the other hand, the ESCOs are using the credit platform provided by Equity Bank and its expertise in the provision of loans to increase sales. The ESCOs have also leveraged on Equity Bank's brand value to access new markets and enhance the credibility of their solar solutions in the Kenyan market.

Access to partner distribution networks in the partnerships is medium. Equity Bank uses its agents for the provision of green energy loans. The loans cover both clean energy stoves and solar home systems. The ESCOs have leveraged on this network to reach a significant number of customers with their solar products. The energy companies are also using the wide branch network offered by the bank as bases to raise awareness on solar home systems. On the other hand, Equity Bank is leveraging on the distribution infrastructure offered by ESCOs to deliver solar kits directly to its agents. The Bank is the primary liaison between the ESCOs and the Equity agents across the country. It negotiates on the agents' behalf. The ESCOs are then responsible for making sure the products negotiated reach the selected agents in all parts of the country. This distribution is handled primary by the ESCOs.

Customers applying for a green energy loan at Equity Bank agents countrywide will access the product on site. If the product is not there, the ESCO must deliver it within 24 hours to the agent in question. There have been challenges though with distribution. Delays on product delivery by ESCOs have been reported at times. Additionally, even with this wide network of agents working to distribute the solar systems, reaching the remotest areas where the bank does not have a bigger presence still poses a challenge. We also found that only a small percentage of selected agents and branches have been used for distribution. More could still be done to enhance overall performance in distribution especially for remote areas where the need for solar energy could be higher. This is why we classify access to distribution networks in this partnership as medium instead of high.

In conclusion, based on the discussion above, we have determined that resource sharing in this partnership is high. With the exception of access to distribution networks, the other underlying dimensions used to measure resource sharing are high performing as summarized in the table below.

**Table 6: Summary of Resource sharing for the Equity Bank case**

Resource Sharing – High		
Measurement	Performance	Comments
<b>Access to Financial Support</b>	High	<ul style="list-style-type: none"> <li>Equity has leveraged on partnerships with ESCOs to access funding from IFC</li> </ul>
<b>Access to Partner product and services</b>	High	<ul style="list-style-type: none"> <li>Equity bank has accessed manufacturing, branding, and after sales maintenance from ESCOs.</li> <li>The ESCOs are utilizing the bank’s credit platform and expertise in loans to increase sales</li> </ul>
<b>Access to distribution Networks</b>	Medium	<ul style="list-style-type: none"> <li>ESCOs are using Equity bank agents for distribution.</li> <li>The Bank is also leveraging on ESCOs distribution networks to ensure products reach its agents country wide</li> <li>More could be done to fully leverage on the extensive branch and agent network offered by Equity Bank</li> </ul>

*(Source: fieldwork)*

### **Capability Learning**

In our analysis of Capability learning we use three measurements – Knowledge Transfer, New product launch, and access to new markets. On Knowledge transfer, we determine the level is high. Equity Bank has benefited from the expertise of ESCO partners to understand existing energy needs in the market and develop credit solutions to meet them. The bank is also using ESCOs knowledge of the energy market to screen and profile customers for credit. The Energy Service Companies have also provided training for Equity Bank agents on product marketing and promotion. The agents are trained on how to demonstrate the solar systems and generating awareness for the kits among the targeted customers.

ESCO partners are also playing an important role in helping Equity Bank launch new products. The bank has involved all its ESCO partners in every stage of developing its financing packages for different solar solutions. The ESCO partners have provided input on how loan packages

should be structured, the eligibility criteria, and also the terms and conditions. The bank has also used the networks provided by ESCOs to pilot and test new financing packages. On the other hand, ESCOs have managed to introduce new products into the market simply because there is a financing option for the targeted customers. For instance, the solar market has largely been dominated by simple portable lighting solutions and small capacity home systems. But we found that companies like Orb Energy are introducing higher end products such as solar water heaters after partnering with credit providers. The ESCOs are also adding value to the initial portable lighting systems by offering higher capacity solar panels that can support mobile charging, a radio and solar powered satellite TVs. Based on these findings we conclude that the extent in which the partnership has led to the launch of new product for both the FIs and ESCOs is high.

On access to new markets, we found that both Equity Bank and its ESCO partners have strongly benefited. For instance, energy companies have networks in some areas around the country where the bank does not have a presence. The bank has used these networks to bring in new clients for its solar financing packages. The partnerships have also allowed the bank to access marketing and product promotion assistance from its ESCO partners. Orb Energy in particular has deployed sales agents in selected Equity Bank branches to provide product demonstration and promotion. This has significantly helped Equity bank to recruit more people for its loan package. ESCOs on the other hand are also using the branch network provided by Equity to market and promote solar solutions to the bank's massive customer base. A combination of sales agents in branches, product banners, and stands in selected braches has help improve customer outreach. The Equity bank agents too have received training from ESCO partners on product promotion. They are also raising awareness in their adjacent communities on solar energy and the products available from ESCO partners.

In conclusion, we strongly determine that capability learning based on our metrics above is very high in the Equity Bank case. The measurements used in the paper to gauge this variable (Knowledge transfer, new product launch, and access to new markets) are all high performing. We have summarized our findings on this on the table below.



**Table 7: Summary of capability learning for the Equity Bank case**

Capability Learning – High		
Measurement	Performance	Comments
<b>Knowledge Transfer</b>	High	<ul style="list-style-type: none"> <li>• Equity Bank has benefited from the knowledge of ESCOs in the energy industry to develop loan packages</li> <li>• The bank is also using this knowledge to screen and profile customers for credit</li> <li>• ESCOs have offered training for Equity bank agents in product demos and promotions</li> </ul>
<b>New Product launch</b>	High	<ul style="list-style-type: none"> <li>• ESCOs have been involved in the design of loan packages for solar</li> <li>• The companies have also assisted the bank in piloting various financing models</li> </ul>
<b>Access to New markets</b>	High	<ul style="list-style-type: none"> <li>• ESCOs are providing sales agents at Equity bank branches for product promotions</li> <li>• The ESCOs are also leveraging on the bank’s extensive network for customer outreach</li> <li>• ESCOs have assisted Equity Bank to recruit customers in areas where the bank does not have a big presence</li> </ul>

*(Source: fieldwork)*

## **Overall Partnership Performance**

Overall, by looking at both resource sharing and capability learning, we conclude that the Equity Bank partnership is high performing. As we have discussed above, the partnership has high levels of resource sharing and high levels of capability learning. Although there are some challenges with distribution networks, all aspects of the partnerships are doing well.

### **2. Greenland Fedha**

We now look at our second partnership involving Greenland Fedha and Barefoot Power. Greenland Fedha Limited (GFL) is a non-deposit taking microfinance institution based in Nairobi. The MFI provides a variety of financial services to low income small scale tea farmers

in the country. Greenland Fedha is wholly owned by Kenya Tea Development Agency Holdings Limited (KTDA). The microfinance institution was founded in 2009. It has representatives in 66 tea factories across the country. The factories are used as fronts to target customers with financial services in the tea growing regions of Kenya. Greenland Fedha serves over 120, 000 customers.

### **Overview of partnership**

Greenland Fedha was approached by Barefoot Power in 2013 about the possibility of offering loans for solar systems. Barefoot offered to supply the products and Greenland was to provide the credit platform. The solar kits were exclusively marketed to tea farmers who deliver their harvest to KTDA factories around the country. The microfinance institution used its own network of loan officers across the country to reach potential clients for the solar kits. Once the customers were interested, they applied for a loan using a mobile phone based platform. The loan was processed within a few hours. The client then received a voucher which they would use to pick the solar kits from Barefoot. The ESCO established two main collection centers in Meru and Kericho counties. The loan was booked only after the customer received the kits. The program ran for three years before it was cancelled by Greenland.

### **Partnership Performance**

Partnership performance in this case is also measured based on the extent of resource sharing and capability learning.

### **Resource Acquisition**

As discussed in Chapter 2 above, resource acquisition is measured in terms of access to financial support, access to partner products and services, and access to distribution networks. Our findings show that financial support in the partnership was very high. Greenland Fedha received KES 20 million from Barefoot as part of the solar loan program. The money was used to subsidize solar kits for Greenland customers and to also handle additional operational expenses. However, the money was not enough. The MFI had to also provide its own funding to support the solar credit program. Despite this, the funding provided by the ESCO partner played a significant role in rolling out the program and sustaining it for the 3 year duration it lasted.

