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DATA FORECASTING STRATEGIES AND COMPETITIVE ADVANTAGE OF SAVINGS AND CREDIT COOPERATIVE SOCIETIES IN NAIROBI CITY COUNTY, KENYA

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Abstract

Cooperative societies contribute in excess of 7% to the Gross Domestic Product of Kenya and provide employment opportunities to over 250,000 people around the country. However, corporate societies are experiencing growing competition, regulatory restrictions, and changing client expectations, all of which are driving the need to discover new methods to improve their competitive advantage. As such, SACCOs have adopted data forecasting strategies to facilitate the analysis, and presentation of business information to support decision-making and strategic planning. Nonetheless, despite the adoption of data forecasting strategies, the competitive advantage of SACCOs in Kenya has been declining. This study therefore sought to examine the influence of data forecasting strategies on competitive advantage of Savings and Credit Cooperative Societies in Kenya. The study adopted a descriptive research design. The target population was 215 heads of finance, human resource, ICT, operations and customer relations departments in 43 SACCOs in Nairobi City County. The study made use of stratified random sampling in the selection of 140 sample size from the target population. The study used primary as well as secondary data. Secondary data was derived from yearly reports of different SACCOs in Nairobi City County. Primary data was obtained using semi-structured questionnaires. The questionnaires generated qualitative and quantitative data. Thematic analysis was used to analyze qualitative data and the results were presented in a narrative form. Descriptive as well as inferential statistics were employed in analyzing quantitative data with the assistance of SPSS version 25 statistical software. Descriptive statistics comprised of frequency distribution, percentages, standard deviation and mean. Inferential data analysis was carried out using Pearson correlation coefficient and linear regression analysis. The study found that data forecasting strategies have a positive and significant effect on competitive advantage of Savings and Credit Cooperative Societies in Nairobi City County, Kenya. The study recommends that SACCOs should invest in advanced data forecasting tools and technologies that can provide accurate and reliable predictions.

Key Words: Data Forecasting Strategies, Competitive Advantage; Savings and Credit Cooperative Societies

Introduction

Cooperative societies play an important role in economic empowerment, especially among marginalized groups. By pooling resources, cooperative societies can grant access to credit, finance, and other resources which may not be available to individuals (Umoh, Udoh & Inwang, 2023). However, cooperative societies have been experiencing challenges related to the changing business environment, regulatory restrictions, increasing customer demands and competition from other financial institutions including banks. Savings and Credit Cooperative Organizations (SACCOs) may experience a declining competitive advantage due to various factors. In addition, the financial services industry is highly competitive, and SACCOs face competition from banks, microfinance institutions, online lenders, and other financial service providers (Thuo, 2021). If SACCOs do not differentiate themselves effectively or offer unique value propositions, they may lose market share to competitors who provide more attractive offerings or better customer experiences. To improve their performance, cooperative societies have adopted business intelligence systems including business forecasting strategies (Mathuva, Muthuma & Kiweu, 2016).

Data forecasting strategies are techniques used to predict future trends and outcomes based on historical data patterns. These strategies help businesses make informed decisions, anticipate market changes, optimize resource allocation, and improve overall operational efficiency (Rikwentishe, Jato & Paul, 2022). Forecasting customer demand is essential for inventory management, production planning, and resource allocation. By examining previous sales information, trends in the market, and other important variables, business intelligence systems can produce accurate demand predictions (Moayer, 2016). The study conceptualized demand forecasting strategies in terms of historical data analysis strategies, trend projection strategies and predictive modeling strategies.

Demand forecasting is the process of predicting future customer demand for a product or service. It is a critical component of supply chain management and business planning. Accurate demand forecasting helps businesses maintain the right level of inventory (Rikwentishe, Jato & Paul, 2022). Overstocking ties up capital and can lead to storage costs, while understocking can result in stockouts and lost sales. By aligning inventory levels with anticipated demand, a business can reduce carrying costs and improve cash flow. When a business consistently meets customer demand, it enhances customer satisfaction and loyalty (Otmane & Horst, 2019). Accurate demand forecasting ensures that products are available when customers want them, leading to positive customer experiences and repeat business. Efficient supply chain management, driven by accurate demand forecasting, can lead to cost reduction (Paulino, 2022). Reduced carrying costs, better use of resources, and minimized wastage can all contribute to cost savings. When a business can predict demand accurately, it can optimize pricing strategies (Kusmantini, Mardiana & Pramudita, 2021).

