African Journal of Emerging Issues
Peer reviewed | Double blind | Interdisciplinary

African Journal of Emerging Issues (AJOEI)
Online ISSN: 2663 - 9335
Available at: https://ajoeijournals.org

FINANCE

FINANCIAL LITERACY CAPABILITY AND THE COMPETITIVE ADVANTAGE OF DEPOSIT-TAKING SAVINGS AND CREDIT CO-OPERATIVE SOCIETIES IN KENYA

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https://doi.org/10.53819/81018102t7190

Publication Date: August, 2024

ABSTRACT

Purpose: The study sought to explore the effect of financial literacy on the competitive advantage of deposit-taking savings and credit co-operative societies in Kenya
Methodology: The study employed a descriptive cross-sectional research design, focusing on senior management staff from 176 DT-SACCOs, with 3856 individuals as the target population. The study stratified the population into top management, middle-level management, and low-level management, sampling 900 respondents using the Yamane formula. Data was collected through structured questionnaires and analyzed using SPSS v25.0, with the results presented in graphs, diagrams, and figures.
Results: The study reveals that financial literacy positively and significantly affects the competitive advantage of DT-SACCOs in Kenya. This underscores the importance of financial knowledge and expertise within these organizations. Staff and leaders who possess a deep understanding of financial principles can make informed decisions, manage resources effectively, and identify opportunities for growth, all of which contribute to competitive advantage. In conclusion, the analysis underscores the significance of financial literacy in enhancing the competitive advantage of DT-SACCOs in Kenya.
Unique contribution to theory, policy and practice: DT-SACCOs should implement financial education programs covering budgeting, saving, and investment options, along with personalized counseling, and collaborate with institutions to expand financial literacy initiatives.
Keywords: *Financial Literacy Capability, Competitive Advantage, Return on Investment (ROI), Economic Value Added (EVA), Customer Satisfaction, Market Share, Brand Differentiation, Saving culture, Investment decisions, Product portfolio decisions, Financial Skills*

INTRODUCTION

The concept of Business Model Dynamic Capability (BMDC) provides a framework for firms to create, deliver, and capture value effectively, emphasizing the seamless integration of organizational and financial aspects (Teece, 2018). The Business Model Canvas, a strategic management tool, helps managers analyze key components such as customer segments, value propositions, and revenue streams to enhance organizational innovation strategy (Vodovoz & May, 2017). This perspective is extended by the Dynamic Business Model (DBM), which allows firms to adapt and transform conventional models in response to changing environments (Amit & Zott, 2016; Teece, 2018).

Financial literacy is identified as a crucial dynamic capability within the broader context of BMDC, essential for sound decision-making and resource allocation. Financial literacy capability involves understanding financial concepts and risks, along with the skills and competence to apply this knowledge in various financial situations, thereby improving both individual and societal financial well-being (Hasan et al., 2021; Stella et al., 2020). This capability also requires access to appropriate financial products and services, making it a vital component for better investment decisions and overall business success.

The role of financial literacy in enhancing business success is further emphasized by its impact on risk management, capital structure, and rational financial decision-making. High financial literacy can increase financial inclusion and contribute to business sustainability, particularly by enabling firms to navigate financial constraints effectively. Additionally, financial organizations differentiate their clients based on transaction sizes, and a lack of financial management knowledge can lead to significant performance issues, as seen in studies on Micro and Small Enterprises in Kenya (Waweru & Ngugi, 2014; Tumwine, Mbabazize & Shukla, 2015). Well-designed financial education programs can therefore improve financial knowledge and behavior, leading to better firm performance.

In the context of Deposit-Taking Savings and Credit Cooperative Societies (SACCOs) in Kenya, the selection of financial literacy capability and human resource capability as key variables in this study is strategic. These elements are pivotal in shaping the BMDC of SACCOs, with financial literacy capability being a critical factor in the business model. The study adopts this perspective to explore how financial literacy can contribute to the success and sustainability of SACCOs by ensuring they remain agile and responsive in a dynamic financial environment.

Statement of the problem

The study identifies significant challenges facing DT-SACCOs in Kenya, particularly the lack of business model dynamic capability (BMDC), which hampers their ability to sustain competitive advantage. Many DT-SACCOs operate high-risk models prone to liquidity issues, leading to financial instability, with some facing liquidation or license revocation by SASRA due to non-compliance with capital requirements (FDS, 2018; SASRA, 2022). The study underscores the absence of access to critical financial infrastructure, such as open market shares, national payment systems, and central liquidity facilities, which are available to commercial banks, as a key factor exacerbating these challenges (SASRA, 2017). The decline in growth rates of deposits and assets further highlights the precarious financial position of DT-SACCOs, indicating that without significant improvements in financial literacy and BMDC, their long-term competitiveness is at risk.

The review of past studies reveals various gaps in understanding the relationship between BMDC and competitive advantage, particularly within the context of DT-SACCOs. Studies conducted in different regions, such as South Africa, Ethiopia, and Tanzania,

present contextual and conceptual gaps as they did not specifically focus on the unique challenges of DT-SACCOs in Kenya (Mushonga, Arun & Marwa, 2019; Duguma & Han, 2018; Kilemile, 2017). Additionally, research conducted in various Kenyan counties, including Mombasa, Kisii, and Nyeri, demonstrated methodological weaknesses and limited generalizability due to small sample sizes and a lack of focus on BMDC (Ngugi & Kising'u, 2017; Momanyi, 2017; Machira, 2017). These studies highlight the need for a more targeted approach in examining the dynamic capabilities of DT-SACCOs to enhance their competitiveness.