On access to partner products and services, our findings show that access is medium. The initial agreement between Greenland Fedha and Barefoot established specific roles for each partner. Greenland Fedha was required to provide the credit platform that enables tea farmers to access financing for Barefoot solar solutions. On the other hand, Barefoot was supposed to supply the kits and offer after sale maintenance. The partners also wanted to combine efforts in marketing and raising awareness. We found that some of these roles were not fulfilled to the satisfaction of Greenland Fedha. For example, even though Barefoot Power had promised to provide after sales maintenance for kits sold to Greenland clients, the ESCO had a very limited presence in the targeted markets. This made it very difficult for any issues with the kits to be addressed. Barefoot only had two outlets, one in Kericho and one in Meru. The outlets were used as both distribution centers and repair and maintenance centers for sold systems. They were not enough to handle the demands in the market at the time. As a result, requests for system maintenance and repairs took too long. This had a negative effect on the satisfaction of Greenland Fedha customers. Despite this challenge, the ESCO was able to provide manufacturing and branding for the solar kits sold under the financing program. By leveraging on the credit platform offered by Greenland Fedha and its network of loan officers, Barefoot was able to sell a significant number of solar products. This is why we classify the performance of this metric as medium and not low.

Our findings also show that access to distribution networks in the partnership was medium. Barefoot Power established two distribution centers in Kericho and Meru to supposedly target tea growers. Loan applications were done through Greenland Fedha officers located in tea growing areas around the country. Once the loan was approved, the customer would get a voucher. He or she was then required to visit two of these distribution centers established by Barefoot in Kericho and Meru and collect the kits. Our findings show that this process was inefficient and too cumbersome. The two centers were not enough to guarantee efficient distribution once the loan was offered. Greenland in the end had to use its own networks in Kenya's tea growing areas to facilitate distribution of solar kits to its customers. Since this is a small MFI with a limited number of employees, it was very difficult to effectively reach all the areas where Barefoot couldn't. Delays in product delivery were consequently reported. We categorize access to distribution networks as medium because of one reason. Barefoot, the ESCO partner did very little to offer the needed distribution infrastructure. But Greenland stepped in with its networks in tea growing areas to supplement what the ESCO had to offer. Although

these networks were not enough, they still played a role in helping customers access the kits relatively easier in their own communities.

In conclusion, resource sharing in this partnership is okay but still not as high as it should be. With the exception of financial support, our findings show that the other two metrics of resource sharing were not high performing. However, despite the challenges, there was still a small measure of success. As a result, we classify resource sharing in the partnership as medium. The findings are summarized in the table below.

**Table 8: Summary of Resource sharing in the Greenland Fedha case**

Resource Sharing – Medium		
Measurement	Performance	Comments
<b>Access to financial Support</b>	High	<ul style="list-style-type: none"> <li>Greenland received KES 20 million from Barefoot to subsidize kits and handle other operational expenses</li> </ul>
<b>Access to partner product and services</b>	Medium	<ul style="list-style-type: none"> <li>Greenland was able to access manufacturing and branding for the solar kits while Barefoot utilized the credit platform offered by the MFI</li> <li>After sale maintenance and repairs were however delivered very slowly and inefficiently by the ESCO.</li> </ul>
<b>Access to distribution networks</b>	Medium	<ul style="list-style-type: none"> <li>Barefoot had two distribution centers in Meru and Kericho. They were not enough.</li> <li>Greenland’s networks in tea growing areas were used to facilitate distribution. They reached a reasonable number of customers.</li> </ul>

*(Source: fieldwork)*

## Capability Learning

We determine the level capability learning by analyzing the level of Knowledge transfer, launch of new products, and access to new markets. Our findings show that knowledge transfer in the partnership is medium. At first, loan applications for the solar kits were done using pen and paper. Barefoot Power was able to provide some assistance for Greenland to develop a mobile based system for loan application. Other than that, we did not see any evidence that the ESCO partner helped Greenland directly with any specific information related to the energy industry. Instead, Barefoot promised to bring in its own sales agents to work alongside Greenland loan officers. The hope was that this collaboration would assist Greenland to acquire expertise in solar lending as the program went on. Our findings show that despite this promise, Barefoot did not provide enough sales agents for Greenland loan officers to collaborate with. This is the reason why we categorize knowledge transfer in the partnership as medium. While there was some knowledge shared, there was room to do more.

On the launch of new products, we conclude the level was high. Greenland Fedha is an MFI that provides asset finance loans for KTDA registered tea farmers. Before the MFI was approached by Barefoot Power about the possibility of including a solar lending option in its asset finance portfolio, there was no immediate plan whatsoever at the MFI to move towards this direction. Barefoot Power provided assistance on product packaging too. The ESCO also helped Greenland Fedha with financing to help roll out the loans in major tea growing areas. There was also some training offered by Barefoot for Greenland loan officers. The training largely focused on customer outreach. However, it was only available to a small number of selected loan officers.

Our findings also show that the extent the partnership went to enhance access to new markets for partner organizations was medium. Greenland Fedha is an MFI that only works with small scale tea growers in Kenya who deliver tea to KTDA factories across the country. When the MFI was approached by Barefoot about the possibility of offering loans for solar, the goal was to market the product to its existing customer base. Our findings show that even though uptake of solar loans among the tea growers was relatively high, recruitment of customers outside tea farmers was very small. There was a proposal by Barefoot Power to fund roadshows and radio ads for the solar systems but it never took off. We categorize this metric as medium because access to markets outside tea farming areas was low but uptake of solar kits among targeted tea growers

was very high. Additionally, for Barefoot Power, partnering with Greenland provided access to hundreds of thousands of potential customers in need of solar energy solutions.

In conclusion, based on our discussion above we determine that capability learning in the Greenland Fedha case was medium. Although the extent in which the partnership led to the launch of new products is high, the other two measures (market access and knowledge transfer) are all medium. We summarized our analysis on capability learning from this case on the table below.

**Table 9: Summary of Capability learning for the Greenland Fedha case**

Capability learning – Medium		
Measurement	Performance	Comment
<b>Knowledge Transfer</b>	Medium	<ul style="list-style-type: none"> <li>Barefoot provided assistance in digitizing the loan application process</li> <li>The ESCO’s promise to offer sales agents to train Greenland loan officers on the job did not materialize as expected</li> </ul>
<b>New product launch</b>	High	<ul style="list-style-type: none"> <li>Greenland was approached by Barefoot to offer solar financing at a time when there was no plan to do so at the MFI</li> <li>Barefoot funded the product roll out and provided assistance on packaging and marketing</li> </ul>
<b>Market access</b>	Medium	<ul style="list-style-type: none"> <li>Uptake of solar kits among tea growers already working with Greenland was high</li> <li>New markets outside this demographic were very small</li> </ul>

*(Source: fieldwork)*

### **Overall Partnership Performance**

Based on the discussion above, we categorize the Greenland Fedha and Barefoot power partnership as medium performance. This is because the two measures (Resource sharing and

capability learning) we have used to gauge partnership performance in this study have performed at the medium level too.

### **3. Letshego Kenya Microfinance**

Our third case focuses on the partnership between Letshego Kenya and Orb Energy, D.light, and Greenlight Planet. Letshego Holdings limited is a financial service provider based in Gaborone Botswana. In 2012, the company opened its operations in East Africa with the acquisition of Micro Africa, a former non deposit taking MFI working in the region. The institution has over 20, 000 customers in Kenya and 23 branches across the country.

#### **Overview of Partnership**

Letshego is a Microfinance institution that works with SMEs and salaried employees. The MFI has partnered with Green Light Planet, Orb Energy, and D. Light to provide loans on solar kits. The loan application is done at Letshego branches country wide. Customers fill a one page loan application form and it's processed in less than 24 hours. Once the loan is approved, confirmation is sent to the Energy Service Companies. The ESCOs then deliver the requested kits on a Letshego branch nearest to the customer. The client is then contacted to come pick the solar kit. The partnership has been in place for three years to date.

#### **Partnership Performance**

Our analysis of partnership performance for the Letshego case is also based on resource sharing and capability learning. We begin our discussions below.