In Turkey, Ozturk, Unal and Kilinç (2021) established that data forecasting strategies positively affects competitive advantage. Data forecasting strategies provide organizations in Turkey with access to data from various sources, allowing them to use the forecast information to make informed decisions. In Iran, Eidizadeh, Salehzadeh and Chitsaz (2017) observed that data forecasting strategies positively and significantly affects knowledge exchange, organizational creativity, and acquiring a competitive edge. In Nigeria, Umoh, Udoh and Inwang (2022) found that data forecasting strategies significantly affect competitive advantage of hotels in Akwa Ibom State. In addition, Bett (2019) indicates that data forecasting strategies had an influence on organizational performance. In Kenya, Mukuche (2018) discovered that data forecasting strategies have been employed for competitive advantage by Kenyan insurance companies.

Statement of the Problem

Globally, cooperative societies play important role in development of social and national economy (Islam, 2018). Cooperative societies in Africa have been experiencing challenges in their market share as a result of increased competition from commercial banks (Effiom, 2017). Cooperative societies in Africa have recognized the value of data forecasting strategies and have started adopting data forecasting strategies to enhance their operations and decision-making processes. In Kenya, SACCOs contribute about 7% to the GDP of Kenya and offers opportunities for employment (indirectly or directly) to more than 250,000 individuals around the nation (Sacco Societies Regulatory Authority, 2021). However, cooperative societies are experiencing growing competition, regulatory restrictions, and changing client expectations, all of which are driving the need to discover new methods to improve their competiveness. As such, SACCOs have adopted data forecasting strategies to facilitate integrating and analyzing of corporate data to enable making of decision and strategic planning. Nonetheless, despite the adoption of data forecasting strategies, the competitive advantage of SACCOs in Kenya has been declining.

SACCOs in Kenya have faced difficulties with their financial performance over the past ten years. Return on assets for deposit-taking SACCOs decreased from 2.69% in 2017 to 2.40% in 2018, but increased to 3.8% in 2019 before decreasing to 3.2% in 2020 and 2.9% in 2021. In addition, between 2021 and 2023, licenses for three (3) SACCOs were suspended, licenses for twelve (12) were reaffirmed but with restrictions and two (2) SACCOs were put into liquidation (SASRA report, 2021). The vision 2030 ambitions of boosting financial inclusion are still being hindered by Sacco's poor performance. It is therefore important to evaluate impacts of data forecasting on organizational competitive advantage of Savings and Credit Cooperative Societies in Kenya.

Numerous studies have been carried out in Kenya on data forecasting strategies and organization competitive advantage. For instance, Mbugua, Wamitu and Kinyamu (2017) investigated the impact of strategic forecasting on manufacturing enterprises' performance in the Region of Central Kenya; and Chindia, Wainaina, and Kibera (2018) investigated the connections between accuracy of performance forecasting (APF), operating environment (OE) and forecasting techniques (FT) in large manufacturing enterprises in Kenya. However, the studies were limited to manufacturing firms in Kenya. This research therefore sought to examine the influence of data forecasting strategies on organization competitive advantage of Savings and Credit Cooperative Societies in Kenya.

Theoretical Review

The study was anchored on consumer behavior theory. Consumer Behavior Theory was developed by Erving Goffman. Consumer Behavior Theory seeks to explain and understand how individuals and groups make decisions regarding the acquisition, consumption, and disposal of goods and services (Amin, 2017). It explores the psychological, social, and cultural factors that influence consumer behavior. Consumer Behavior Theory focuses on the decision-making processes that customers experience when they buy something. This covers problem identification, searching for information, alternative assessment, purchase choice, and post-purchase assessment (Herrando, 2023).

Consumer Behavior Theory recognizes that consumer needs and wants drive purchasing decisions. By understanding these needs and wants, demand forecasters can anticipate consumer demand for specific products or services (Amin, 2017). Through market research, surveys, and analyzing consumer behavior data, demand forecasters can gain insights into the underlying motivations and preferences that drive consumer purchasing decisions. By analyzing consumer

attitudes and beliefs towards certain products, brands, or market trends, demand forecasters can gauge consumer interest and potential demand (Herrando, 2023).

