

GUIDELINES ON STRATEGY AND PRACTICE IN AGRICULTURE VALUE
CHAIN FINANCE AND THEIR EFFECTS ON FINANCIAL PERFORMANCE OF EDIBLE
OIL INDUSTRY IN KENYA
(DESK RESEARCH STUDY)

Rajiv Agarwal

Kenyatta University, Kenya

Jagongo Ambrose

Kenyatta University, Kenya

CITATION: Rajiv, A. and Jagongo, A (2014). Guidelines on strategy and practice in agriculture value chain finance and their effects on financial performance of edible oil industry in Kenya (desk research study). *European Journals of Business Management*, 2 (3), 1-21.

ABSTRACT

We have studied the agriculture value chain strategy and practices in different countries across different agriculture based industries with the focus on study of edible oil value chain strategy and practices in Kenya. Understanding of different Links in the agriculture value chain and their needs is very important for the managers engaged in the value chain. We have documented the successful strategy and practice for agriculture value chain financing ready reference manual for the development of Agriculture value chain financing in edible oil industry in Kenya by managers. Managers can adopt different strategies and implement good established practice in their organization within value chain to improve the profitability and develop the weak links in the value chain by generating appropriate finances within the value chain and from outside the value chain to equally divide the value in all the links of the chain.

Key Words: Strategy, Practices, Agriculture value chain finance

Background to the Study

Agriculture Value chain finance has become a topic of interest in all the developing countries, underdeveloped countries and other development agencies involved in the agriculture development. In Country like France there is a legislation for control and management different value chains. One of the famous value chain for edible oil in France is <http://www.sofiproteol.com/en/>. This is an independent identity formed by different players in the value chain to ensure the equal distribution of value among the members, groups, cooperatives, banks, research in the value chain. It is an approach that is increasingly

being applied by financial institutions and those actively participating or involved in promoting and developing value chains. Value chains have been accepted as an effective way of focusing on measures to improve the scale and impact of **private sector** investments, which include the investments made by small holder farmers themselves as well as those made by larger-scale domestic or foreign agri business investors (Nedelcovychet *al.*,2012).

From a development perspective, governments and support agencies must ensure the development of value chain legislation to attract the financial systems are able to meet the financial demands arising from the growth of modern agricultural value chains. Agricultural value chain finance (AVCF) is an innovative yet proven approach to finance that can help address these issues. AVCF is not a development goal, but rather a means of achieving other social and economic goals. AVCF is a financial approach and set of financial instruments that can be applied for agricultural and agribusiness financing. AVCF can facilitate increased financial access and lower agricultural costs and financing risks.(IFAD, 2012).

Scope and Objective of the study

The purpose of this study is to help the programme managers and project design teams involved in the AVCF to understand & Develop Value Chain for their industry by understanding:-

- a. Value Chain financing Strategies
- b. Value Chain financing Practices
- c. Help Managers to understand the requirements and advantages
- d. Help managers to Developing the Business models for Agriculture value chain Finance
- e. Theoretical Framework & conceptual frame work
- f. Empirical evidence of Agriculture value chain Financing
- g. Conclusions and Summary of Research gaps in AVCF
- h. Study of Edible oil Growth in Kenya
- i. Case study of BIDCO edible oil manufacturing industry in Kenya
- j. Conclusion of the study and way forward
- k. Reference to the literature used in the study

Value Chain financing Strategies

Agricultural Value Chain Finance strategies and models must be flexible. AVCF is a comprehensive and holistic approach; it is not simply a single instrument or a defined “recipe” to follow. It involves systemic analysis of an entire value chain and the relationship amongst its actors. The actual tools and applications are dependent upon the particular VC and business model and are preliminarily identified during the VC assessment. These change when conditions change

and must be able to be revised according to the interests and capacity of the partners selected and during the course of implementation of the Programme(Calvin Miller 2011).

Promote promising VCF strategy and business model development. No strategy or model can be singled out as ‘the best’ solution, as this depends critically upon the circumstances and maturity of the value chain concerned. Development agencies can play a constructive role in discussing with their partners the merits and disadvantages of one strategy and model versus another. Ultimately there should be agreement on the trajectory to be followed, preferably laid down in a strategy plan or business plan(Calvin Miller 2011).

Strategies Examples:

We have identified few strategies which can be modified by managers to adapt to their business modal(Li *et al.*, 2005), Brau *et al.* (2007), (Gachora *et al.* 2014):-

- a) Dedicated Oversight of Goal-Setting
- b) Superior Technology
- c) Customer Development
- d) Supplier Development
- e) market oriented production

Value Chain financing Practices

Managers should concentrates on the value chain practices which have a stable effect on the performance of the firm. This occurs when the resources and capabilities are directed towards sustaining value chain practices (Baltacioglu *et al.*, 2007).

Demand Management: This is the main function, assists in managing and balancing customer demand by keeping updated demand information Ellram *et al.* (2007).

Customer relationship management: Maintain and develop long-term customer relationships by developing information continuously and understanding what customers want Ellram *et al.* (2007).

Leadership: due to optimal contracting and supplier relationship management and has the components; coordination, cooperation, commitment, information sharing and feedback Khanget *al.* (2010) Govindaraju (2011), Li *et al.*, (2005) summarized practices which can be modified by managers to adapt to their business model such as Information Flow, Postponement Strategy, Customer Relationship Management, Strategic Supplier Partnership, Information Quality, Vision And Goal, Award Sharing.

Help Managers to understand the requirements and advantages: Value chain finance works best where there` is strong end-market demand, as well as transparency, trust and strong and repeated inter-firm transactions. The stronger the relationships, the more readily players in the value chain can rely on their relationships to facilitate access to finance. The most common ways value chain actors facilitate financing include: Source <https://www.microlinks.org> Microenterprise and Private Enterprise Promotion (MPEP) USAID 2013 website

Screening Borrowers: Value chain actors may have useful information about potential borrowers. This information can help financial institutions screen for reliability, evaluate profitability and/or assess the risk of default.

Disbursement/Repayment of Loans: Value chain actors may play a direct role in loan transactions. They may be positioned to disburse loans on behalf of the financial institution (in-kind or cash) and loan repayments may be channeled through them as well. These roles can help to lower transaction costs and reduce likelihood of arrears and default.