#### **Resource Acquisition**

Resource acquisition as we have disused in all the other cases is viewed in terms of access to financial support, access to partner products and service, and access to distribution networks. On financial support, we determine that the level is low. Letshego has not received any financial assistance from ESCO partners. The MFI has also not provided any financial help to its ESCO partners. The solar loan program has been funded internally. Letshego has also not received any grants from development agencies to support the program.

On access to partner products and services, Letshego is leveraging on the manufacturing assets of ESCO partners to secure high quality solar solutions for its customers. The MFI offers both low end portable LED solar lights and high end water heating and solar PV systems. All these products are supplied by ESCOs. The products supplied come with a 2 year warranty. Repairs and replacements of faulty kits are handled by the ESCOs although such cases have been very minimal. Based on this, we classify access to partner products and services as high.

Access to effective distribution networks is however low. The model used by Letshego to distribute solar kits heavily relies on its branch network. Once a loan for the kits is approved by the MFI, a note is sent to the ESCO partner to deliver the product. The product is delivered to any Letshego branch nearest possible to the customer. However, Letshego does not have a big presence in terms of branch network. The MFI has a total of 23 branches 10 of which are located in and around the city of Nairobi. This makes it very difficult for the MFI to supply the kits to clients in time. The issue has also somewhat limited the number of potential users Letshego can target at one given time. Our findings also show that delays in product delivery by the ESCOs have been reported too.

In conclusion, we determine that overall resource sharing in this case is low. Although access to partner products and service is high, we found that access to financial support and distribution networks is low. This has limited Letshego's ability to target more clients with the solar loan program. We summarize the analysis of resource sharing in the table below.



**Table 10: Summary of resource sharing for the Letshego case**

Resource Sharing – Low		
Measurement	Performance	Comments
<b>Access to financial support</b>	Low	<ul style="list-style-type: none"> <li>• Letshego has not received any financial assistance from ESCO partners</li> <li>• The MFI has also not accessed grants</li> </ul>
<b>Access to partner product and services</b>	High	<ul style="list-style-type: none"> <li>• Access to solar kits manufactured by ESCOs is high</li> <li>• ESCOs do also offer repair and replacement for faulty kits. Such cases are very rare</li> </ul>
<b>Access to distribution networks</b>	Low	<ul style="list-style-type: none"> <li>• Only Letshego branches are used in distribution. The MFI does not have a big branch network country wide. As a result distribution has been very challenging</li> </ul>

*(Source: fieldwork)*

### **Capability Learning**

We look at capability learning in terms of knowledge transfer, new product launch, and access to markets. On knowledge transfer we determine the level is high. Our findings show that partnership with the ESCOs has given Letshego exposure to the solar lending market. The ESCOs have also shared important market research that has allowed the MFI to offer the “right product” for its customers. ESCOs have also provided some training on customer targeting for the solar loans.

Our findings however show that the role of ESCO partners in helping Letshego launch new products is medium. Although the Energy companies have shared their market research on the energy space in Kenya, Letshego has fully relied on its experience in microfinance to develop and structure loan packages. Unlike in some cases (Equity Bank) where ESCO partners have been involved in product development right from start, in this partnership the input has been very small. Nonetheless, we found that the market research provided by the ESCO has to some extent helped the MFI understand the target market better. This has in turn helped in the development

of relevant loan packages. As a result, we categorize the performance of this measure as medium. We observe that more could be done to ensure better engagement between the MFI and its ESCO partners in the development and launch of new products.

On access to new markets, we determine that the level here is very low. The role of ESCO partners in marketing has been very limited. Letshego has instead taken over the mantle of doing product promotions and marketing itself. The loans are marketed to its existing customer base. There was a promise by some of the ESCOs to provide sales agents to assist in marketing and product promotion. But the number of agents provided is too small to have any significant effect in generating awareness on the solar kits. Letshego markets the solar kits bundled together with other asset finance loans offered by the organization.

Overall, the level of capability learning in the partnership is medium. Knowledge transfer is high but other measures do not perform as good. The role of the partnership in enhancing access to markets is low. Our findings also show that while the ESCO partners have to some extent helped with the launch of new Products, there is room to do more. We summarize our analysis in the table below.

**Table 11: Summary of Capability learning for the Letshego case**

Capability Learning – Medium		
Measurement	Performance	Comments
<b>Knowledge Transfer</b>	High	<ul style="list-style-type: none"> <li>Market research has been shared by ESCO to help Letshego fine tune loan packages</li> <li>Partnerships with ESCO partners has also given Letshego exposure to the solar market</li> </ul>
<b>New Product launch</b>	Medium	<ul style="list-style-type: none"> <li>ESCOs have helped with important market research. Other than that their involvement in product development and launch has been very limited</li> </ul>
<b>Access to markets</b>	Low	<ul style="list-style-type: none"> <li>Sales agents supplied by ESCOs to help with marketing and sales are not enough</li> <li>Letshego is doing product marketing and promotions entirely on its own</li> <li>Products have only been marketed on Letshego existing customer base</li> </ul>

## **Overall Partnership Performance**

We determine that the overall performance of the partnership between Letshego Microfinance limited and Orb Energy, Greenlight Planet, and D.light is medium. Our conclusion is based on the fact that resource sharing is low and capability learning is medium. Based on our classification criteria discussed in the methodology, the partnership falls under medium performance.

### **4. ECLOF Kenya**

We now proceed with our fourth case study involving ECLOF Kenya and Orb Energy. ECLOF Kenya (Ecumenical Church Loan Fund) is a microfinance institution that provides financial and related non-financial services to SMEs and low income households in Kenya. The MFI was registered under the Companies Act in 1994. It has 27,000 customers, 60% of whom are located in rural areas. 57% of its customers are also female. ECLOF Kenya is affiliated to ECLOF International based in Geneva.

### **Overview of Partnership**

ECLOF Kenya has established a partnership with Orb Energy Kenya to supply a wide range of solar solutions. The MFI offers financing for both low-end and high-end systems including solar water heaters. Clients apply for a loan through ECLOF loan officers located countrywide. Once the loan is approved a notification is sent to Orb Energy for product delivery. A sales agent is assigned the order by the ESCO. The sales agent collaborates with the loan officer involved in the loan application to deliver the solar system directly to the client. Generally, the product is delivered within 48 hours. The partnership has been in place for five years to date.

### **Partnership Performance**

We look at the different dimensions of resource sharing and capability learning to establish partnership performance as discussed here below:

#### **Resource Acquisition**

We begin our assessment of resource acquisition by looking at the level of financial support. Our findings show that the level is low. ECLOF Kenya has not received any financial assistance from

its ESCO partner. The MFI has also not received any grants to support the program too. The green loans are financed entirely by the MFI.

Access to partner products and services is high. ECLOF Kenya like most financial institutions analyzed in the cases above does not have any expertise in solar. The MFI relies on the manufacturing assets of ESCO partners to secure quality solar solutions. The ESCO also offers after sales maintenance and repair. However, such cases have been very limited for the duration of the partnership. Repairs for faulty kits are normally handled within 24 hours but delays have been reported in some instances.

On access to distribution networks, we determine the level of access is medium. Orb Energy, the ESCO partner working with ECLOF Kenya is responsible for distributing kits directly to ECLOF Kenya customers. The ESCO's sales agent collaborates with loan officers working for ECLOF Kenya on the ground to reach customers in specific locations. However, our findings show that this model is relatively challenging. ECLOF Kenya loans officers are still required to handle marketing and promotional duties for other asset finance loans offered by the MFI. In some cases, they may lack the time to effectively coordinate with Orb sales agents to ensure the purchased systems reach the customer in time. Additionally, although ECLOF Kenya has a small branch network around the country, we did not find any evidence that this network has been used in any way for distribution of kits. This is why we categorize this measurement as medium. While Orb Energy is providing its distribution networks, ECLOF Kenya could do more by availing its branches too for the same role.