The current study seeks to fill these gaps by providing a comprehensive analysis of how DT-SACCOs in Kenya can effectively implement BMDCs through enhanced financial literacy. By focusing on the specific needs and challenges of DT-SACCOs, the study aims to offer actionable insights that can help these organizations improve their competitiveness and financial performance. The study emphasizes that developing and integrating BMDCs is crucial for DT-SACCOs to survive and thrive in the competitive financial services sector in Kenya (Mundy, 2011; Storchi & Johnson, 2016; Teguh et al., 2021).

Study Objectives

To explore the effect of financial literacy capability on the competitive advantage of deposit-taking savings and credit co-operative societies in Kenya

Hypothesis of the Study

H_A: There is a statistically significant effect of financial literacy capability on the competitive advantage of deposit-taking savings and credit co-operative societies in Kenya

Significance of the Study

The novelty of the study was based on the introduction of business model dynamic capability to DT-SACCOs in Kenya. By implementing the business model dynamics, firms are sure of competitiveness via the use of substantive and dynamic capabilities (Dyduch et al., 2021). Therefore, given the relationship between dynamic capability, business model, customer value proposition and sustained competitive advantage, to outperform competitors in the long run, DT-SACCOs need to continually develop and strengthen their dynamic capabilities and be able to effectively and in a timely manner, re-orchestrate and re-transform their resources when opportunities or threats arise. Based on the above backdrops, therefore, the current study adopts the approach of analyzing financial literacy capability as one of the avenues of business models dynamic towards the competitive advantage of deposit-taking savings and credit co-operative societies in Kenya. This study will assist policymakers, and the leadership in DT-SACCOs to understand the requisites of how to model dynamic capabilities that will ensure their knowledge and practicality of competitiveness is beefed up. That is, how they can identify, manage and implement the elements of business model dynamics for their competitiveness. The study likewise aims to present recommendations to policymakers such as the Sacco Societies Regulatory Authority (SASRA) since it is the regulator of the SACCOs in Kenya. The study will guide the regulator in ensuring that they develop and formulate policies that ensure DT-SACCOs in Kenya can operate freely and compete fairly with other firms in Kenya's financial sector. Specifically, academicians can advance their research on financial literacy and the competitiveness of DT-SACCOs in Kenya. The literature used in this analysis will help form their cases. In addition, researchers will be able to criticize the conclusion of this research in comparison to other studies. This will enrich research on business models and competitive advantage.

THEORETICAL FRAMEWORK

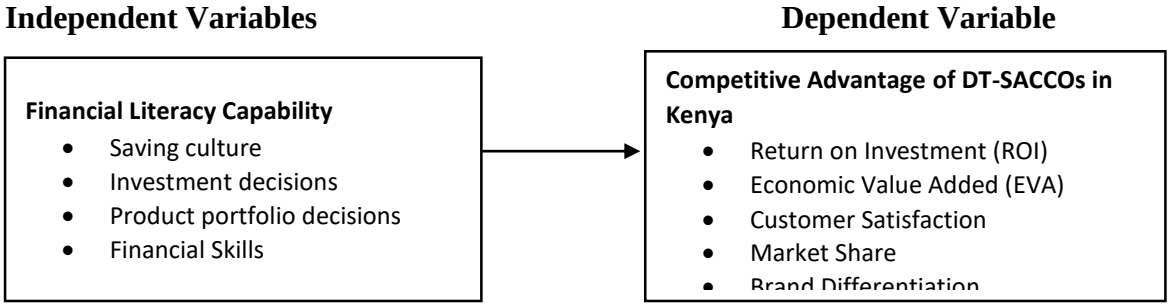
A good study is founded on a theoretic framework. Theories are viewed to help readers to understand the behaviour of phenomena. They also help researchers to challenge and expound on existing forms of knowledge (Alavi et al., 2018). Hence, this paper was anchored on Modern portfolio theory.

Modern portfolio theory

Modern Portfolio Theory (MPT), developed by Harry Markowitz in 1952, posits that investors, particularly those who are risk-averse, aim to construct portfolios that maximize returns based on existing market risks (Markowitz, 1952). The theory emphasizes the inseparable nature of risk and reward, advocating for portfolio diversification to reduce overall risk. MPT distinguishes between systematic risk, which affects the entire market and cannot be diversified, and unsystematic risk, which is specific to individual stocks and can be mitigated through diversification. By diversifying across unrelated securities, investors can achieve an efficient frontier, optimizing returns for a given level of risk (Markowitz, 1952; Mbithi, Kisaka & Kitur, 2015; Turcas et al., 2017).

This theory is relevant to DT-SACCOs as it underscores the importance of portfolio diversification in spreading risks and maximizing potential returns. MPT provides a foundation for DT-SACCO managers to make informed financial decisions by balancing low-risk and high-risk investments. It also supports the idea that financial literacy capability is crucial for achieving a competitive advantage, as it enables managers to identify and select the most beneficial assets for portfolio diversification, thereby enhancing the overall performance of the SACCOs in Kenya. This approach is instrumental in informing the relationship between financial literacy capability and the competitive advantage of deposit-taking savings and credit cooperative societies in Kenya.

Conceptual Framework



Source: Adapted from (Teece, 2010; Birkinshaw & Ansari, 2015; Teece, 2018; Vodovoz & May, 2017).

Competitive advantage of deposit-taking savings and credit co-operative societies

Competitive advantage is the edge a company possesses that allows it to meet customer needs more effectively or cheaply than its competitors, leading to superior performance (Hugh et al., 2000). Sustainable competitive advantage (SCA) is crucial for long-term survival and is built on unique corporate capabilities, both tangible and intangible, such as intellectual property, strong brands, effective leadership, and organizational culture (Momanyi, 2017). The competitive landscape compels firms to continually enhance efficiency, improve service quality, and adopt strategies that strengthen their market position and ROI (Porter, 2010).