Default Risk/Collateral: Value chain actors may provide a form of "soft" collateral. Unlike "hard" collateral such as land titles, "soft" collateral can be in the form of direct (formal or informal) guarantees or co-signing, assigning value to inventory in a warehouse, etc. Value chain actors may also provide some alternative which is acceptable to a financial institution in the case that legal collateral is not available to secure the loan. Purchase orders and buyers' contracts may provide a reasonable guarantee of repayment to the extent that a financial institution would waive traditional requirements. Even when buyers' contracts are not transferable (and thus are not truly a substitute for collateral), they can be important nonetheless to the lender, since they signal creditworthiness and thus decrease the default risk.

Process guidelines to develop the value chain: Adoption of one or the more agriculture value chain strategy and practice helps in improving the working capital and reducing the cost and improve the performance of the firm:

Source IFAD Agricultural value chain finance strategy and design Technical Note (2012)

- i. The transformation of agriculture and modern value chains and how this knowledge can be used to benefit the financial access and delivery processes
- ii. How to develop value chain financial services that benefit all types of farmers and agribusiness firms within value chains and the country as a whole
- iii. The best way to develop a programme implementation strategy that will strengthen priority value chains through interventions that address capacity needs and financing, policy and support infrastructure requirements
- iv. The best value chain financing and management practices as manifested in the continuous engagement with farmers

Help managers to developing the Business models for AVCF

The strategy for developing or strengthening value chains depends on the business model. The term "business model" in value chains refers to the way value is added within a network of producers, suppliers and consumers. The business model includes the drivers, processes and resources of the entire value chain system, even if the system is composed of multiple enterprises. The business model concept is linked to business strategy (the process of business model design) and business operations. If value

chain finance is to be successful, the value chain must be viewed as a single structure, with the model of this structure providing a framework for further analysis. A value chain is not an entire sector or subsector. It involves a specific group of interrelated producers and other actors who supply a particular end market. Table 1 illustrates the typical organization of smallholder production and marketing. The relationship of farmers to the market and/or the wider value chain. This analysis provides a basis for value chain business models Adapted from Vorley (2008). In Da Silva *et. al.*, (2009).

Table 1. Typical organizational models of smallholder agricultural production in developing countries

Model	Driver of organization	Rationale
Producer-driven (association)	Small-scale producers, especially when formed into groups such as associations or cooperatives Large-scale farmers	Access new markets Obtain higher market price Stabilize and secure market position
Buyer-driven	Processors Exporters Retailers Traders, wholesalers and other traditional market actors	Assure supply Increase supply volumes Supply more discerning customers – meeting market niches and interests
Facilitator-driven	Non-governmental organizations and other support agencies National and local governments	Make markets work for the poor Regional and local development
Integrated	Lead Supermarkets Multinationals	firms New and higher-value markets Low prices for good quality Market monopolies

Source: Adapted from Vorley (2008). In Da Silva *et. al.*, (2009).

AVCF is an approach to financing in a structure targeting the same end product. It uses an understanding of production, value-added and marketing processes to determine the financial needs of actors in the chain and how best to provide financing to those involved. Many diverse and innovative financial instruments may be applied or adapted to meet specific financial needs. AVCF fall into five categories IFAD Technical **study (2013)** (table 2).

Table 2. Categories of financial instruments commonly used in AVCF

Category	Instrument
Product financing	<ul style="list-style-type: none"> • Trader credit • Input-supplier finance • Marketing and wholesale company finance • Lead-firm financing
Receivables financing	<ul style="list-style-type: none"> • Trade-receivables finance • Factoring • Forfaiting
Physical-asset collateralization	<ul style="list-style-type: none"> • Warehouse receipts finance • Repurchase agreements (repos) • Financial leasing (lease–purchase)
Risk mitigation products	<ul style="list-style-type: none"> • Insurance • Forward contracts • Futures

Source: Adapted from IFAD Technical **study (2013)**

Significance of the study and practical guidelines for Managers

Selection: These instruments can be used alone, but it is more common to use several of them within a value chain. value chain finance is an approach that applies instruments appropriate to the value chain. Application of these instruments is new to agricultural financing. it is important to understand their applications and implications and risk involved.

Clear Role: It is the role of the facilitator strong link in the value chain to explain clearly to the different links in the value chain (a) understand the benefits and risks of the different financial instruments and explain to the various participants within the value chain and (b) ensure that adequate mechanisms are in place to permit and govern their application.

Application: AVCF has grown due to the key strategy and practices innovated in the value chain by different links to ensure the stability and quality of their input and output in the structure of value chain

Process innovation has helped develop business models, as well as improve contract-farming systems, commodity exchange linkages and other aspects of value chain operations.

Financial innovations include the growing use of interlinked supplier-buyer-producer-bank financial arrangements to reduce cost and risk. Building on these value chain linkages can greatly reduce the need for cash payments and transactions that increase financing costs.

Technological innovations include the application of information and communication technologies in mobile banking, mobile technical support, electronic networks, etc. and improved management information systems to accommodate tailored financial services – all of which have made AVCF much more feasible.

Policy innovations, which have reoriented extension services towards prioritizing and strengthening value chains and investing in supportive infrastructure, are also important. focus should be all types of innovation that reduce costs, risks and improve services in the value chain.