Overall, we determine that resource sharing in the ECLOF Kenya/Orb Energy partnership is medium. While access to partner products and services is high, financial support and access to distribution networks are low and medium respectively. We summarize these findings in the table below:

**Table 12: Summary of Resource sharing for the ECLOF Kenya case**

Resource Sharing – Medium		
Measurement	Performance	Comments
<b>Financial support</b>	Low	<ul style="list-style-type: none"> <li>ECLOF Kenya has not received any financial assistance from ESCO partner. The MFI has also not received any grants to finance the program</li> </ul>
<b>Access to partner products and service</b>	High	<ul style="list-style-type: none"> <li>The MFI has accessed quality branded solar systems manufactured directly by Orb Energy and after sales maintenance.</li> </ul>
<b>Access to distribution networks</b>	Medium	<ul style="list-style-type: none"> <li>Orb Energy handles all the distribution on its own. The ESCO collaborates with loan officers on the ground to reach the customer directly</li> <li>ECLOF branches have not been fully utilized in distribution</li> </ul>

*(Source: fieldwork)*

### **Capability learning**

We look at capability learning in terms of knowledge transfer, new product launch, and access to markets. On Knowledge transfer, we determine that the level is high for this case. The ESCO partners have provided training for loan officers working at ECLOF Kenya to promote and market solar kits to their existing customer base. The ESCO is also providing important information about the solar market in Kenya to help ECLOF understand the opportunities and challenges. Our findings also show that Orb Energy has assisted ECLOF Kenya to develop specific loan packages for the lowest end of the market where the MFI has its largest customers.

We also determine that the partnership has played a significant role in the launch of new products for ECLOF Kenya. Initially, ECLOF Kenya started off its loan program with simple low end portable lights. The partnership with Orb Energy has allowed the MFI to diversify its product offerings to additional Solar PV systems and water heaters. Our findings also show that ECLOF Kenya has engaged directly with ESCO partner in the development of new loan packages for different solar solutions other than the low end portable lights.

On access to markets, we rate the performance of this measure as medium. Orb Energy has provided sales agents to work directly with ECLOF Kenya in marketing and product promotion. However, the sales agents are not incentivized enough to be dedicated to ECLOF Kenya. Our findings show that mostly, the agents offered by the ESCO partners are shared by more than one financial institution. Since the agents are paid on a commissions basis, they are much more inclined to dedicate efforts to bigger financial institutions where there is significant potential to sell more kits. Despite this, Orb Energy has availed training for ECLOF Kenya loan officers to help them in marketing and product promotion. The solar kits are marketed in group meetings in targeted communities.

Overall, we conclude that capability learning in this partnership is high. All metrics used to measure the variable show high performance except access to markets that shows medium. Despite this, we still conclude that based on the two other metrics there has been higher capability learning. We summarize our discussions above in the table below.

**Table 13: Summary of Capability learning for ECLOF Kenya**

Capability Learning – High		
Measurement	Performance	Comments
<b>Knowledge Transfer</b>	High	<ul style="list-style-type: none"> <li>Orb Energy has provided training for ECLOF Kenya loan officers on product promotion and marketing</li> <li>The ESCO partners have also provided input on targeting low end customers with loans</li> </ul>
<b>New product launch</b>	High	<ul style="list-style-type: none"> <li>ECLOF Kenya has progressed from financing low end portable kits to high end PV systems and water heaters. This progression is a result of the input provided by Orb Energy and its expertise in the energy market</li> <li>ECLOF Kenya has engaged directly with Orb Energy through the entire process of launching financing packages for higher end systems</li> </ul>
<b>Access to markets</b>	Medium	<ul style="list-style-type: none"> <li>Although training has been offered for ECLOF Kenya loan officers on product marketing and promotion, sales agents provided by Orb energy are not enough.</li> <li>The agents lack bigger incentives to dedicate themselves to smaller MFIs. They instead put a lot on large banks where the potential for selling more products is high</li> </ul>

(Source: fieldwork)

### **Overall Partnership Performance**

Based on the measure of resource acquisition and capability learning, we conclude that the partnership is medium performing using the criteria we have outlined in the methodology. Although capability learning is high, resource sharing is at medium performance.

### **5. Musoni Microfinance**

Our fifth case focuses on Musoni Kenya partnership with D.light. Musoni Kenya is a microfinance institution (MFI) that provides financial services to the unbanked in Kenya through mobile payments. All transactions are done using M-pesa. Established in 2009, Musoni Kenya was the first 100% cashless financial services provider in the world. As of 2018, the MFI had a total of 24, 000 customers. An estimated 60% are female and 48% are located in rural areas.

#### **Overview of Partnership**

Musoni Kenya has formed a partnership with D.light Kenya to finance loans for solar. The MFI works collaboratively with sales agents deployed by D.light to market and promote solar solutions to its existing customers. Targeted customers apply for the solar loan through a fully digitized process. The loan is processed and if approved, D.light is notified with the details of the customer. The ESCO then coordinates with the MFI to deliver the product purchased directly to the customer. All transactions including loan disbursement and repayment are done via M-pesa.

#### **Resource Sharing**

Musoni Microfinance has not received any financial assistance from its ESCO partner for the solar lending program at the institution. The MFI has also not received any grants from development organizations. Because of this, we conclude that access to financial support in these partnerships is low.

On access to partner products and services, the level is high. Musoni has accessed branded solar systems manufactured by D.light. The partnership agreement also mandates that any repairs for damaged kits be done by ESCO technicians. The MFI on the other hand provides its cashless credit platform that allows customers to apply and receive loans through M-pesa.

Access to distribution networks is however medium. Musoni MFI has a very limited branch network in the country. As of 2018, the MFI had 23 branches half of which are located in the city of Nairobi. The branches have not been used at all for distribution. Instead, solar kits purchased through financing by the MFI are delivered by D.light directly to the customer. However, this model has had numerous challenges leading to delays in product delivery. This is why we rate it as medium.

Overall, we classify resource sharing in the partnership as medium. Only access to partner products and services is high. Access to financial support and access to distribution networks are low and medium respectively. We summaries this discussion in the table below:

**Table 14: Summary of resource sharing in the Musoni Kenya case**

Resource sharing – Medium		
Measurement	Performance	Comments
<b>Access to financial support</b>	Low	<ul style="list-style-type: none"> <li>Musoni Microfinance has not received any financial support for the purpose of offering loans in solar from ESCO partners or other development agencies</li> </ul>
<b>Access to partner products and services</b>	High	<ul style="list-style-type: none"> <li>The MFI has accessed branded solar products manufactured directly by D.light Solar (ESCO partner)</li> <li>The ESCOs are also offering repairs and maintenance services for sold kits</li> </ul>
<b>Access to distribution networks</b>	Medium	<ul style="list-style-type: none"> <li>Due to its limited branch network across the country, Musoni has fully relied on its ESCO partner for the distribution of solar kits once purchased.</li> <li>The kits are distributed directly to the client but we found this model has a number of challenges including delays</li> </ul>

*(Source: fieldwork)*



## Capability Learning

Knowledge transfer in the Musoni Kenya partnership is high. Research findings show that ESCO partners are offering training on marketing solar products. They are also conducting public demonstrations in targeted areas. The ESCOs have also been involved in customer outreach programs where they have worked collaboratively with Musoni loan officers on the ground in popularizing the solar systems among potential customers.

The role of ESCO partners in the launch of new products is however medium. Our findings show that Musoni has developed the financing packages independently of the input of ESCO partners. However, the sales agents from ESCOs have taken a role in customer outreach. For example, loans at Musoni are largely offered through group lending. ESCO sales agents have been invited during group meetings to try and popularize the kits. This has led to increased awareness on the available solar financing loans.

On access to new markets, our findings show that the level is medium. Although ESCO partners are providing training to Musoni loan officers in marketing of solar kits, only existing Musoni customers have been targeted so far. We did not find any significant effort by the MFI and its ESCO partners to market the products beyond Musoni's existing customer base. Despite this, this marketing collaboration between ESCO sales agents and Musoni loan officers has had a positive effect in promoting product awareness and also uptake among existing Musoni customers.

Overall, we rate capability learning in the partnership as medium. Although knowledge transfer is high, the two other measures we are using to gauge the variable are not. On access to markets for instance, there is still room to do more in reaching new clients beyond the existing Musoni customer base. ESCO partners have also not been involved to a larger degree in the development of financing packages for the solar kits as we have seen in other cases. We summarize these findings on the table below:

**Table 15: Summary of Capability learning for the Musoni case**

Capability learning – Medium		
Measurement	Performance	Comments
<b>Knowledge transfer</b>	High	<ul style="list-style-type: none"> <li>• ESCO partners are providing training on marketing energy products to loan officers</li> <li>• Sales Agents from ESCO have also been invited in group meetings where they work collaboratively with loan officers to popularize the solar kits</li> </ul>
<b>New product launch</b>	Medium	<ul style="list-style-type: none"> <li>• The loan packages are developed by Musoni MFI. ESCOs have not provided any input on this.</li> <li>• They have however sent a few sales agents for customer outreach</li> </ul>
<b>Access to markets</b>	Medium	<ul style="list-style-type: none"> <li>• ESCOs are providing training on marketing and sales.</li> <li>• Only exiting Musoni MFI customers have been targeted so far. There is no significant effort to reach beyond this market</li> </ul>

*(Source: fieldwork)*

### **Overall Partnership Performance**

Overall we classify the partnership between Musoni Kenya and D.light as medium performing. This is because based on our criteria for classification outlined in the methodology we found resource sharing and capability learning as both medium.