The development of SCA relies on a firm's ability to invest in capabilities that respond to macro-environmental shifts (Srivastava et al., 2013; Parida & Wincent, 2019). For

SACCOs, this advantage can be achieved through fund mobilization, technology adoption, cost reduction, staff training, improved governance, and aggressive marketing (Okelo, 2014; Njoki, 2015). Competitive strategies such as cost leadership, differentiation, and focus have been shown to positively influence the performance of SACCOs by enhancing market share and growth (Porter, 1985; Islami et al., 2020).

Measuring competitive advantage involves evaluating various dimensions like cost efficiency, innovation capability, and niche market dominance. Cost leadership focuses on minimizing costs through economies of scale and technological advancements, while differentiation emphasizes unique value propositions, brand recognition, and customer loyalty. The focus strategy assesses the firm's dominance in niche markets and its ability to customize offerings for specialized segments (Porter, 1980; Kiseľáková et al., 2018; Debebe, 2020). These strategies are critical in ensuring that SACCOs in Kenya maintain a competitive edge in the financial services sector.

In the context of SACCOs, competitive advantage is assessed using metrics like Return on Investment (ROI), Economic Value Added (EVA), customer satisfaction, market share, and brand differentiation. These measures provide a comprehensive evaluation of a cooperative's strategic positioning and its ability to sustain success and growth. A well-rounded approach that integrates these financial and non-financial metrics ensures that SACCOs are strategically aligned to thrive within the unique dynamics of Kenya's financial services sector (Stewart, 1991; Damodaran, 2012).

EMPIRICAL LITERATURE

Resmi et al. (2021) examined the impact of financial and taxation literacy on MSMEs' competitiveness in Yogyakarta, finding that financial literacy significantly enhances MSMEs' competitive advantage. This suggests that SACCOs can improve their competitiveness by enhancing their members' financial literacy, enabling informed financial decisions. Similarly, Srisusilawati et al. (2021) found that self-efficacy and Islamic financial literacy positively impacted SME performance, highlighting the importance of financial literacy and innovation strategies in boosting organizational productivity. SACCOs can apply these findings to enhance member participation in financial activities, thereby improving competitiveness.

Mwatondo and Wekesa (2019) analyzed financial literacy's influence on the financial growth of SACCOs in Kwale County, revealing a positive relationship between financial knowledge, attitude, behavior, training, and financial growth. Although the study provided valuable insights, it was critiqued for not addressing competitiveness directly. Kiruthu et al. (2019) emphasized the role of organizational capabilities—such as leadership, innovation, and collaboration—in strategy execution within SACCOs, aligning with the concept of BMDC. These capabilities are crucial for enhancing SACCOs' competitiveness and overall performance.

Further, Mauerman and Randall (2018) demonstrated the positive impact of financial education on SACCO members in Rwanda, particularly when SACCOs had autonomy in trainer selection, leading to better financial knowledge, attitudes, and behaviors. Machira (2017) supported the significance of financial resources in maintaining SACCOs' competitive edge through innovative technologies. These studies collectively underscore the importance of financial literacy and organizational capabilities in enhancing the competitiveness of SACCOs, forming the basis for the hypothesis that financial literacy capability significantly affects their competitive advantage in Kenya

RESEARCH METHODOLOGY

This study, grounded in a positivist research paradigm, employed a quantitative approach to examine the impact of financial literacy capability on the competitive advantage of DT-SACCOs in Kenya. Utilizing a descriptive cross-sectional design, the study targeted 176 licensed DT-SACCOs, focusing on a diverse population of 3,856 management staff across various sectors. Stratified random sampling was used to select 899 respondents from top, middle, and low-level management for data collection via structured questionnaires. A pilot study was conducted to ensure the validity and reliability of the research instruments. Data were analyzed using descriptive and inferential statistics, including regression analysis to test the hypothesis that financial literacy capability significantly influences the competitive advantage of DT-SACCOs. The findings were presented using statistical measures such as R^2, F statistics, and beta coefficients, with a 95% confidence interval.

RESEARCH FINDINGS

This section presents the findings of the study. The results include descriptive and inferential statistics.

Descriptive Statistics

Descriptive statistics in research involve the use of numerical and graphical methods to summarize and present data in a meaningful and interpretable manner. These statistics provide a snapshot of the main features of a dataset, helping researchers gain insights into its central tendencies, variations, and distribution patterns. Descriptive statistics serve as a fundamental tool for summarizing large and complex datasets. They condense raw data into concise, understandable measures, allowing researchers to grasp the key characteristics of the information at a glance. The study sought to present the descriptive results of the outcomes of Business Model Dynamic Capabilities and Competitive Advantage of deposit-taking savings and credit co-operative societies in Kenya.

Financial Literacy Capability

The respondents were asked to indicate their level of agreement or disagreement with the statements with regard to financial literacy capability where 1 = Strongly disagree, 2= Disagree, 3= Neither agree nor disagree, 4= Agree and 5= Strongly agree, M = Mean, S D = Standard Deviation. Financial literacy capability equips individuals and organizations with the knowledge and skills to make strategic financial decisions, allocate resources efficiently, and optimize financial outcomes. It encompasses a range of topics, including budgeting, savings, investment, debt management, risk assessment, financial planning, and understanding financial markets. In this context, the study explored how a financial literacy capability can drive competitive advantage for deposit-taking savings and credit co-operative societies (DT-SACCOs) in Kenya, shedding light on the pivotal role it plays in their competitive advantage. The results are presented in Table 1.