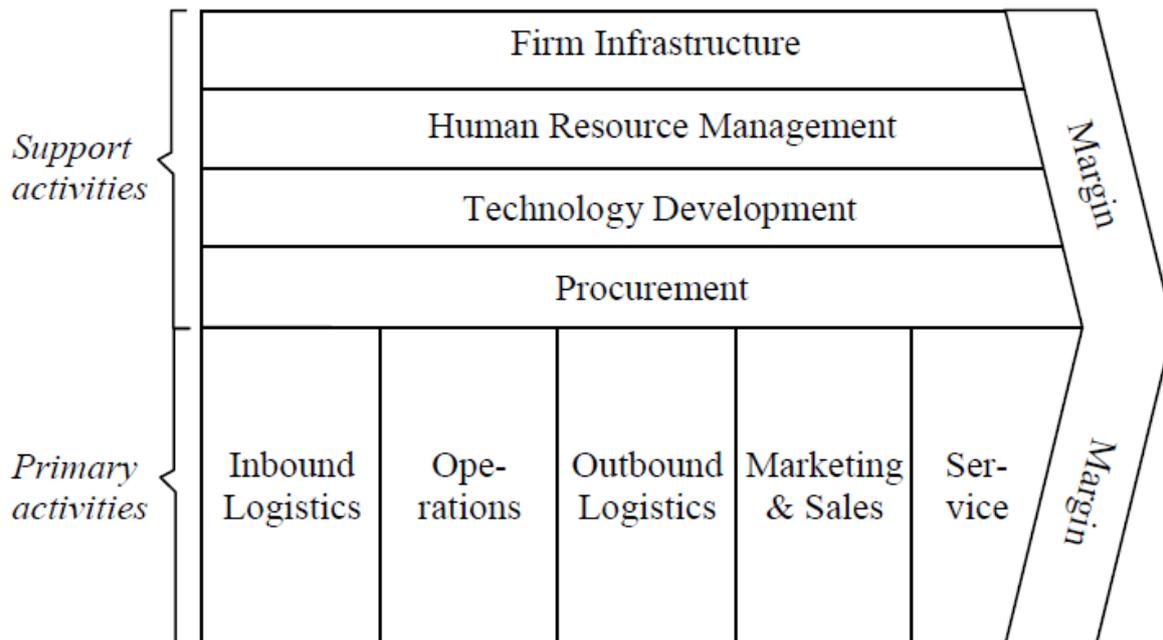
Theoretical Framework

Review of Theories

Various theories were found beneficial to the present study in developing the study conceptual framework. These theories clearly explain the role of each study variable; chain strategies, value chain practices and how each affects financial performance of edible oil manufacturing firms in Kenya. The study reviewed the Porter's Theory of Competitive Advantage, and the Resource-Based View (RBV) Theory (Ray, Barney & Muhanna, 2004).

Porter's Theory of Competitive Advantage

Porter (1985) analysed the value chain as an effort to understand the behavior of costs and the existing/potential sources of differentiation, arriving at the Porter's value chain analysis (VCA) the value chain analysis rotates around; design, produce and market, delivering products, and support firms product. Thereafter Porter's Theory of Competitive Advantage, which focuses upon individual industries, emerged to extend VCA and related it to performance (Porter, 1990). The Porter's theory of Competitive Advantage contributes to understanding the competitive advantage. This theory encourages individual industries to build up to the economy as a whole, since the firms are the ones competing in the markets (Kohler, 2006). These firms should have an understanding the way firms create and sustain competitive advantage. Porter's theory of Competitive Advantage distinguishes between; primary activities (Grant (1991) and support activities (Porter, 1985). The primary activities include; inbound logistics, operations, outbound logistics, marketing and sales, service in the core value chain creating directly value. The support activities are, procurement, technology development, human resource management, firm infrastructure supporting the value creation in the core value chain (Porter, 1985).



Source: Competitive advantage study (Porter 1985)

Figure F.2: Porters Value Chain

The theory formulates the general strategies for the value chain of cost leadership and differentiation to reach competitive advantage (Porter 1985). These cross-value chain strategies established a principle that competitive advantage can be reached only by managing the entire value chain as a whole including all involved functions (Salvatore 2002). Competitive advantage is necessary to satisfy customers by fulfilling customers request (Wang et al., 2011). Michael Porter considers the competitiveness as a function of four major determinants: factor conditions; demand conditions; related and supporting industries, firm strategy, structure, and rivalry. The competitive advantage leads to explaining the role played by the value chain on economic environment and thereby promoting firms' ability to compete in a particular industry. The Porter's theory of Competitive Advantage when applied in value chain, simply advocate for use of appropriate value chain strategy and having prudent practices to enhance the financial performance (Porter, 1990). The production of goods and services should be for those that can be produced at a lower opportunity cost (Salvatore 2002). The Competitive advantage theory suggest that firm should go for policies that create high quality products to be sold at high prices (Wang, Lin & Chu, 2011).

Resource-Based View (RBV) Theory

The Resource-Based View (RBV) Theory, which is on the overall performance of a firm (Ray, Barney & Muhanna, 2004), examines the impact of organization resources and capabilities on competitive advantage that. The theory expresses that these resources and capabilities should be directed to ensuring overall firm performance since those not conditioned into sustaining activities and business processes negatively impact on an organizational performance (Ray et al., 2004).

The study of RBV by (Baltacioglu et al., 2007) suggest that the resources and capabilities should be organized effectively and operated efficiently at optimal level to improve the firm performance. This occurs when the resources and capabilities are directed towards sustaining value chain practices, demand management, on the main functions, assists in managing and balancing customer demand by keeping updated demand information, customer relationship management maintains and develops long-term customer relationships by developing information continuously and understanding what customers want, leadership due to optimal contracting and supplier relationship management. In addition to this various components such as coordination, cooperation, commitment, information sharing and feedback are equally important. Therefore, both RBV and competitive advantage theories will glue the five dimensions in service value practices with financial performance in this proposed conceptual framework (Baltacioglu et al., 2007).

Conceptual Framework

The study borrowed heavily from; Resource-Based View (Ray *et al.*, 2004), Porter’s Theory of Competitive Advantage (Porter, 1987) to proposes that the financial performance of agricultural firms in Kenya (Ainapuret *al.* ,2011) is equally affected by; value chain strategies, value chain practices. In this study, value chain strategies, value chain practices on financial performance are the independent variables and financial performance is the dependent variable. The Porter’s theory of Competitive Advantage advocate for use of appropriate value chain strategy and having prudent practices to enhance the financial performance (Porter, 1990). Both RBV and competitive advantage theories will glue the dimensions in value chain practices with financial performance in this proposed conceptual framework (Baltacioglu et al., 2007).