Consumer Behavior Theory was used to provide insights into how data forecasting strategies influence the competitive advantage of SACCOs (Savings and Credit Cooperative Organizations). Consumer Behavior Theory emphasizes the importance of understanding consumer needs and wants. Data forecasting strategies can help SACCOs gain insights into the financial needs and preferences of their members. By analyzing historical data and market trends, SACCOs can identify patterns and anticipate the needs of their members, enabling them to develop tailored financial products and services that meet those needs. This understanding can give SACCOs a competitive advantage by providing solutions that align with member preferences.

Conceptual Framework

Figure 2.1 shows the relationship between independent study variable (data forecasting strategies) and dependent variable (organizational competitive advantage).

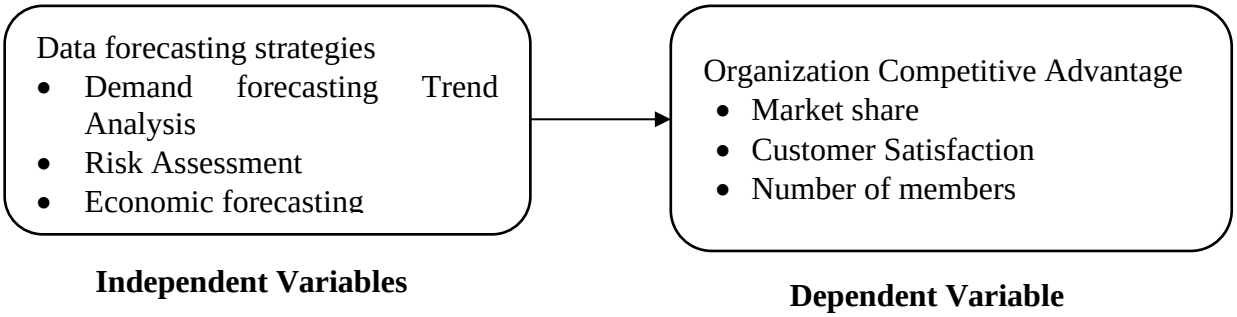

Figure 1: Conceptual Framework

Empirical Review

In Italy, Danese and Kalchschmidt (2019) evaluated effect of forecasting on firms' performance. The research employed a descriptive design. Information was gathered from a sample of 343 manufacturing companies in 6 different countries. The findings showed that forecasting positively influenced performance of firms in Italy. The results revealed the presence of positive interactions between the gathering and application of market data and the other forecasting factors as well as the presence of negative interaction impact between the implementation of forecasting methods and the usage of forecasts in various processes of decision-making.

In Nigeria, Iheanacho (2020) evaluated impact of forecasting on performance of organizations. Enugu's Eastern Shop served as a case study. Data was presented using tables, charts, percentages and frequencies, whereas Chi-square Tests of independence and association was involved in examining statistical significance of null hypothesis. The outcomes revealed that information is a useful instrument for forecasting, forecasting influences organizational profitability, and forecasting and turnover in Eastern Shop Enugu differ significantly.

Mbugua, Wamitu and Kinyamu (2017) investigated the impact of strategic forecasting on manufacturing enterprises' performance in the Region of Central Kenya. Research employed a descriptive design. The research employed questionnaires as an instrument for gathering information. Total of 110 questionnaires were given to the sampled respondents in the research, and 82% of them responded. The research found that the performance of manufacturing enterprises in central Kenya is significantly impacted by business trends. This was due to the fact

that factors related to business trends, such as management's ability to analyze trends, company image, sales patterns, and advancements in technology trends, had a significant impact on firm performance. Seasonal patterns impact business performance. The study makes the suggestion that manufacturing company employees need to be made more aware of the strategic objectives in connection to forecasting.