Table 1: Summary of the descriptive results regarding financial literacy capability

Statements	1	2	3	4	5	M	S D
1. The management is careful to compare prices of assets and resources to be purchased before making the final decision.	0%	3%	33%	46%	18%	3.78	0.78
2. The DT-SACCO has made arrangements for lines of credits from banks to help in uncertainties/recessions and thus sustained competition	1%	2%	28%	47%	22%	3.87	0.81
3. The DT-SACCO regularly reviews its debt contracts to minimize the risk brought about by leverage	1%	4%	28%	43%	23%	3.83	0.88
4. Before signing any financial contract, the management carefully assesses the contents and what pertains to it.	1%	1%	24%	51%	24%	3.95	0.78
5. The DT-SACCO rarely borrows at high costs thus, there is retained earnings to help in new entrants	1%	2%	21%	51%	24%	3.95	0.82
6. The DT-SACCO has enough capital reserves to help in uncertainties in the new markets and/or among competitors	1%	1%	22%	55%	22%	3.96	0.73
7. There are improvements in the level of financial knowledge, attitudes, habits and behaviour towards the flow and circulation of money	1%	2%	22%	53%	22%	3.94	0.76
8. Before making a major/minor financial judgement, the DT-SACCO makes sure that the savings are sufficient to cover any sudden expense/NPLs.	1%	1%	22%	48%	27%	3.98	0.80
9. The DT-SACCO has put in place reserve fund to cater for emergencies	8%	9%	11%	33%	39%	3.86	1.25
Average M/SD	**2%**	**3%**	**23%**	**47%**	**25%**	**3.90**	**0.85**

The study explored the impact of financial literacy capability on the competitive advantage of DT-SACCOs in Kenya, focusing on various financial practices and their perceived effectiveness. The findings revealed that a significant proportion of respondents (64%) believed that the management is diligent in comparing prices before purchasing decisions, with an average score of 3.78 and a standard deviation of 0.78. This careful approach to procurement reflects a commitment to cost-efficiency and financial prudence, which can enhance the DT-SACCO's competitive position. Additionally, 69% of respondents agreed that the DT-SACCO has secured lines of credit to act as a financial safety net during economic uncertainties, with a score of 3.87 and a standard deviation of 0.81, indicating strong support for this practice.

The study also found that 66% of respondents believed that regular reviews of debt contracts help mitigate risks associated with leverage, with an average score of 3.83 and a standard deviation of 0.88. This proactive risk management strategy can strengthen the organization's resilience and competitive advantage. Furthermore, 75% of respondents indicated that management carefully assesses financial contracts before signing, with a high average score of 3.95 and a standard deviation of 0.78. This thorough assessment helps prevent unforeseen financial challenges, further contributing to the DT-SACCO's competitive edge.

In terms of financial behavior, 75% of respondents agreed that the DT-SACCO avoids borrowing at high costs, thereby enabling the accumulation of retained earnings, which supports initiatives like market expansion. The high average score of 3.95 and standard deviation of 0.82 suggest strong consensus on this practice. Moreover, 77% of respondents acknowledged that the DT-SACCO maintains sufficient capital reserves to address uncertainties, with an average score of 3.96 and a low standard deviation of 0.73, underscoring the importance of financial preparedness in enhancing competitive resilience.

The study also highlighted improvements in financial literacy among members, with 75% of respondents agreeing that there have been positive changes in financial knowledge, attitudes, habits, and behaviors within the DT-SACCO. The high average score of 3.94 and a standard deviation of 0.76 reflect a general consensus on the benefits of financial literacy in promoting sound financial management, which can positively impact the organization's competitive advantage. Furthermore, 75% of respondents agreed that the DT-SACCO ensures sufficient savings before making financial judgments, with an average score of 3.98 and a standard deviation of 0.80, indicating strong agreement on the importance of prudent financial decision-making.

The study concluded that financial literacy capability plays a crucial role in strengthening the competitive advantage of DT-SACCOs. Themes emerging from respondents' views highlighted the significance of financial literacy in areas such as risk management, innovative service development, responsible lending, and fostering a savings culture. These capabilities not only enhance the organization's competitive position but also build member trust and loyalty. The findings align with previous research, underscoring the importance of financial literacy in improving the financial performance and competitiveness of SACCOs in Kenya.

Competitive Advantage of DT-SACCOs in Kenya

The respondents were asked to indicate their level of agreement or disagreement with the statements with regard to competitive advantage of DT-SACCOs in Kenya where 1 = Strongly disagree, 2= Disagree, 3= Neither agree nor disagree, 4= Agree and 5= Strongly agree, M = Mean, S D = Standard Deviation. Human resource capability is a critical driver of competitive advantage. Organizations that invest in their workforce, nurture talent, and create a positive work environment are better positioned to excel in the marketplace, adapt to changes, and achieve sustainable success. In this context, the study explored how competitive advantage of the deposit-taking savings and credit co-operative societies (DT-SACCOs) in Kenya has been performing. The results are thus presented in Table 2.

Table 2: Summary of the descriptive results regarding competitive advantage of DT-SACCOs in Kenya

Statements	1	2	3	4	5	M	S D
The firm has achieved the following to sustain its competitiveness in the market:							
1. Cost-saving in service delivery	0%	2%	30%	45%	22%	3.87	0.79
2. Ability to supply both low and high loan volumes	0%	1%	21%	51%	26%	4.02	0.74
3. Ability to offer a wide variety of services	0%	0%	28%	52%	20%	3.90	0.70
4. Improved quality of products and services in the market	0%	1%	17%	55%	26%	4.05	0.71
5. Efficiency in service delivery to its customers	1%	2%	18%	53%	26%	4.01	0.81
6. Ability to customize products to suit customer requirements	0%	0%	25%	46%	28%	4.01	0.77
7. Customer loyalty across wide market segments	1%	2%	21%	53%	23%	3.95	0.78
8. The increased investment return to the members	1%	0%	23%	53%	22%	3.96	0.74
9. Sustained long-term commitment with members	1%	2%	24%	51%	22%	3.93	0.77
10. Offering relatively cheaper products than competitors	1%	1%	24%	50%	25%	3.98	0.76
11. Higher economic value added than the competitors	8%	9%	12%	34%	38%	3.84	1.24
Average M/SD	**1%**	**2%**	**22%**	**49%**	**25%**	**3.96**	**0.80**