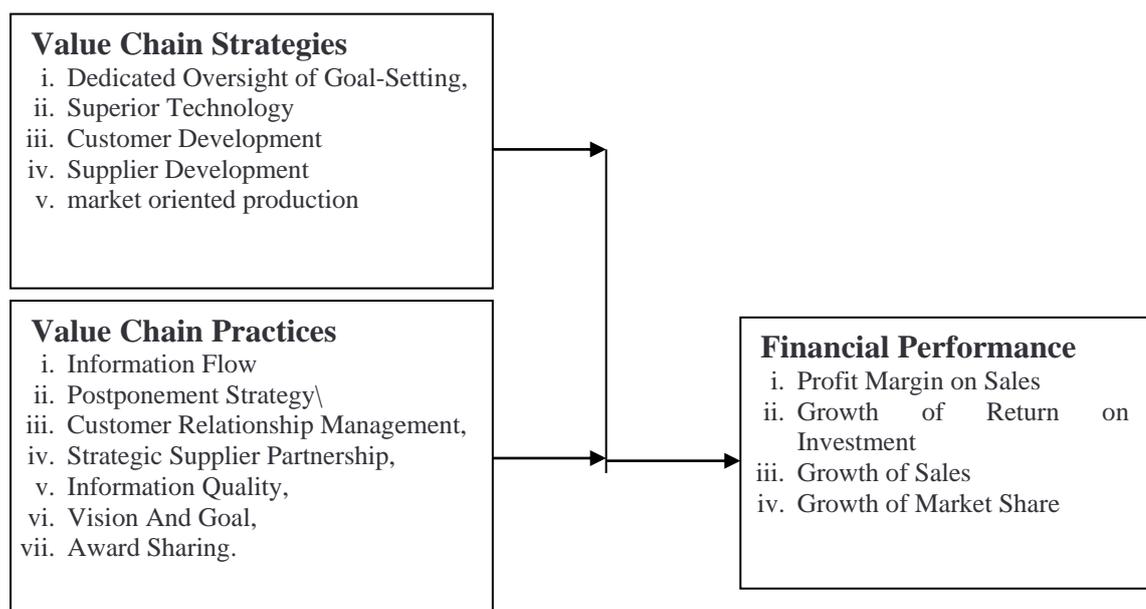


Figure F.3: Conceptual Model

Model is self-explanatory

Empirical literature Review

The study reviewed various global, regional and local past studies which were found beneficial and related to it. The studies reviewed were categorized as; effects of Value chain financing strategies on the financial performance, effects of value chain financing practices on the financial performance.

Value chain financing strategies and financial performance

A study by Brau, Fawcett and Morgan (2007) evaluated value chains financing strategies where it was recognized that small entrepreneurial firms faced various value chain strategies in their Supply Chain Management (SCM).strategies. These challenges arose from the firms' failure adopt effective and efficient to dilemmas, we are encouraged by our findings. However, the study by Brauet al. (2007) found that when a firm invests on the appropriate value chain strategies such as; dedicated oversight of firm-wide supply chain goal-setting, superior technology, and customer and supplier development, such a from gained heavily in financial benefits. The study by Brauet al. (2007) simplify established adoption of appropriate value chain strategies significantly enhanced financial performance of the firm. The findings from the study by Brauet al. (2007) assisted the present study to regarding the value chain strategies as one of the independent variables. Although the study by Brauet al. (2007) strongly supported the use of strategies, it fell short of identifying other variables closely related to value chain strategies, a gap that the present study will fill. Another study by Wagner, Grosse-Ruyken and Erhun (2012) established that the value strategies and their financial impact has been shaping up as a continuing point interest as it investigated this relationship. It investigated the relationship between strategic consistencies of value chain; taking into account the products' supply, demand uncertainty, chain design, and the financial performance of the firm. The study found that when the most appropriate value chain strategy was adopted, the firm experience higher financial performance in term of; higher the Return on Assets (ROA) of the firm and vice versa. That is adoption of a negatively fitting strategies led to a lower financial performance. The study by Wagner et al. (2012) was found to be helpful to the present study in identification of the study variable but it did not provide sufficient information on what else would be useful in explain value chain financing as a determinates of firm financial performance in the sunflower oil institutions. This gap will be filled by the present, which will consider one additional variable; value chain practices.

Regionally, the study Ugulumua and Inanga (2013) regarded; core competencies, financing, warehouses, and technology as the most pronounced factors leading to improved productivity and quality by sunflower buyers and consumers. This study found that review to a better value chain strategies design and delivery of the sunflower leads to improved economic well-being of farmers. The study was

borrowing from core competence of the sunflower subsector where it established that adopting new capabilities for small-scale farmers, especially by financing, among other factors, leads to improved productivity and quality. Although the study by study Ugulumua and Inanga (2013) indicates that value chain strategies upgrading affects the financial performance, it was not clear to what level this occurred, in fact the effects of financial performance was hidden in productivity. The present will therefore expose the effects on financial performance.

Locally, Theuri, Mwirigi & Namusonge (2014) study sought to identify value chain strategic management determinants in the sea food processing sub-chain. The study by Theuri, et al. (2014) used; technological competitiveness, market competition, and corporate policies as the factors of strategies influencing financial performance. Another local study by Gachora, Kibet and Musiega (2014) found that there was a significant increase in revenue generated by farmers, and difference in effectiveness in cost reduction and the performance of small-scale agricultural enterprise after using new value chain strategies. The study found that the use of the appropriate and improved value chain strategies was a recipe for high financial performance of the firm. The study by Gachora et al. (2014) did not fully explain how the entire financial performance was exactly influenced, which is what the present study will achieve.

Value chain financing practices and financial performance

A global study by Li et al. (2005) evaluated the effects of value chain financing practices on financial performance where it used the indicators; internal operation practices; information flow, information quality, postponement strategy, customer relationship management, and strategic supplier partnership. The study by Li et al. (2005) established that value chain financing practices significantly affects financial performance. The findings were echoed by Batacioglu et al. (2007) study. Although the study by Batacioglu et al. (2007) used different set of factors, the findings aligned to of the study by Li et al. (2005). Koh et al. (2007) were indicative that effective value chain financing practices improve firm's market performance and financial performance. The study failed to reach for other closely related indicators, which motivated the present study include other variables' practices.