### **Summary of Strategic Partnerships in End User Financing For Solar**

In Section A above we have discussed in detail five partnerships. We classified each of these partnership based on the performance of underlying measurements into three broad areas. We have low performing partnerships, medium performing partnerships, and high performing partnerships. The table below gives a summary of this typology.

<b>Partnerships</b>		
<b>High performing</b>	<b>Medium performing</b>	<b>Low performing</b>
<ul style="list-style-type: none"> <li>Equity Bank/D.light, Orb Energy, and Greenlight Planet</li> </ul>	<ul style="list-style-type: none"> <li>Greenland Fedha/ Barefoot Power</li> <li>Letshego Kenya/D.light, Greenlight planet, and Orb Energy</li> <li>ECLOF Kenya/ Orb Energy</li> <li>Musoni Kenya/D.light Kenya</li> </ul>	<p>We did not find any low performing partnership</p>

### **Limitations of data on Strategic partnerships**

Most of the partnerships we have analyzed above are still active. Some of the data provided by respondent could yet change in the future. Additionally, there was some hesitation among some respondents during interviews to provide any information that cast a bad light on the partnership. Most responses that were definitively negative about these partnerships were offered off the record. We have not included them in this analysis. We also noted that in some cases the information provided was too general.

## **4.2. Section B: Uptake of loans offered through partnerships**

In this section we compared partnership performance with loan uptake. We begin with a brief discussion of uptake of solar loans for each case discussed above. We then compared the uptake with the performance of the partnership and drew conclusions.

### **4.2.1. Uptake of Solar Loans Offered Through Partnerships**

As outlined in the conceptual framework, the study sought to measure uptake of solar loans by looking at the total value of loans disbursed since partnership was established. However, due to the sensitivity of this data we did not get total value in all the cases. However, we still managed to collect important information such as total number of households reached to help us determine the level of uptake.

For the Equity Bank case, our findings show that uptake is very high. The bank has offered over 50, 000 loans through its ECO Moto loan program. The program finances both solar systems and clean energy cook stoves. 35% of the total households targeted adopted a solar system. This translates to about 17, 500 households reached over a period of two years. Our findings also show that both individual households and SMEs have taken up the solar loans offered by the bank. Average loan size issued ranges between KES 8, 000 and KES 15, 000. Even though financing for high end solar systems that cost between KES 120, 000 to KES 160, 000 is available, uptake has been very low.

For Greenland Fedha, uptake is also high. Greenland offered the solar loans through a mobile platform. The credit product was exclusive only to tea farmers that deliver tea to any KTDA factories across the country. For the three years the program ran, Greenland had already provided between KES 50 Million – KES 100 Million in loans. The average loan size ranged between KES 5, 000 and KES 15, 000. A majority of the clients taking up the loan were individual households.

In the Letshego case, our findings show that uptake of solar loans is low. The solar loan product has been available at the MFI for a period of three years to date. During this time, total amount of loans disbursed has ranged between KES 2 Million and KES 8 million. The average loan size offered ranges between KES 3, 000 and KES 10, 000. Both SMEs and individual households have been targeted by the loans.

Our findings also show that for ECLOF Kenya, the uptake of the loans is very low. The partnership has been in place for five years to date. During this period, only 2000 households have been reached. The loans have targeted individual households only and the average loan size ranges between KES 4, 600 and KES 19, 000.

For Musoni Kenya, we did not get the exact number of targeted households or total value of the loans offered. We however requested the respondent to rate the uptake for the two years the partnership with D.light has been in place. We established that uptake in this case was medium.

We summarize uptake of the solar loans in the table below:

**Table 16: Summary of Uptake of Solar Loans**

Uptake of loans			
Partnership	Duration	Uptake	Comments
<b>Equity Bank/ D.light, Orb Energy and Greenlight Planet</b>	2 years	High	<ul style="list-style-type: none"> <li>• 17500 households reached</li> <li>• Average loan size KES 8, 000 to 15, 000</li> </ul>
<b>Greenland Fedha/ Barefoot</b>	3 years	High	<ul style="list-style-type: none"> <li>• Total loan disbursed ranges between KES 50 million and KES 100 million</li> <li>• Average loan size ranges between KES 5, 000 to KES 15, 000.</li> </ul>
<b>Letshego/ D.light, Orb Energy, and Greenlight Planet</b>	3 years	Low	<ul style="list-style-type: none"> <li>• Loan value disbursed ranges between KES 2 Million and KES 8 Million</li> <li>• Average loan size KES 3, 000 to KES 10, 000</li> </ul>
<b>ECLOF Kenya/ Orb Energy</b>	5 years	Low	<ul style="list-style-type: none"> <li>• Estimated Total households targeted so far is 2000</li> <li>• Average loans sizes ranges between KES 4600 and KES 19, 000</li> </ul>
<b>Musoni Kenya. D.light</b>	2 years	Medium	<ul style="list-style-type: none"> <li>• The respondent we spoke to was not at liberty to divulge this information. We asked her to rate the uptake. She noted uptake was medium</li> </ul>

*(Source: fieldwork)*

#### **4.2.2 The extent partnerships affect loan uptake**

In this sub section, we compared partnership performance established in section A above with the uptake of loans. We used a simple tool here below for this comparison.

**Figure 3: Comparison of Partnership performance and uptake**

<b>Uptake Of Solar Loans</b>	<b>High</b>		<ul style="list-style-type: none"> <li>Greenland Fedha/Barefoot</li> </ul>	<ul style="list-style-type: none"> <li>Equity Bank/D.light, Orb Energy, Greenlight planet</li> </ul>
	<b>Medium</b>		<ul style="list-style-type: none"> <li>Musoni Kenya/D.light</li> </ul>	
	<b>Low</b>		<ul style="list-style-type: none"> <li>Letshego/D.light, Orb Energy, Greenlight Planet</li> <li>ECLOF Kenya/Orb Energy</li> </ul>	
		<b>Low</b>	<b>Medium</b>	<b>High</b>
<b>Partnership Performance</b>				

*(Source: fieldwork)*

**Discussion on Partnership Performance and Loan Uptake**

The findings support our operating proposition that high performing partnership lead to high uptake. We did not have any low performing partnerships in our analysis to compare with uptake. We argue that, because of the limitations of partnership data discussed above, it was relatively harder for respondents to give information that could suggest the partnerships were not working as effectively as expected. This is because most of these partnerships are still active and presumably, any problems would be addressed through an established confidential conflict resolution system. We have however seen some mixed results too.

From the figure above, the findings show that high partnership performance led to high uptake in the case of Equity Bank and its ESCO partners. On the other hand, medium performing partnerships recorded low uptake in the loans offered with Musoni Kenya and Greenland Fedha

as the only exceptions. However, data on uptake for the Musoni case is very limited because it is based on the respondent's own assessment of uptake as opposed to a specific value of loans disbursed.

The ECLOF Kenya and Letshego partnerships have all been categorized as medium performing but uptake of loans offered through the partnerships is low. These findings fail to back our proposition that partnership performance affects uptake. Even with a medium performing partnership, the two MFIs recorded low uptake. We argue that some external factors outside the partnerships may have affected uptake. For instance, our findings show that there is not enough awareness on the value of solar compared to traditional lighting solutions like kerosene. Targeted customers don't often see the need to invest on a solar system even if a loan is available to offset the initial costs. This may have affected uptake for both ECLOF Kenya and Letshego. Some respondents also observed that the solar kits were relatively expensive for a majority of their clients. For instance, ECLOF Kenya, an MFI that works with low income households mostly in rural areas of Kenya noted that it was very difficult to promote solar kits due to the perceived high cost among customers.