The study examined the competitive advantage of DT-SACCOs in Kenya by analyzing various factors that contribute to their market position. A significant 67% of respondents agreed that the firm has achieved cost savings in service delivery, indicating operational efficiency, with a mean score of 3.87 and a standard deviation of 0.79. This suggests that the firm's efforts to optimize costs are widely recognized, positioning it favorably in the market. Additionally, 77% of respondents acknowledged the firm's capability to supply both low and high loan volumes, demonstrating flexibility and adaptability in meeting diverse customer needs. The mean score of 4.02 and a low standard deviation of 0.74 underscore a strong consensus on this capability.

The firm's ability to offer a wide variety of services was acknowledged by 72% of respondents, with a mean score of 3.90 and a standard deviation of 0.70, reflecting a commitment to catering to diverse customer preferences. Furthermore, 81% of respondents agreed that the firm has improved the quality of its products and services, with a mean score of 4.05 and a standard deviation of 0.71, indicating a strong perception of the firm's enhanced offerings. Additionally, 79% of participants recognized the firm's efficiency in service delivery, reflected in a mean score of 4.01 and a standard deviation of 0.81, highlighting the firm's operational excellence.

The study also found that 74% of respondents agreed that the firm can customize products to meet customer needs, with a mean score of 4.01 and a standard deviation of 0.77, demonstrating the firm's customer-centric approach. A substantial 76% of respondents noted the firm's success in cultivating customer loyalty across various market segments, with a mean score of 3.95 and a standard deviation of 0.78, indicating strong brand loyalty. Additionally, 75% of respondents agreed that the firm has enhanced investment returns for its members, reflected in a mean score of 3.96 and a standard deviation of 0.74, suggesting positive financial outcomes and member satisfaction.

The study revealed that 73% of respondents recognized the firm's sustained long-term commitment to its members, with a mean score of 3.93 and a standard deviation of 0.77, highlighting the firm's dedication to building lasting relationships. Moreover, 75% of participants agreed that the firm offers competitively priced products, with a mean score of 3.98 and a standard deviation of 0.76, positioning the firm favorably in terms of affordability. However, responses regarding the firm's economic value added relative to competitors showed greater variability, with a mean score of 3.84 and a higher standard deviation of 1.24, indicating mixed opinions on this aspect.

Overall, the study's findings reflect a largely positive perception of the DT-SACCOs' competitive capabilities, with an average mean of 3.96 across various dimensions. The high levels of agreement suggest that the firm has effectively communicated its strengths and established a strong competitive position. However, the variability in responses regarding economic value added indicates a potential area for strategic refinement. These findings align with Porter's (2010) assertion that competition drives efficiency and quality improvement, and with the broader understanding that sustainable competitive advantage (SCA) relies on unique corporate capabilities, both tangible and intangible, as outlined by scholars such as Parida & Wincent (2019) and Momanyi (2017).

Trends in the Economic Value Added of DT-SACCOs in Kenya

Figure 1 represents the trends in Economic Value Added (EVA), for DT-SACCOs in Kenya over the years 2017 to 2022.

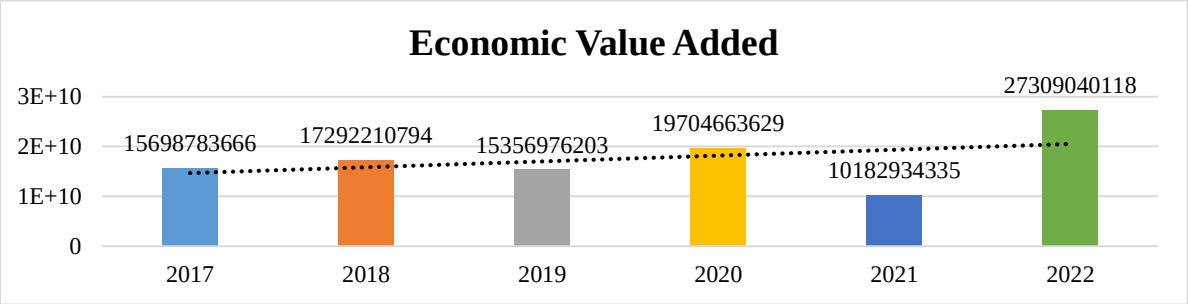


Figure 1: Trends in the Economic Value Added of DT-SACCOs in Kenya

Source: (SASRA, 1st January, 2023).

The results show that in 2017, the DT-SACCOs had a positive EVA of approximately 15.7 billion Kenyan Shillings, indicating that they generated sufficient economic value to cover their cost of capital. The positive trend continued in 2018 and 2019 with EVA values of approximately 17.3 billion and 15.4 billion Kenyan Shillings, respectively. In 2020, the EVA increased to approximately 19.7 billion Kenyan Shillings, suggesting that the SACCOs were improving to create economic value. In 2021, there was a positive EVA of approximately 10.2 billion Kenyan Shillings. This indicates that DT-SACCOs managed to generate economic value surpassing their cost of capital, a positive sign but a lower value. However, in 2022, the EVA improved significantly to approximately 27.3 billion Kenyan Shillings, indicating a return to positive economic value creation. The trends in EVA show an incremental performance for DT-SACCOs in Kenya.

Trends in the Return on Investment of DT-SACCOs in Kenya

Figure 2 represents the trends in Return on Investment (ROI), for DT-SACCOs in Kenya over the years 2017 to 2022.