The study by Ellram et al. (2007) used the same indicators as those by Batacioglu et al. (2007) study; information flow, capacity and skills management, demand management, customer relationship management, supplier relationship management, service delivery management and cash flow. The study also found as the four studies earlier reviewed; effective value chain financing practices improve firm's market performance and financial performance. Sundram, Ibrahim and Govindaraju (2011) study found that practices factors; information flow, postponement strategy, customer relationship management, strategic supplier partnership, information quality, agreed vision and goal, and risk and award sharing affected the firm performance. The studies by Khang et al. (2010), Sundram et al, (2011) and Boon-itt and Pongpanarat (2011) were very supportive in regarding value chain financing practices as an

independent variable. Although these studies provided very useful information, they did not identify the significant variables, which the present study will. Cho et al. (2011) considered the same indicators as those in the study by Batacioglu et al. (2007), where it found that innovation and efficiency of value chain financing practices significantly affected organizational performance. The study by Yap and Tan. (2012) determined that the practices significantly influence organizational performance. Regionally, the study by Mensah, Diyuoh and Oppong (2014) value chain practices significantly influence business performance and was evidence in the sales performance. All these studies; Cho et al. (2011), Lee et al (2011), Kumar et al. (2011), Cho et al. (2011), Yap and Tan. (2012), Mensah et al.(2014) found that value chain financing practices would have effects on financial performance but failed to include other very useful indicators, which is what the present study will do.

Value Chain on Financial Performance

A study by Petrovic-Lazarevic (2007) found that the Organizational performance, financial performance includes increased sales, organization-wide coordination and supply chain integration. Further the study by Wong and Wong (2011) found that organizational financial performance due to value chain in measure using; return on investment, market share, profit margin on sales, growth of return on investment, growth of sales, and growth of market share to measure organizational performance (Wong & Wong, 2011). The study findings by Ainapure *al.* (2011) showed that the value chain financing maximize revenue and minimize cost. Bærentsen (2012) thesis study found out that the financial value chain management influences on profitability, return on invested capital (ROIC) and return on equity (ROE) The supply chain finance is a financial solution that provides win-win outcomes for all the participants in the supply-side value chain. Particularly in the economic recession, the positive impact of SCF on corporate performance can increase corporate economic power in the marketplace and remain competitive. A study by Rostamiet *al.* (2013) showed that value chain management helps a firm to achieve the true return on investment. The supply chain finance is a financial solution that provides win-win outcomes for all the participants in the supply-side value chain.

Conclusions and Summary of Research gaps

The study by Brau et al. (2007) established that adoption of appropriate value chain strategies significantly enhanced financial performance of the firm. Although the study by Brau et al. (2007) strongly supported the use of strategies, it fell short of identifying other variables closely related to value chain strategies, a gap that the present study will fill. The study Wagner et al. (2012) found that when the most appropriate value chain strategy was adopted, the firm experience higher financial performance in term of; higher the Return on Assets (ROA) of the firm and vice versa. The study did not provide sufficient information on what else would be useful to explain value chain financing as a determinants of firm financial performance in the sunflower oil institutions. This gap will be filled by the present, which will consider additional variable; value chain practices.

Although the study by Ugulumua and Inanga (2013) indicates that value chain strategies upgrading affects the financial performance, it was not clear to what level this occurred, in fact the effects of financial performance was hidden in productivity. The present will therefore expose the effects on financial performance. The study by Theuri et al. (2014) was very instrumental in exposing the value of value chain strategy review, which the present study adopted but this study failed to see beyond the strategies and as such the present study will then enlarge the spectrum to include other variables; practices, of value chain to make the study tasteful. The study Gachora et al. (2014) found that the use of the appropriate and improved value chain strategies was a recipe for high financial performance of the firm. The study by did not fully explains how the entire financial performance was exactly influenced, which is what the present study will achieve.

The two studies by Li et al. (2005) and Batacioglu et al. (2007) were indicative that effective value chain financing practices improve firm's market performance and financial performance. The study failed to reach for other closely related indicators, which motivated the present study include other variable practices. All these studies; Cho et al. (2011), Lee et al (2011), Kumar et al. (2011), Cho et al. (2011), Yap and Tan. (2012), Mensah et al.(2014) found that value chain financing practices would have effects on financial performance but failed to include other very useful indicators, which is what the present study will do.

Study of Edible oil Growth in Kenya

History of Edible oil industry

According to the Export Processing Zones Authority (2008), Kenya's domestic production of edible oils is estimated at 380,000 tonnes, accounting for a third of its annual demand, with the deficit being met through imports. Oil manufacturing is one of the competitive and leading industrial sectors in Kenya, with key players including processors who extract oil from seeds and also produce oil cake for use in animal feed, as well as refineries who convert crude oils into forms suitable for human consumption. Kenya currently has about 30 edible oils refiners producing cooking oils and fats.

Oil crops have a long history in Kenya, where sesame, coconut and groundnut have been grown for centuries. Domestic oil is principally supplied from non-oil crops particularly, cotton and maize (cotton seed and maize germ). Oil crops and cotton are mainly grown in the regions which fall within the former five provinces in Kenya: Coast province: 50,000 ha (almost 25 percent of total cultivated area) is devoted to oil crops, primarily coconut; Eastern province: About 50,000-60,000 ha (less than 6 percent of total cropped area) is under cotton, with small quantities of sunflower. Western and Nyanza provinces: Cotton is important, with smaller quantities of sunflower and groundnuts. Rift Valley province: only 5,000 ha of sunflower, groundnut and cotton are grown.

Most oil crops are well suited to Kenyan conditions, being drought resistant and without many serious plant diseases. These characteristics render, especially sunflower (but not maize) suitable for relay planting after the main crop (using residual soil moisture) and for planting during the short rainy season where bimodal precipitation occurs. Recent changes in imported oil costs indicate that sunflower may now be a financially attractive crop, and major expansion potential is believed to exist.

The natural comparative advantage Kenya has for edible oil production provides ample opportunity to acquire them locally in sufficient quantities, as oil crops grow in all regions of the country. A great deal needs to be done, however, to ensure a steady supply of the required quality and standard. While the potential is there to adequately supply both domestic and export needs, chronic shortages in supply have been known to beset the operations of both the edible oil industry and the requirements of oil crops exporters. In this regard, the Kenyan edible oil industry is beset by substantial production capacity which remains unused for an excessively huge part in the midst of adequate resource base while exporters of oil crops face serious problems of supply and quality in meeting their commitments.