Additionally, the size of the institutions may also have affected the uptake of solar loans. As we have discussed in our analysis in the next section, institutional size is a strong determinant of both partnership performance and uptake. Smaller MFIs including ECLOF Kenya and Letshego with limited branches have reported low uptake and medium performance in the partnerships. We argue that a strong nationwide presence by bigger institutions has facilitated access to markets. In addition to this, a high number of personnel has ensured increased marketing and promotion efforts of solar in various parts of the country. This may have had a positive effect on the uptake of loans.

For Greenland Fedha and Barefoot, the findings are interesting. Even with a medium performing partnership, Greenland has still managed to record high uptake. This also fails to back our proposition in this analysis that high performance partnership lead to high uptake of loans. We noted that there were also other external factors that may have led to the high uptake. For instance, the solar kits offered under the partnership were significantly subsidized through financial assistance offered by Barefoot Power. The ESCO provided KES 20 million to Greenland Fedha to be partly used in subsidizing the kits for customers. Additionally, despite

receiving very little distribution support from Barefoot, Greenland Fedha already had an extensive network of loan officers specifically located in tea growing areas in Kenya normally within tea factories. The loan officers were extensively used in product distribution and marketing. This may have affected the uptake of loans.

### 4.3. Analysis of Institution Size in Relation to Partnership Performance and Uptake

The study also sought to determine whether the size of the institution had any influence on partnership performance and uptake. This comparison helps us to understand why there is variation in partnership performance even in cases where ESCO partners are the same. For instance, Equity Bank and Letshego have the same ESCO partners yet in the Equity case the partnership performance is high while in the Letshego case the performance is medium. Our analysis in this section starts with a small discussion on institution size. We use number of employees, asset size, and branch network to determine the size of each institution. We then compare the size with the performance of partnerships and later with uptake.

#### Size of Financial Institutions

In the five cases we have looked at so far, only Equity Bank is categorized as a large financial institution. The rest are all smaller microfinance institutions. The following table gives a simple summary of institution size.

**Table 17: Summary of institution size**

Name of institution	Determinants of Size			Size
	Asset value (in KES Billion)	No. of Employees	Branch Network	
<b>Equity Bank</b>	524	6, 000 +	173	Large
<b>Greenland Fedha</b>	5.5	110	66	Small
<b>Letshego Kenya</b>	7	300	23	Small
<b>ECLOF Kenya</b>	n/a	340	40	Small
<b>Musoni Kenya</b>	n/a	250	23	Small

*(Source fieldwork)*



**How does size compare with partnership performance?**

We now compare the size of the financial institutions with the performance of partnerships. We use the simple tool below for the comparison:

**Figure 4: Comparison of Institution size and Partnership performance**

<b>Size of Financial Institution</b>	<b>Large</b>			<ul style="list-style-type: none"> <li>• Equity Bank</li> </ul>
	<b>Medium</b>			
	<b>Small</b>		<ul style="list-style-type: none"> <li>• ECLOF Kenya</li> <li>• Greenland Fedha</li> <li>• Letshego Kenya</li> <li>• Musoni Kenya</li> </ul>	
		<b>Low</b>	<b>Medium</b>	<b>High</b>
<b>Partnership Performance</b>				

From the figure above, Equity Bank, which is a large financial institution, managed to report stronger performance in its partnership with ESCOs compared to the smaller institutions. We argue that large institutions provide a bigger incentive for ESCOs to dedicate more resources. In the case of Equity Bank, with an extensive branch network and millions of potential customers to be targeted, ESCO partners are likely to do more to enhance the outcomes of the partnership.

This could explain why there is a visible variance in partnership performance between the Equity Bank and the Letshego case despite the two FIs sharing the same ESCO partners.

**Size and Uptake**

We now compare the size of financial institutions and the uptake of the solar loans. We use the simple tool below for this:

**Figure 5: Comparison of Institution size and uptake**

<b>Size of Financial Institution</b>	<b>Large</b>			• Equity Bank
	<b>Medium</b>			
	<b>Small</b>	<ul style="list-style-type: none"> <li>• ECLOF Kenya</li> <li>• Letshego Kenya</li> </ul>	<ul style="list-style-type: none"> <li>• Musoni Kenya</li> </ul>	<ul style="list-style-type: none"> <li>• Greenland Fedha</li> </ul>
		<b>Low</b>	<b>Medium</b>	<b>High</b>
<b>Uptake of loans</b>				

*(Source: fieldwork)*

The figure above also shows that the size of financial institution has an effect on the uptake. All the smaller MFIs reported low uptake of solar loans except Greenland Fedha and Musoni Kenya. Equity Bank on the other hand, a large financial institution recorded high uptake for the loans. The data on uptake for Musoni Kenya is limited since we did not get the exact value of loans offered. Instead we received a subjective assessment of uptake from the respondent. As for

Greenland, we argue that the high uptake is a result of networks in tea growing communities. All the 66 branches used by Greenland to offer loans are all tea factories. The factories are located very close to the targeted customers. This makes it relatively easier and less costly for the MFI to promote and market the loans directly to the customer. For ECLOF and Letshego, branches are located in town centers and they are very limited in number. This would suggest that ECLOF Kenya and Letshego would need to invest more on personnel to reach more markets where they don't have a significant presence through their branch network.

We did not find any evidence that this investments were made. Instead, the MFIs relied heavily on the sales agents supplied by ESCO partners and their existing networks of loan officers for customer targeting. The sales agents provided by ESCO partners are however shared across all financial institutions with which the ESCO has a partnership. For example, if Orb Energy avails sales agents to help the financial institutions in customer targeting, the agents will work with all the banks Orb Energy has partnered with. This will include Equity Bank, ECLOF Kenya, and Letshego. We argue that there will be a bigger incentive for the agents to do more working with Equity due to the clear potential of getting more sales and reaching more customers as a result of the sheer size of the bank and its customer base. This is because sales agents are paid on commissions. Equity Bank has a big customer base and a big presence in the country. It is very likely that the agents would view the bank as the ideal focus for them in maximizing their sales. This was also a key challenge observed by one of our respondents.

## **Chapter 5: Summary of Findings, Conclusions, and Recommendations**

In chapter 4 above, we presented our findings as per our research objectives in Chapter 1. We also compared our study variables and drew conclusions. In this section, we summarized the entire project and provided overall conclusions from the study. We also provided recommendations for further research and policy. The section is organized as follows. We start by first giving a summary of the project. We then highlight some of the key conclusions from the study and how they relate to relevant literature. We then provide a list of recommendations for policy and future research.

### **5.1. Summary of Research Findings**

The research paper aimed to understand the nature of existing partnerships between financial institutions and energy companies and how they have impacted uptake of solar loans. We've also looked at the previous experiences of end user financing models in Kenya and other parts of the world in our literature review. We determined that previous financing models in Kenya failed to achieve the scale needed. On the other hand, a critical analysis of end user financing models that were able to achieve scale showed that energy companies were involved in the provision of credit. Our study therefore sought to explain how these partnerships apply in the case of Kenya. In the literature that we reviewed for Kenya, there was only a mention that banks are working with suppliers of energy equipment for the solar loans (Kabutha et al., 2007; Rolfs et al., 2014). However, the papers do not go further to explore the nature of these partnerships and how they have affected the uptake of the technology.

Our research is based on two theoretical approaches – the Resource based view and the knowledge based view. The general argument from these theoretical approaches is that, firms will pursue strategic alliances to access resources and capabilities needed to enhance performance. Consequently, our study looked at strategic partnerships between banks and energy companies in terms of the resources shared and the capabilities transferred. Our findings showed that different classes of resources have been shared in the partnerships. Distribution networks that include bank branches and agents are however the most commonly shared resources in all the cases. In some partnerships, there was sharing of financial resources too. In the Greenland Fedha and Barefoot Power partnership in particular, we found that the ESCO partner provided KES 20 Million to support the solar loan program. In the Equity Bank case, financial resources

were not shared directly but the partnership has been used as leverage to access financial support from other third party organizations. The Equity Bank partnership has promoted access to about KES 50 million from IFC that has been used to support the Eco Moto program. The program provides loans for both solar energy kits and clean energy stoves.