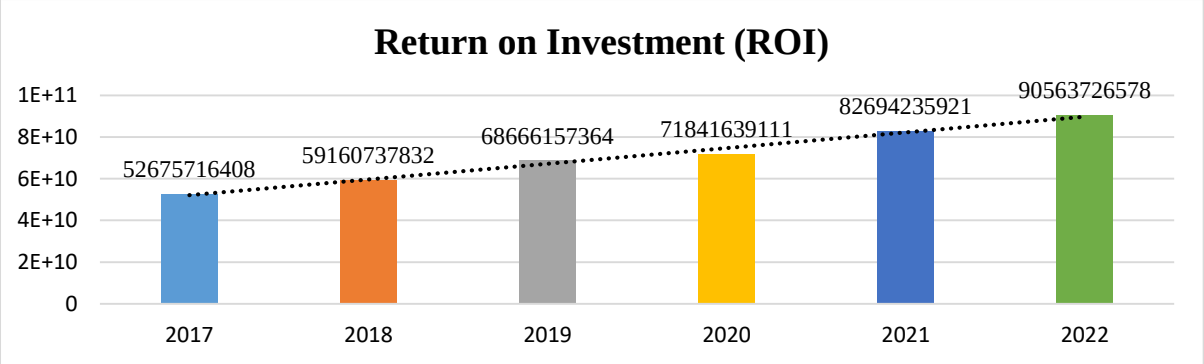


Figure 2: Trends in the Return on Investment of DT-SACCOs in Kenya

Source: (SASRA, 1st January, 2023).

ROI measures the profitability of an investment relative to its cost. Figure 2 indicates that ROI consistently increased from 2017 (52,675,716,408) to 2022 (90,563,726,578). This indicates that the SACCOs' investments became more profitable over these years, demonstrating improved efficiency in generating returns. This suggests an improvement in the profitability of investments. The increasing ROI is a positive sign, indicating improved profitability. The consistent increase in ROI indicates that the SACCOs' investments were becoming more lucrative. This trend suggests that the SACCOs made sound investment decisions, possibly aligned with their core business model capabilities, leading to higher returns over the years.

Trends in the Company Size of DT-SACCOs in Kenya

Figure 3 represents the trends in company size (measured by Total Assets) for DT-SACCOs in Kenya over the years 2017 to 2022.

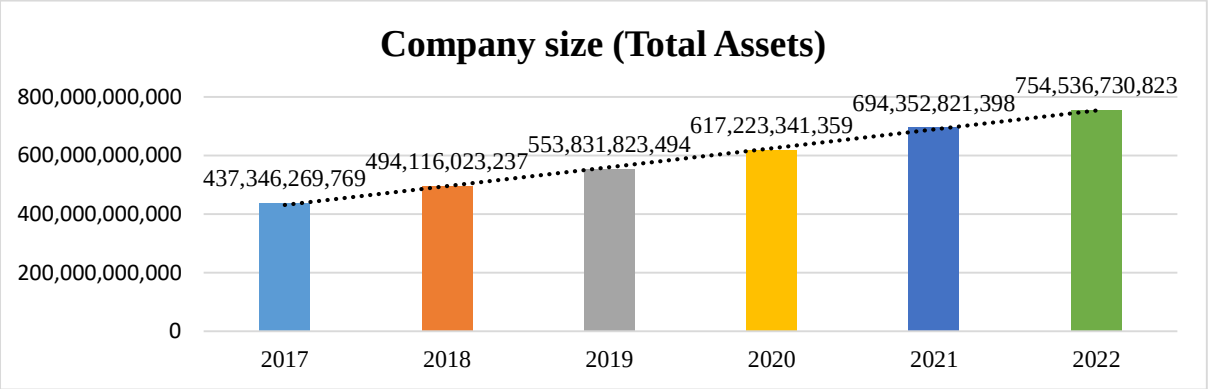


Figure 3: Trends in the Total Assets of DT-SACCOs in Kenya

Source: (SASRA, 1st January, 2023).

The total assets result of DT-SACCOs in Figure 3 increased steadily from 2017 to 2022. In 2017, the total assets were approximately 437.3 billion Kenyan Shillings, and by 2022, they had grown to approximately 754.5 billion Kenyan Shillings. This indicates that DT-SACCOs have been expanding in terms of their size and scale over the years. The growth in total assets suggests that DT-SACCOs have been expanding their operations and scale, which can be a positive factor for competitiveness and market presence.

Trends in the Market Share of DT-SACCOs in Kenya

Figure 4 represents the trends in ROE for DT-SACCOs in Kenya over the years 2017 to 2022.