Edible oil Sub-Sector Institutions

No single institution holds responsibility for the edible oil sector, although such diverse Government agencies as the Ministries of Agriculture, Industry, Finance and Planning & National Development are all responsible for some elements. The main processors are BIDCO Oil Refineries, KAPA Oil Refineries, Pwani Oil Refineries, Palmac Oil Refineries, Aberdare Oil Millers, Kenya Nut Company, Kakamega Refiners, Nairobi Refiners, Menengai Oil Refineries, Nakuru Oil Mills and Unilever Kenya.

Some of the large edible oil refiners are also involved in supporting small scale farmers in better farming methods (value chain financing) to increase the edible oil production in Kenya. The country exports edible oil and fats products to mainly East and Horn of African countries, as well as Europe and the United States of America (USA). It is ranked 15 worldwide in export of edible fats and oils and their fractions: (EPZA, 2008).

Case study of BIDCO edible oil manufacturing industry in Kenya

Why BIDCO:

The selection of the company is based on her leading position in the manufacture and distribution of edible oils in Kenya and East Africa and notable value chain financing and management practices as manifested in the continuous engagement with farmers. The company is involved in the manufacture and distribution of a variety of edible oils and fats in Kenya and the African region. The firm focuses on being regional and globally competitive manufacturers of affordable edible oils and fats. A brief profile of the company under study is as follows.

In our study we looked in detail of BIDCO Oil Refineries as an example to establish the strategy and practices adopted to support the Agriculture value chain and the ways and financial instruments used in the process. Also to study the effect of such strategy and practice on the financial performance of the

company compare to the growth of the edible oil industry during the same period.

Overview of BIDCO Oil Refineries since establishment

Source internet website www.bidco-oil.com BIDCO (2014) and annual reports of (2012).

Established in 1985, BIDCO Oil Refineries is located in Thika town with subsidiaries in Uganda (Jinja Complex Refinery) and Tanzania (Shivji & Sons Limited.). Its main oil/fat products include Golden fry, Chi po, Chipsy, Mallo, Gold Band and 'Biddy Margarines. BIDCO's growth strategy involves both expansion and acquisition as was the case with the purchase of Elianto Oil from Unga in 1998; Kimbo, Cowboy, Veebol and Tiger brands from Unilever in 2002. In order to ensure steady supply of its raw materials, the company is pro actively promoting the growing of maize, sunflower and soya; and is currently working with 30,000 farmers across East Africa under contract farming. In addition, the company has established an integrated oil palm development project in Kalangala and along the shores of Lake Victoria in Uganda.

The company is an ardent follower of Kaizen, a Japanese management technique that advocates continuous improvements without making any additional investments; through which the company has been able to increase production in its Thika Factory from 100 to 800 tonnes a day without adding any new buildings. The company is ISO 9001 certified and has been consistent in successful development and commercialization of new innovative products almost on an annual basis, the latest being Biddys Margarine launched early 2007, Nuru Soap and Olive Gold Oil in December 2010.

In 2008, the Bidco Oil Refineries Ltd signed a loan agreement of Kshs. 3.2 billion with the International Finance Corporation (IFC). The move was aimed at enabling the company enter into new value chains and expand its current facilities. The move was intended to create employment for about 3,000 people in the supply chain and promote the local farmers. The Company has since been encouraging farmers to plant corn, soya beans and sunflower which the company buys from them. The money was also intended to help farmers in the rural areas increase their productivity and provide finances to purchase equipment's and inputs. BIDCO in 2014 has proved to adopt an Inclusive growth means, "broad-based and shared growth that helps the up liftment of the poor in the region. Bidco provides employment to over 2000 people from the region thereby directly increasing the involvement of people into the growth process of the country. Inclusive growth by its very definition implies an equitable allocation of resources with benefits incurred by every section of the society. With the 'Soil to Pan' philosophy fully in action, the group is helping over 20,000 farmers at the soil level and across the value chain. As Kenya follows the concept of extended family the benefits and economic prosperity multiply in the region and connected family elsewhere. It is considered and proved over a period of last 5 years that BIDCO has adopted core corporate philosophy and the company is also considered Socially Responsible Corporate in the society of Kenya.

Tracking Growth of BIDCO to link strategy and practices to the performance:-

In 1991, BIDCO moved its operations to Thika with the opening of BIDCO Oil Refineries plant. This marked a turnaround for BIDCO as it now concentrated on its core competencies of manufacturing and marketing edible oil, fats and soaps. Between 1994 and 1997, BIDCO increased its capacity by 500%. This growth led to the acquisition of Elianto business from Unga Group Ltd in 1998. In a year's time this business grew exponentially by 400%. 2002 demonstrated BIDCO's prowess when the company acquired leading brands in East Africa from Unilever. BIDCO has maintained all these brands under the same superior quality providing total customer satisfaction. In 2010, BIDCO implemented SAP-ERP making it more agile.

Development of agriculture Value chain and integration of farmers into the agriculture value chain has increased from 0 in 2002 to 30,000 in 2014. Consolidation of the marketing efforts and brand building by merging and acquisition has improved the domestic and export market resulting into the development of agriculture value chain.

Product development and expansion of the value in to the byproducts and expansion of alternative markets and creating enlarged demand for the value chain. Improved quality of inputs for farmers and guidance on farming techniques to maintain the standard quality of products.

Growth in BIDCO financial performance and Assets

Strategy adopted by BIDCO to improve the value chain during 2007 to 2014

Clear Business plan and long term goals of social responsibility, Buyer driven model

Providing inputs and finance to the farmers, Cost reduction by improving the technology

Product and market development, Practices adopted by BIDCO to improve the value chain during 2007 to 2014, Improved customer relationship, Supplier Partnership by adopting contract farming currently they have 30,000 Farmers family, Inventory management, Better Human resource policy, Improved operations, Direct visible impact on the financial performance in the company.