Sharing of partner products and services was also observed in all the cases we have looked at. Generally, financial institutions have provided the credit platform needed to sell solar kits on loans. These platforms have been utilized by the ESCOs to target low income consumers who lack the ability to afford the technologies. ESCO partners have on the other hand provided manufacturing resources for the solar kits. We also found that ESCOs are now offering after sales maintenance to address faulty and damaged kits. This has been very vital in reducing the rates of loan default as observed in previous cases captured by Van Der Plas, (2000) and Rolffs et al, (2014).

Transfer of capabilities between financial institutions and ESCO partners was also observed. Generally, the knowledge shared has been on customer targeting. Energy companies have brought in their experience in the energy industry to help financial institutions identify and target potential customers with solar loans. This has allowed the banks to get exposure in the energy market which in turn has helped them package loans that meet the needs of targeted customers. Our findings also showed that in some cases, ESCO partners have been involved in the development of these loan packages. For example, in the Equity Bank, Greenland Fedha, and ECLOF Kenya cases, the ESCO partners have been directly involved in product development. They have provided input on how loans should be structured, amounts to be offered, and who should be targeted. We also noted that marketing and product promotion capabilities have been shared across all cases. ESCO partners have provided sales agents. The agents have worked collaboratively with banks' loan officers to raise awareness on the solar products in selected communities. In all the 5 cases, the ESCOs have also provided training for loan officers and other staff on marketing solar products, doing product demos, and raising awareness on the value of the technology in different areas.

The study also found that uptake of loans varied from case to case. Greenland Fedha and Equity Bank were the two financial institutions that reported high uptake. Greenland Fedha through its partnership with Barefoot Power was able to provide total loans of between KES 50 Million and

KES 100 million in value over a period of three years. Equity Bank on the other hand has reached an estimated 17, 500 households with its solar loan programs over a period of 2 years. In two other cases, we found uptake was low. Letshego for instance has offered loans ranging between KES 2 Million and KES 8 Million in value over a period of 3 years. ECLOF Kenya on the other hand has reached an estimated 2, 000 households over a period of 5 years. But Musoni Kenya has reported medium uptake. However, this is based on the respondents own assessment not an exact loan value.

Although in some of these cases the uptake has been categorized as low by the study, it's still relatively higher compared to the previous financing models in Kenya that we captured in our literature review. For instance, the Michimikuru SACCO solar electrification project analyzed by Rolffs et al. (2014) was only able to sell 150 solar systems on credit. The program had a \$30, 000 grant from UNDP and GEF but did not achieve the scale expected. Other loan programs like the Kenya Union of Savings and Credit Cooperatives (KUSCCO) program and the Faulu Kenya energy lending program only managed 50 and 105 solar home systems respectively (Kabutha et al., 2007; Rolffs et al., 2014). The Kenya Women Finance Trust program, the GEF/World Bank Photovoltaic Market Transformation Initiative, and the World Bank Energy Sector Management Assistance Program (ESMAP) all failed to evolve beyond the pilot phases and were consequently scrapped.

## **5.2. Key Conclusions**

The study found a number of important conclusions from the data analyzed. First, we determine that partnerships between financial institutions and energy companies are vital in accelerating the uptake of solar loans. It is through partnerships that financial institutions have managed to access high quality solar products for their clients. The partnerships have also given banks important exposure to the energy market. As a result, they have managed to package their solar loans in a manner that meets the needs of targeted customers. ESCOs are also leveraging on the expertise of financial institutions in lending to increase sales of solar technology. The banking platforms have facilitated access to the products by offsetting high costs through credit provision. Sharing of knowledge and expertise is also high. Lack of expertise in solar lending was mentioned extensively by Rolffs et al. (2014) as one of the biggest challenges of previous financing models. The partnerships have addressed this to some extent. Financial resources are also very central in

enhancing performance. In the two cases where uptake was high, there was significant financial support. In the case of Equity, the bank had received KES 50 million from IFC to support its program while Greenland was able to get KES 20 Million from Barefoot for the same purpose. We also noted that for ECLOF Kenya and Letshego Kenya, where financial support was low, the uptake was also low. However, there are still other external factors that may affect both partnership success and loan uptake. For instance, in the Greenland Fedha case, the uptake was high even though the partnership success was medium. Additionally, ECLOF Kenya and Letshego had medium partnership performance but uptake was low.

Our analysis showed that there are a number of important external factors to be considered in understanding uptake and partnership success. One of them is the institution size. Bigger banks with a bigger presence around the country have the capacity to reach more markets. This may have a positive effect on loan uptake even if partnerships are not high performing. Smaller MFIs on the other hand are limited in this regard. The limited staff and limited presence in targeted markets adds new challenges.

In the cases of smaller MFIs that we have covered in the paper, only Greenland was able to record high uptake. This brings us to the second external factor – networks in targeted areas. We concluded from our findings that Greenland Fedha, which has an established network of loan officers specifically located in tea growing areas, was able to achieve scale partly because of these networks. The solar kits sold under the Greenland partnership were only reserved for small scale tea farmers who are in very close proximity to Greenland loan officers. This likely reduced product promotion and marketing challenges. We also found that the kits offered under the Greenland Fedha program were subsidized. The loan size was therefore relatively smaller. This introduces loan size as a factor too in determining uptake. It's very likely that most customers targeted for solar energy are low income households in remote areas. Most might view taking up a solar finance loan as an unnecessary burden considering that awareness on the value of solar is still not high. This was also captured in our interviews with respondents who told us that, financing for the high end, more expensive solar systems, was very unpopular among targeted customers.

On partnership success, we noted that the institution size is the main external factor affecting partnership success. We concluded that bigger institutions offer an attractive incentive for ESCO

partners to do more in enhancing partnership outcomes compared to smaller banks. This is because the potential for increasing sales is relatively high working with a bigger financial institution compared to a smaller one. The following table shows a list of variables that were important in determining uptake of solar credit in our study.

**Table 18: Important Variables That Determined Uptake**

Variables we expected to be important	Variables that were actually important	Unexpected important variables
<b>Resource sharing</b> <ul style="list-style-type: none"> <li>• Access to Products and services</li> <li>• Financial support</li> <li>• distribution networks</li> </ul>	All these variables were important in determining uptake	<ul style="list-style-type: none"> <li>• Networks in targeted communities</li> <li>• Loan size</li> </ul>
<b>Capability Learning</b> <ul style="list-style-type: none"> <li>• Access to Knowledge</li> <li>• New Product Launch</li> <li>• Access to new markets</li> </ul>	All these variables were important in determining uptake.	
<b>Institutional Size</b> <ul style="list-style-type: none"> <li>• Asset Value</li> <li>• Number of Employees</li> <li>• Branch Network</li> </ul>	Branch Network has the most important determinant	

### 5.3. Recommendations for Policy and Further Research

A broader comparison of the effects of institutional size on uptake of solar loans should be explored further. Our study, due to time and resource constraints, was not able to bring in additional bigger institutions to enhance comparison with uptake. We were only able to use the case of Equity Bank. Studies with a bigger population list could be more conclusive in this area. There is also need to look at upstream financing and its implications on uptake. Our study focused largely on end user finance. However, there are still opportunities for partnerships between banks and energy companies to be used in enhancing energy entrepreneurship. Research on how financing for local level community suppliers affects uptake could provide significant insights on the discussion about solar technology adoption. Further research on other determinants of uptake outside partnerships is also needed. Factors such as networks, loan size, and awareness on the value of solar can be explored further as important determinants of uptake in future research.



As for the policy side, innovations in distribution and marketing are needed. Our findings show that bank branches and agents have primarily been used as distribution and product promotion centers. We noted that these branches are mostly located in town centers. The real need though for solar energy is often in remote rural areas where grid expansion has yet to reach. Banks and ESCO partners need to devise ways to establish a presence in these remote areas. Using local energy entrepreneurs especially women as part of the marketing and distribution strategy could be very helpful in the long term.

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**APPENDICES**

**APPENDIX 1: FINANCIAL INSTITUTION QUESTIONNAIRE**

How are you sir/Madam? Thank you for taking some time to speak to me. My Name is Amon Muchiri, a Masters of Development Studies student at the institute for Development Studies, University of Nairobi. I am doing a research study on strategic partnerships between financial institutions and Energy Service companies in promoting uptake of solar micro loans in Kenya. Your institution has been picked as part of the cases to be analysed in this paper. I would love to kindly ask you a few questions about your institution for the purpose of this study. This interview will take between 30 to 45 minutes. The information you give voluntarily will be used only for academic purposes. Your cooperation in this will be highly appreciated.