Chindia, Wainaina, and Kibera (2018) investigated the connections between accuracy of performance forecasting (APF), operating environment (OE) and forecasting techniques (FT) in large manufacturing enterprises in Kenya. Empirical testing of the model was conducted after gathering information employing structured questionnaire distributed between randomly chosen in Kenyan large manufacturing firms (LMF). Empirical findings revealed that FT and EOE together have a significant impact on APF. On the other hand, the IOE's impact on APF was minimal. Furthermore, relative to the internal operating environment (IOE), the impact of the EOE explained a greater variation in APF.

Research Methodology

The research adopted a descriptive design. The unit of analysis in this research was 43 Saccos in County of Nairobi City as indicated by Sacco Societies Regulatory Authority (2021). The unit of observation was heads of finance, human resource, ICT, operations and customer relations departments. The target population was 215 heads of finance, human resource, ICT, operations and customer relations departments in 43 Saccos in Nairobi City County.

The sample size for this research will be determined using Slovin's Formula. Slovin's Formula is a statistical formula used in survey research to determine the sample size required for a survey, especially when the population size is very large and the desired margin of error (sampling error) is known. Therefore, the research employed 95% level of confidence and 0.05 margin of error.

$$n = \frac{N}{1 + NE^2}$$

Where by: n = no. of samples; N = total population; E = error margin / margin of error (0.05)

$$n = \frac{215}{1 + (215 * 0.05^2)} = 140$$

The study employed stratified random sampling in choosing of sample size from population targeted. The strata in the study include finance, human resource, ICT, operations and customer relations departments. This method enables more precise and trustworthy inferences about total population as well as within particular subgroups. The stratified random sampling method was employed in this research since it minimizes biasness in selection.

Table 1: Sample Size

Departments	Large-Tier	Mid-Tier	Small-Tier	Total
Finance	4	10	14	28
Human Resource	4	10	14	28
ICT	4	10	14	28
Operations	4	10	14	28
Customer Relations	4	10	14	28
Total	**20**	**50**	**70**	**140**

The research employed primary as well as secondary data. Secondary data was derived from yearly reports of different SACCOs in County of Nairobi City. Primary data was obtained employing semi-structured questionnaires. A pilot study was conducted in order to ensure

reliability and validity of research instrument. The pilot group was obtained from SACCOs in Kiambu County. Kiambu County will be chosen because it is close to the County of Nairobi City. The pilot group was made up of 10% of sample size (14). However, pilot group was not part of the primary investigation. Content validity was enhanced through opinion seeking from individuals' with expertise in the field of this study, mainly the supervisors. Face validity was also enhanced by carrying out a pilot test and changing any unclear or ambiguous questions. The study used KMO & Bartlet test to measure construct validity of research tool. Reliability of a research instrument was assessed using Cronbach's alpha. A Cronbach's alpha of 0.7 and above was regarded acceptable.

Questionnaires produced both qualitative and quantitative data. Qualitative data was analyzed using thematic analysis, and the findings were presented narratively. Descriptive and inferential statistics were involved in analyzing quantitative data with help of SPSS version 25 statistical software. Descriptive statistics comprised of frequency distribution, percentages, standard deviation and mean. Inferential data analysis was carried out using linear regression analysis. The linear regression model was as follows;

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Whereby; Y = organization competitive advantage; B_0 = Constant; β_1 =Coefficients of determination; X_1 = Data forecasting strategies; and ε = Error term

Research Findings and Discussions

The sample size of this study was 140 heads of finance, human resource, ICT, operations and customer relations departments in 43 Saccos in Nairobi City County. Out of the 140 questionnaires that were distributed, 125 questionnaires were dully filled and returned to the researcher hence providing a response rate of 89.29%. Krishna (2020) suggests that 75 percent response rate is adequate for data analysis, drawing conclusions as well as making recommendation. This denotes that 89.29% response rate was adequate for data analysis.

Demographic Information

Demographic information refers to data and characteristics related to the population or a specific group of people. The demographic information of the respondents in this study include their gender, age bracket, highest level of education and work experience.

Gender of the Respondents

The respondents were requested to indicate their gender. The results were as presented in Figure 2. As shown in Figure 1, 57.6% of the respondents indicated that they were male and 42.4% indicated that they were female. From the findings, most of the heads of finance, human resource, ICT, operations and customer relations departments in Saccos in Nairobi City County were male. This observation highlights a slight gender imbalance or disparity in leadership roles within these Saccos.