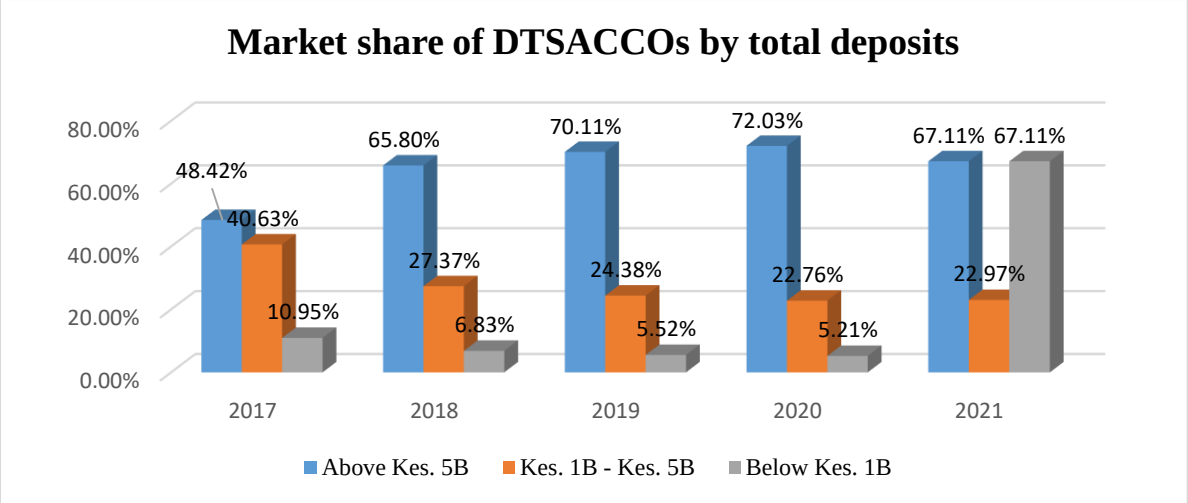


Figure 4: Trends in Market Share of DT-SACCOs in Kenya

Source: (SASRA, 1st January, 2023).

Figure 4 indicates the market share for DT-SACCOs with assets above Kes. 5 billion that has shown a consistent increase from 48.42% in 2017 to 72.03% in 2020, indicating substantial growth in this segment. However, there is a notable dip in 2021, with the market share dropping to 67.11%. This might be a result of various factors; such as changes in the competitive landscape or internal challenges faced by some DT-SACCOs.

The market share for DT-SACCOs with assets ranging from Kes. 1 billion to Kes. 5 billion has experienced a decline over the years. In 2017, this category held 40.63% of the market share, which decreased to 22.76% in 2020. However, there's a slight increase to 22.97% in 2021. The DT-SACCOs with assets below Kes. 1 billion had a market share of 10.95% in 2017, which decreased steadily to 5.21% in 2020. In 2021, there's an unusual spike, with the market share showing an identical percentage of 67.11% as the above Kes. 5 billion category. This might be a data anomaly or a unique event in the market.

The results indicate an overall growth trend in the market share of DT-SACCOs, especially in the "Above Kes. 5 Billion" category, which reached its peak in 2020. However, the subsequent drop in 2021, especially in the same category, suggests potential challenges or changes in the market dynamics. The "Kes. 1 Billion - Kes. 5 Billion" category witnessed a decline over the years, indicating a possible shift in market concentration towards larger institutions. This decline could be due to increased competition, changes in consumer preferences, or other market forces. The sudden surge in the market share for DT-SACCOs with assets below Kes. 1 billion in 2021 seems anomalous and warrants further investigation. It might be a result of data reporting errors, changes in classification criteria, or other exceptional circumstances. Verification of this data point is crucial for accurate interpretation. Fluctuations in market share can be influenced by various factors such as economic conditions, regulatory changes, competitive strategies, and consumer behavior. Further analysis and contextual information would be valuable for a comprehensive understanding of the observed trends.

Correlation Analysis

Correlation statistics were conducted to determine the relationship between the study variables. Below are the correlation findings of the study variables. The Pearson correlation coefficient was used to determine the association between the variables which is denotated by R (Table 3).

Table 3: Correlation Matrix between Financial Literacy Capability and Competitive Advantage

Correlations		Competitive Advantage	Financial Literacy
Competitive Advantage	R	1	
	Sig		
Financial Literacy Capability	R	.701**	1
	Sig	0.000	

** = Correlation is significant at the 0.01 level (2-tailed).
R= Pearson correlation coefficient
Sig = P value < 0.05

The results show that there is a very strong positive correlation (R = 0.701, p = 0.000) between competitive advantage and financial literacy capability. The r value of 0.701 indicates a value of greater than 0 which implies that financial literacy capability has a strong and linear association with competitive advantage. Firms with higher financial literacy capability tend to have a significantly greater competitive advantage. The findings also corroborate those of Resmi et al. (2021) who revealed that financial education/literacy influenced MSMEs' competitiveness. Srisusilawati et al. (2021) revealed that self-efficacy and financial literacy capability gained via business model dynamic capability had a beneficial impact on the performance of SMEs. Mwatondo and Wekesa (2019) indicated that financial knowledge and financial training had a significant and positive relationship with the financial growth of the SACCOs in Kwale County while financial attitude and financial behaviour had a significant and positive correlation with the financial growth of the SACCOs.

Regression Analysis

Regression analysis is a valuable tool for understanding and modeling relationships in data, making predictions, and gaining insights into how variables interact. It is a foundational technique in statistics and data analysis that is used in a wide range of applications across diverse fields. Regression analysis was conducted to explain and indicate the extent of change in the independent variables with regard to the change in the dependent variable as follows.

Regression Analysis for Financial Literacy

Regression analysis was employed to explain the prediction, hypothesis testing, and understanding of the strength and nature of the relationship between financial literacy capability and competitive advantage of deposit-taking savings and credit co-operative societies in Kenya as indicated in Table 4.

Table 4: Model of Fitness for Financial Literacy Capability

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.701a	0.491	0.49	0.35713

Dependent Variable: Competitive Advantage

The model of fitness results in Table 4 shows that the value of R in this model was 0.701. The R value of 0.701 indicates a strong positive relationship between financial literacy capability and competitive advantage. This suggests that as financial literacy capability within DT-SACCOs in Kenya improves, there is a significant tendency for competitive advantage to also increase. The R Square value was 0.491. This means that approximately 49.1% of the variance in competitive advantage can be explained by financial literacy capability in this model. In other words, financial literacy capability accounts for nearly 49.1% of the observed variability in competitive advantage among DT-SACCOs in Kenya.

This is a substantial proportion, suggesting that financial literacy capability is a significant predictor of competitive advantage in this context.