Conclusion of the desk study:

Study confirms based on theory and empirical evidence above and the performance review over last 7 years that there is a positive effects of Agricultural value chain financing on financial performance of BIDCO the edible oil manufacturing firms in Kenya Study also confirms that Value chain financing strategies adopted by BIDCO edible oil company in Kenya effect positively financial performance of the firms in Kenya.

Recommendations

This study collected the relevant material for managers for considering the development of Agriculture value chain for their industry in Kenya. Further research is required to test and record the evidence by studying more firms out of the 30 edible oil firms in Kenya to establish the guidelines for development of agriculture value chain strategy and practices and their impact on financial performance of the firm. Further study is required to clearly Map the growth of financial performance due to different factors:

Further research is required to test and record the effect on the growth of farmers as a result of participation in the AVCF in edible oil industry in Kenya so that it can be replicated for the growth of other agro industries in Kenya and east Africa.

REFERENCES

Report No. 2195-UG (2011), Republic of Uganda Vegetable Oil Development Project Interim Evaluation Document of the International Fund for Agricultural Development.

Calvin, M., et al. (2011) TECHNICAL NOTE Agribusiness and Finance Group, Rural Infrastructure and Agro-Industries Division (AGS), Food and Agriculture Organization of the UN

CHARLES B. STABELL* and ØYSTEIN D. FJELDSTAD Norwegian School of Management, Sandvika, Norway

African Development Bank (2013) Agricultural Value Chain Financing (AVCF) and Development for Enhanced Export Competitiveness

www.microlinks.org USAID Knowledge-Driven Microenterprise Development (KDMD) project (2013)

Brealey A. R, & Myers, C.S. (2010), Principles of Corporate Finance, 4th edition, McGraw Hill, New York.

Baker, D., et al. (2011). Agro-industries for Development. CABI. Oxfordshire, UK.

Fries, B. (2009). The value chain framework, rural finance, and lessons for TA providers and donors. Agri Revolution: Financing the Agricultural Value Chain, Mumbai, India.

Jones, L. (2010). Agricultural Value Chain Finance: Tools and Lessons. Practical Action Publishing. Rugby, UK.

Kenya, Republic of (2011) Economic Recovery Strategy for wealth and employment creation (2007-2012)

Levi D. Maurice, (2010), International Finance, The markets and Financial Management of Multinational Business, 3rd edition, McGraw-Hill, New York.

Miller, C. (2007). Value chain financing in agriculture. Enterprise Development and Microfinance. India

- MacGregor, J. (2011). Business models inclusive of small farmers. Paper prepared for FAO and the United Nations Industrial Development Organization (UNIDO) on Agro-industries Forum. New Delhi. India
- Mugendu O. & Mugenda, A. (2003), Research method, Acts press, Nairobi
- Shepherd, A.W. (2008) 'Financing agricultural marketing, the Asian experience Agricultural management, marketing and finance occasional paper No.2, FAO, Rome.
- Tiffen, P. (2009) Agricultural Value Chain Finance, p. 39, FAO and Academia de Centro USA,
- Winn,. (2009) 'The use of structured finance instruments in agriculture in ECA countries', AGSF Working Document No. 26, FAO, Rome.
- World Bank (2008) World Development Report 2008: Agriculture for Development, The World Bank, Washington D.C.
- Walters, D (2009) Marketing and Financial Management, Palgrave Macmillan, Hampshire, New York.
- Achieng, O. A. (2011), Information Integration on Supply Chain Management: A Case Study of Food Processing Firms in Kenya. Unpublished MBA Project, Nairobi: University of Nairobi.
- Ainapur, B., Singh, R. & Vittal, P.R. (2011). TOC Approach for Supply Chain Performance Enhancement. International Journal of Business Research and Management (IJBRM), 2 (4), 2011.
- Alvarado, U. Y., & Kotzab, H. (2001). Supply chain management: The integration of logistics in marketing. Industrial Marketing Management, 30, 183-198.
- Bærentsen, D. X (2012). The Impact of Supply Chain Finance on Corporate Performance: Improving Supply Chain Efficiency and Increasing Profitability. Unpublished Master Thesis in MSc. Finance. Aarhus University
- Baltacioglu, T., Ada, E., Kaplan, M. D., Yurt, O., & Kaplan, Y. C. (2007). A new framework for service supply chains. The Service Industries Journal, 27(2), 105-124.
- Boon-itt, S., & Wong, C. Y. (2011). The moderating effects of technological and demand uncertainties on the relationship between supply chain integration and customer delivery performance. International Journal of Physical Distribution & Logistics Management, 41(3), 253-276.
- Brau, J, C., Fawcett, S. E., Morgan, L. (2007) An empirical analysis of the financial impact of supply chain management on small firms. Journal of Entrepreneurial Finance, JEF. 12(1), 56-81.
- Cho, D. W., Lee, Y. H., Ahn, S. H., & Hwang, M. K. (2012). A framework for measuring the performance of service supply chain management. Computers & Industrial Engineering, 62(3), 801-818.
- Chong, A. Y. L., Chan, F. T. S., Ooi, K. B., & Sim, J. J. (2010). Can Malaysian firms improve organizational/innovation performance via SCM? Industrial Management & Data Systems, 111(3), 410-431.