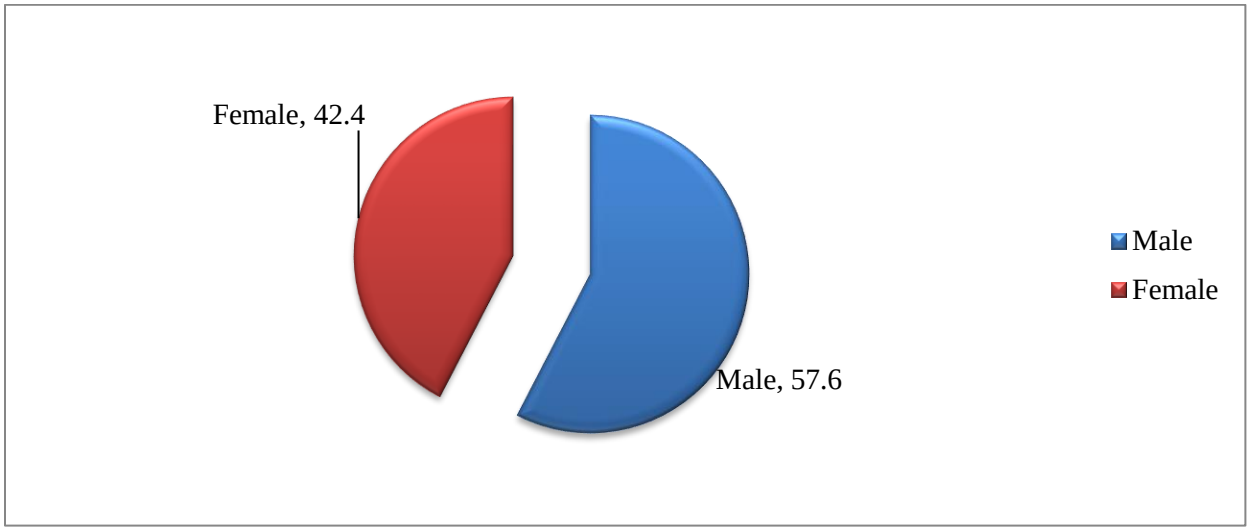

Figure 2: Gender of the Respondents

Age Bracket of the Respondents

The respondents were requested to indicate their gender bracket. The results were as presented in Figure 3. From the findings, 63.2% of the respondents indicated that they were aged between 31 and 40 years, 24% indicated that they were aged between 41 and 59 years and 12.8% indicated that they were aged between 20 and 30 years. These findings imply that most of the heads of finance, human resource, ICT, operations and customer relations departments in Saccos in Nairobi City County were aged between 31 and 40 years.