**Part A: Brief Overview of Financial Institution**

Name of Institution	
Gives us a brief introduction about the institution	
For how long has the institution been in Business?	0-5 Years <input type="checkbox"/> 6-10 Years <input type="checkbox"/> 10-15 Years <input type="checkbox"/>



	15-20 Years <input type="checkbox"/>
	20 Years + <input type="checkbox"/>
What is the total number of employees working for this institution? (You can give a range)	
What is the total asset value of this institution? (You can give a range)	
For How long has the solar loan portfolio been available at the institution?	0-5 Years <input type="checkbox"/>
	6-10 Years <input type="checkbox"/>
	11-15 Years <input type="checkbox"/>
	15 – 20 years <input type="checkbox"/>
	20 Years+ <input type="checkbox"/>

**Part B: Strategic Partnership**

**a) Capability Learning**

1. To what extent do you agree with the following statement; Strategic Partnership with Energy Service Company has led to the transfer of knowledge in solar microcredit.

		Tick Below
<b>Strongly Agree</b>	5	
<b>Agree</b>	4	
<b>Somewhat Agree</b>	3	

<b>Disagree</b>	2	
<b>Strongly Disagree</b>	1	

Briefly Explain?

- To what extent do you agree with the following statement: Strategic partnership with Energy Service Company has helped us launch new products?

		<b>Tick Below</b>
<b>Strongly Agree</b>	5	
<b>Agree</b>	4	
<b>Somewhat Agree</b>	3	
<b>Disagree</b>	2	
<b>Strongly Disagree</b>	1	

Briefly Explain?

- To what extent do you agree with the following statement; Strategic partnership with Energy Service Company has helped us access new markets for our products.

		<b>Tick Below</b>
<b>Strongly Agree</b>	5	

<b>Agree</b>	4	
<b>Somewhat Agree</b>	3	
<b>Disagree</b>	2	
<b>Strongly Disagree</b>	1	

Briefly Explain?

**b) Resource Acquisition**

1. To what extent do you agree with the following statement, Strategic Partnerships with Energy Service Company has led to financial support?

		<b>Tick Below</b>
<b>Strongly Agree</b>	5	
<b>Agree</b>	4	
<b>Somewhat Agree</b>	3	
<b>Disagree</b>	2	
<b>Strongly Disagree</b>	1	

Briefly Explain?

2. To what extent do you agree with the following statement; Strategic Partnerships with ESCO has allowed us to access ESCO products and services.

		Tick Below
<b>Strongly Agree</b>	5	
<b>Agree</b>	4	
<b>Somewhat Agree</b>	3	
<b>Disagree</b>	2	
<b>Strongly Disagree</b>	1	

Briefly Explain?

- 3) To what extent do you agree with the following statement; Strategic partnership with Energy Service Company has allowed us to access ESCO physical assets.

		Tick Below
<b>Strongly Agree</b>	5	
<b>Agree</b>	4	
<b>Somewhat Agree</b>	3	
<b>Disagree</b>	2	
<b>Strongly Disagree</b>	1	

Briefly Explain?

- To what extent has the strategic partnership with Energy Service Company met its objectives?

		Tick Below
<b>Totally Met</b>	3	
<b>Somewhat met</b>	2	
<b>Not met at all</b>	1	

- How satisfied are you with this partnership?

		Tick Below
<b>Strongly satisfied</b>	5	
<b>Satisfied</b>	4	
<b>Somewhat satisfied</b>	3	
<b>Dissatisfied</b>	2	
<b>Strongly Dissatisfied</b>	1	

Briefly Explain?

### **Part C: Uptake of Solar micro loans through FI/ESCO partnership**

- Briefly introduce the solar loan products available in your institution?

2. What is the total value of loans offered since Partnership with ESCO was established?  
(You can give a range)

3. What is the average loan size offered for sola

4. Which of the following categories describe your average solar loan customer?

Individual client

Business Client

Both

5. What is your overall assessment of the partnership?

**Thank you for taking the time to answer these questions.**

## APPENDIX 2: ENERGY SERVICE COMPANY QUESTIONNAIRE

How are you sir/Madam? Thank you for taking some time to speak to me. My Name is Amon Muchiri a Masters of Development Studies student at the institute for Development Studies, University of Nairobi. I am doing a research study on the nature of strategic partnerships between financial institutions and Energy Service companies in promoting uptake of solar micro loans in Kenya. Your institution has been picked as part of the case studies to be analysed in this paper. I would love to kindly ask you a few questions about your institution for the purpose of this study. This interview will take between 30 and 45 minutes. The information you give voluntarily will be used only for academic purposes. Your cooperation in this will be highly appreciated.

### Part A: Brief Overview of Energy Service Company

Name of Company	
Gives us a brief introduction about the Company	
For how long has the company been in Business in Kenya?	0-5 Years <input type="checkbox"/> 6-10 Years <input type="checkbox"/> 10-15 Years <input type="checkbox"/> 15-20 Years <input type="checkbox"/>

	20 Years + <input type="checkbox"/>
How many employees do you have in the country? (You can give a range)	
What is the total asset value of your company (You can give a range)	
What Type of Solar energy products do you sell?	
For How long have you sold solar products on credit?	0-5 Years <input type="checkbox"/> 6-10 Years <input type="checkbox"/> 11-15 Years <input type="checkbox"/> 15 – 20 years <input type="checkbox"/> 20 Years+ <input type="checkbox"/>
Are you available countrywide?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If No how many counties are you available in?	

**Part B: Strategic Partnership**



**c) Capability Learning**

1. To what extent do you agree with the following statement; Strategic Partnership with financial institution has led to the transfer of knowledge in solar microcredit.

		<b>Tick Below</b>
<b>Strongly Agree</b>	5	
<b>Agree</b>	4	
<b>Somewhat Agree</b>	3	
<b>Disagree</b>	2	
<b>Strongly Disagree</b>	1	

Briefly Explain?

2. To what extent do you agree with the following statement: Strategic partnership with financial institution has helped us launch new products?

		<b>Tick Below</b>
<b>Strongly Agree</b>	5	
<b>Agree</b>	4	
<b>Somewhat Agree</b>	3	
<b>Disagree</b>	2	
<b>Strongly Disagree</b>	1	

Briefly Explain?

3. To what extent do you agree with the following statement; Strategic partnership with financial institution has helped us access new markets for our products.

		Tick Below
<b>Strongly Agree</b>	5	
<b>Agree</b>	4	
<b>Somewhat Agree</b>	3	
<b>Disagree</b>	2	
<b>Strongly Disagree</b>	1	

Briefly Explain?

**d) Resource Acquisition**

4. To what extent do you agree with the following statement, Strategic Partnerships with financial institution has led to financial support?

		Tick Below
<b>Strongly Agree</b>	5	
<b>Agree</b>	4	
<b>Somewhat Agree</b>	3	
<b>Disagree</b>	2	
<b>Strongly Disagree</b>	1	

Briefly Explain?

4. To what extent do you agree with the following statement; Strategic Partnerships with financial institution has allowed us to access financial institution's products and services.

		<b>Tick Below</b>
<b>Strongly Agree</b>	5	
<b>Agree</b>	4	
<b>Somewhat Agree</b>	3	
<b>Disagree</b>	2	
<b>Strongly Disagree</b>	1	

Briefly Explain?

- 3) To what extent do you agree with the following statement; Strategic partnership with financial institutions has allowed us to acquire physical assets from partner institution.

		<b>Tick Below</b>
<b>Strongly Agree</b>	5	
<b>Agree</b>	4	
<b>Somewhat Agree</b>	3	
<b>Disagree</b>	2	

<b>Strongly Disagree</b>	1	
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Briefly Explain?

- To what extent has the strategic partnership with financial institution met its objectives?

		<b>Tick Below</b>
<b>Totally Met</b>	3	
<b>Somewhat met</b>	2	
<b>Not met at all</b>	1	

- How satisfied are you with this partnership?

		<b>Tick Below</b>
<b>Strongly satisfied</b>	5	
<b>Satisfied</b>	4	
<b>Somewhat satisfied</b>	3	
<b>Dissatisfied</b>	2	
<b>Strongly Dissatisfied</b>	1	

Briefly Explain?

- What is your overall assessment of this partnership?

**Thank You for taking your time to answer these questions!**