- Ellram, L. M., Tate, W. L., & Billington, C. (2007). Services supply management: The next frontier for improved organizational performance. *California Management Review*, 49(4), 44-65.
- Gachora, J. W., Kibet, J. & Musiega, D. (2014). Supply Chain Cost Reduction Impact on Performance of Small Scale Agricultural Enterprise. *International Journal of Education and Research*, 2(4), 377-390.
- Gonzalez, D. & Jose, L.G. (2010). Analysis of an Economic Order Quantity and Reorder Point Inventory Control Model for Company XYZ.
- Grant, R.M. (1991). 'Porter's Competitive Advantage of Nations: an assessment. *Strategic Management Journal*, 12(7), 535-549.
- Kaufman, P.R. 2000. "Food Retailing Consolidation: Implications for Supply Chain Management Practices. *Journal of Food Distribution Research*, 30(1): 5-11.
- Khang, T. S., Arumugam, V., Chong, A. Y.-L., & Chan, F. T. S. (2010). Relationship between supply chain management practices and organisation performance: a case study in the Malaysia service industry. *International Journal Modelling in Operations Management*, 1(1), 84-106.
- Kim, D., Cavusgil, S. T., & Calantone, R. J. (2006). Information system innovations and supply chain management: Channel relationships and firm performance. *Journal of the Academy of Marketing Science*, 34(1), 40-54.
- Koh, S. C. L., Demirbag, M., Bayraktar, E., Tatoglu, E., & Zaim, S. (2007). The impact of supply chain management practices on performance of SMEs. *Industrial Management & Data Systems*, 107(1), 103-124.
- Kohler, W. (2006). The "Lisbon Goal" of the EU: rhetoric or substance?'. *Journal of Industrial Trade and Competition*, 6: 63-66.
- Kumar, A., Singha, H., Kumara, S. & Mittal, S. (2011). Value Chains of Agricultural Commodities and their Role in Food Security and Poverty Alleviation – A Synthesis. *Agricultural Economics Research Review*, 24, 169-181.
- Lee, S. M., Lee, D., & Schniederjans, M. J. (2011). Supply chain innovation and organizational performance in the healthcare industry. *International Journal of Operations & Production Management*, 31(11), 1193-1214.
- Li, S., Ragu-Nathan, B., Ragu-Nathan, T. S., & Rao, S. S. (2006). The impact of supply chain management practices on competitive advantage and organizational performance. *The International Journal of Management Science*, 34, 107-124.
- Li, S., Ragu-Nathan, B., Ragu-Nathan, T. S., & Rao, S. S. (2006). The impact of supply chain management practices on competitive advantage and organizational performance. *The International Journal of Management Science*, 34, 107-124.

- Lin, C., Chow, W. S., Madu, C. N., Kuei, C.-H., & Yu, P. P. (2005). A structural equation model of supply chain quality management and organizational performance. *International Journal Production Economics*, 96, 355-365.
- Mensah, C., Diyuoh, D., & Oppong, D. (2014). Assessment of Supply Chain Management Practices and its Effects on The Performance of Kasapreko Company Limited in Ghana. *European Journal of Logistics Purchasing and Supply Chain Management*, 2(1), 1- 16,
- Muckstadt, J.A. & Sapra, A. (2010), *Principles of Inventory Management: When You Are Down to Four, Order More*, Springer Series in Operations Research and Financial Engineering.
- Mulure, L. A. (2013). Effect of Supply Chain Finance on Small And Medium Manufacturing Enterprises Performance: A Case Of Nairobi County. Unpublished MBA Project, Nairobi: University Of Nairobi
- Okello, J. O. & Were, S. (2014). Influence of supply chain management practices on performance of the Nairobi Securities Exchange's listed, food manufacturing companies in Nairobi. *International Journal of Social Sciences and Entrepreneurship*, 1 (11), 107-128.
- Onawumi, A.S., Oluleye, O.E. & Adebisi, K.A. (2011), *An Economic Order Quantity Model with Shortages, Price Break and Inflation*.
- Petrovic-Lazarevic, S., Sohal, A., & Baihaqi, I. (2007). Supply chain management practices and supply chain performance in the Australian manufacturing industry. <http://www.buseco.monash.edu.au/mgt/research/workingpapers/2007/wp21-07.pdf>. Accessed on 2nd October 2014.
- Porter, M, (1990). *The Competitive Advantage of Nations*. New York: The Free Press, A Division of McMillan, Inc.
- Porter, M.E. (1985). *Competitive Advantage*. New York: Free Press
- Ray, G., Barney, J. B., & Muhanna, W. A. (2004). Capabilities, business processes, and competitive advantage: choosing the dependent variable in empirical test of the resource-based- view. *Strategic Management Journal*, 25, 23-37.
- Roach, B. (2005). *Origin of the Economic Order Quantity formula*. Topeka, Kansas, USA: Washburn University.
- Rostami, A., Rostami, A. S. A., Jalali, S. & Nazem, A. (2013). Relation between supply chain efficiency And supply chain finance. *Internationals. Research Journal of Applied and Basic Sciences*, 4 (2): 416-423
- Salvatore, D. (2002). *International Economics*. 3rd edition. New York: Macmillan.
- Schwarz, L.B. (2008). *The Economic Order-Quantity (EOQ) Mode*

- Sundram, V. P. K., Ibrahim, A. R., &Govindaraju, V. G. R. C. (2011). Supply chain management practices in the electronics industry in Malaysia: Consequences for supply chain performance. *Benchmarking: An International Journal*, 18(6), 834-855.
- Tanwari, A., Qayoom, L.A. &Shaikh, Y.G. (2000),. ABC analysis as an inventory control technique.
- Theuri, F. S., Mwirigi, F. M. &Namusonge, G. (2014). Strategic Management Determinants of Value Addition in the Sea Food Processing Sub-Chain: A Survey of Industrial Fish Processors in Kenya. *International Journal of Managerial Studies and Research (IJMSR)*, 2(6), 53-62.
- Ugulumua, E. S. &Inanga, E. L. (2013). Tanzania's Small-Scale Sunflower Farmers: Upgrading the Value Chain. *International Journal of Sciences: Basic and Applied Research (IJSBAR)*,10(1), 126-145
- Venkatraman, N., &Ramanujam, V. (1987). Measurement of business economic performance: an examination of method convergence. *Journal of Management*, 13(1), 109-122.
- Wagner, S. M., Grosse-Ruyken, P. T. &Erhun, F. (2012).The Link between Supply Chain Fit and Financial Performance of the Firm. *Journal of Operations Management*
- Wang, W.-C., Lin, C.-H., & Chu, Y.-C.(2011). Types of competitive advantage and analysis. *International Journal of Business and Management*, 6(5), 100-104.
- Wong, W. P., & Wong, K. Y. (2011). Supply chain management, knowledge management capability, and their linkages towards firm performance. *Business Process Management Journal*, 17(6), 940-964.
- Yap, L. L. & Tan, C. L. (2012).The Effect of Service Supply Chain Management Practices on the Public Healthcare Organizational Performance.*International Journal of Business and Social Science*, 3916, .216-224.
- Yusuf, A.M. (2003). Inventory Control and Economic Order Quantity in National Electric Power Authority (NEPA).