The model fitness results demonstrate a robust and positive relationship between financial literacy capability and competitive advantage in DT-SACCOs in Kenya. This suggests that a higher level of financial literacy capability within these organizations is associated with a substantial increase in competitive advantage. Financial literacy capability ity appears to be a significant predictor of competitive success in this context. The R Square value of 0.491 indicates that financial literacy capability explains almost half of the observed variability in competitive advantage. This is a substantial proportion and highlights the importance of financial knowledge and awareness in influencing the competitive position of DT-SACCOs.

Table 5: ANOVA for Financial Literacy Capability

	Sum of Squares	df	Mean Square	F	Sig.
Regression	85.397	1	85.397	669.555	.000b
Residual	88.515	694	0.128		
Total	173.912	695			

Dependent Variable: Competitive Advantage

Likewise, ANOVA was used to test for variations in means/averages using variance to discover if there was a statistically significant variation between financial literacy capability and competitive advantage of deposit-taking savings and credit co-operative societies in Kenya. The model was statistically significant as supported by a significant $F_{statistic} = 669.555 > F_{critical} = 3.841$ (1, 694). Given that the p-value (p = 0.000) was less than 0.05, the results confirmed the statistical significance of the model.

Table 6: Regression of Coefficients for Financial Literacy Capability

Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	β	Std. Error	Beta		
(Constant)	1.147	0.109		10.481	0.000
Financial Literacy	0.720	0.028	0.701	25.876	0.000

Dependent Variable: Competitive Advantage

The regression of coefficients in Table 6 shows that financial literacy capability had a positive and significant effect on competitive advantage of deposit-taking savings and credit co-operative societies in Kenya (**β**=0.720, p=0.000). This implies that positive changes in 1 unit of the aspects related to financial literacy capability leads to a positive change in competitive advantage of deposit-taking savings and credit co-operative societies in Kenya by 0.720 units (vice versa is also true).

The findings underscore the critical role of financial literacy capability in enhancing the competitive advantage of DT-SACCOs in Kenya. Effective implementation of financial literacy leads to improved efficiency, customer satisfaction, and strategic market positioning. The results align with previous research, such as Kiruthu et al. (2019) and Tumwine, Mbabazize, and Shukla (2015), highlighting the benefits of financial education in improving financial behaviors among SACCO members. Mauerman and Randall (2018) also noted that financial literacy reduces suboptimal financial behaviors. Moreover, Machira (2017) and Sum and Memba (2016) found that financial literacy capability significantly impacts the financial performance of SACCOs, further emphasizing its importance for sustaining competitiveness.

The univariate theoretical model: $\boldsymbol{y = \beta_0 + \beta_3 x_3 + \varepsilon}$ is thus represented into the following empirical model:

Y = 1.147 + 0.720X

Where;

Y = Competitive Advantage

X = Financial Literacy Capability

ε= Error Term

Hypothesis Testing

The hypothesis was tested from the regression model output where the acceptance/rejection format was that, if the p-value is less than 0.05, the H_{01} is not accepted also if the p-value is less than 0.05, the H_{a1} is accepted. The results are presented in Table 7.

Table 7: Hypotheses Test Results

Research objective	Tested Hypothesis	Rule	P-value	T value	Results of the hypothesis
To explore the effect of financial literacy capability on the competitive advantage of deposit-taking savings and credit co-operative societies in Kenya	**H_A:** There is a statistically significant relationship between financial literacy capability and the competitive advantage of deposit-taking savings and credit co-operative societies in Kenya	Reject **H_{01}** if p value < 0.05 and if t-value> 1.96	0.000	25.876	Accepted

The study also hypothesized that there is a statistically significant relationship between financial literacy capability and the competitive advantage of DT-SACCOs in Kenya. The hypothesis was accepted with a p-value of 0.000. This implies that financial literacy capability has a statistically significant and positive influence on the competitive advantage of DT-SACCOs in Kenya. A well-informed understanding of financial matters contributes to competitive strength.

SUMMARY

The results show that there is a very strong positive correlation (R = 0.701, p = 0.000) between Competitive Advantage and Financial Literacy. Firms with higher financial literacy capability tend to have a significantly greater competitive advantage. The regression results also show that financial literacy capability had a positive and significant effect on competitive advantage of deposit-taking savings and credit co-operative societies in Kenya (**β**=0.720, p=0.000). This implies that changes in 1 unit of the aspects related to financial literacy capability leads to a change in competitive advantage of deposit-taking savings and credit co-operative societies in Kenya by 0.720 units (vice versa is also true).

CONCLUSION

The study concludes that financial literacy plays a pivotal role in enhancing the competitive advantage of DT-SACCOs in Kenya. By equipping management and members with the knowledge and skills necessary for informed financial decision-making, financial literacy enables organizations to manage resources efficiently, mitigate risks, and seize growth opportunities. These capabilities are crucial in sustaining competitiveness in the dynamic financial services sector. The study further underscores the importance of practices such

as maintaining sufficient capital reserves, fostering a savings culture, and emphasizing prudent financial management, all of which contribute to the organization's resilience and market position. By prioritizing financial literacy and adapting strategies to their unique contexts, DT-SACCOs can achieve long-term success and stability.

RECOMMENDATIONS

The study recommends that DT-SACCOs develop and implement comprehensive financial education programs for both staff and members, covering essential topics such as budgeting, saving, debt management, and investment options. It is recommended that DT-SACCOs offer personalized financial counseling and advisory services tailored to individual member needs, focusing on financial planning, risk management, and investment opportunities. Additionally, DT-SACCOs should collaborate with educational institutions, NGOs, and government agencies to expand financial literacy initiatives, leveraging these partnerships to reach a broader audience. Continuous assessment of financial literacy levels among staff and members is essential, with feedback and assessments used to refine and enhance these programs over time.

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