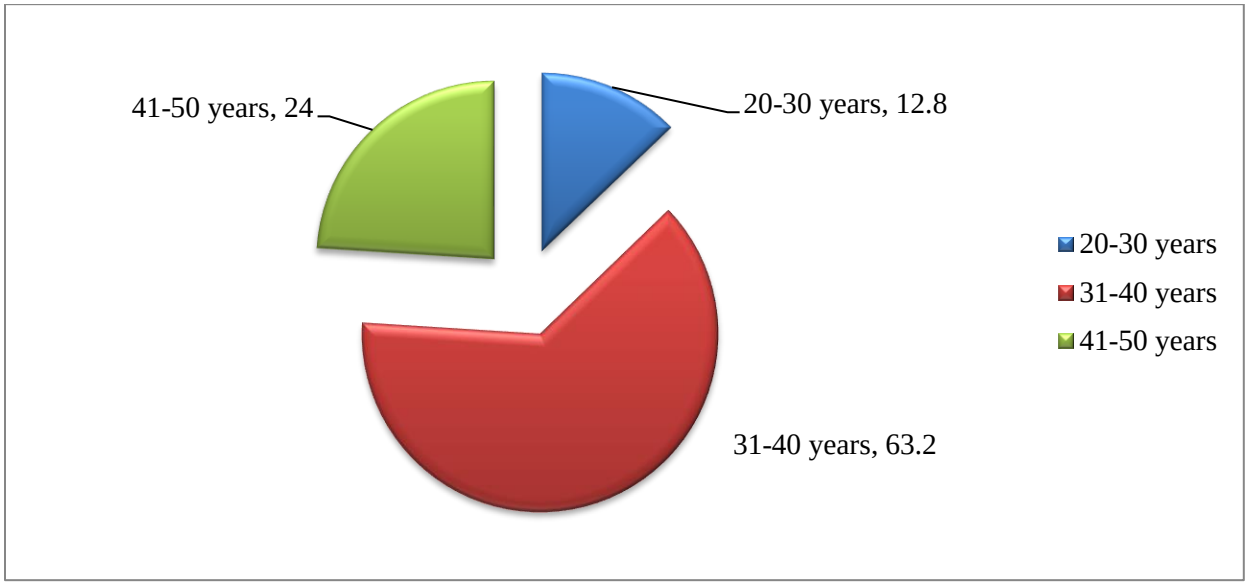

Figure 3: Age Bracket of the Respondents

Highest Level of Education of the Respondents

The respondents were further asked to indicate their highest level of education. The results were as presented in Figure 4. From the findings, 66.4% of the respondents indicated that they had undergraduate degrees as their highest level of education, 18.4% indicated that they had masters degrees and 15.2% indicated that they had diplomas. These findings show that most of the heads of finance, human resource, ICT, operations and customer relations departments in Saccos in Nairobi City County had undergraduate degrees as their highest level of education.

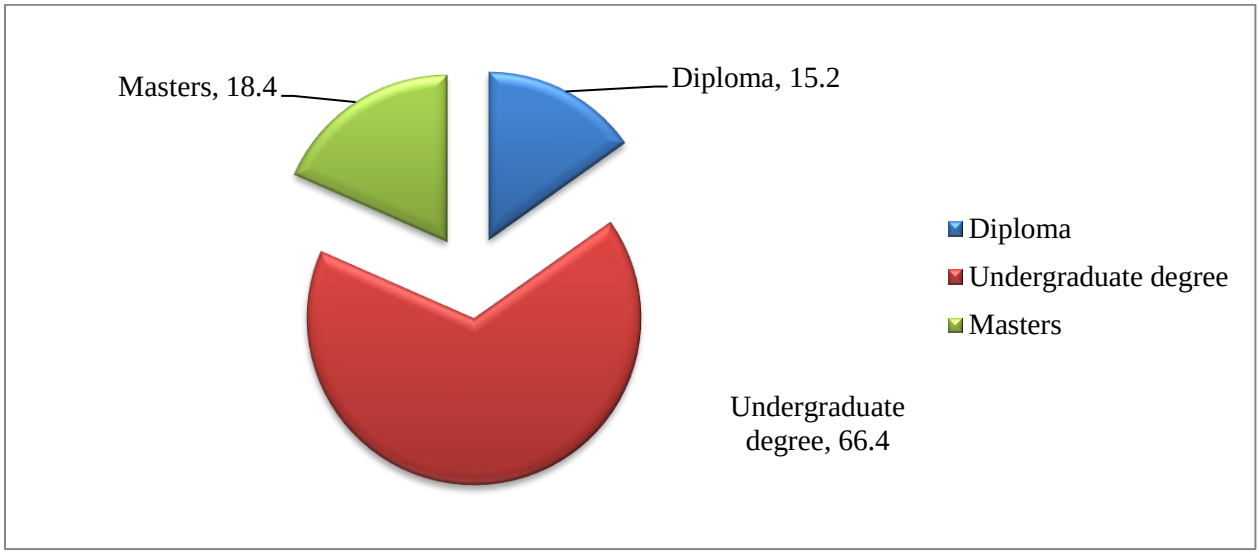

Figure 4: Highest Level of Education of the Respondents

Work Experience of the Respondents

The respondents were requested to indicate the duration of time their organization had been in their organization. The results were as shown in Figure 5. From the findings, 42.4% indicated that they had worked in their organizations for between 5 and 7 years, 28.8% indicated for between 8 and 10 years, 21.6% indicated for between 2 and 4 years while 7.2% indicated for less than 2 years. This shows that most of the heads of finance, human resource, ICT, operations and customer relations departments in Saccos in Nairobi City County had worked for their organization for between 5 and 7 years.

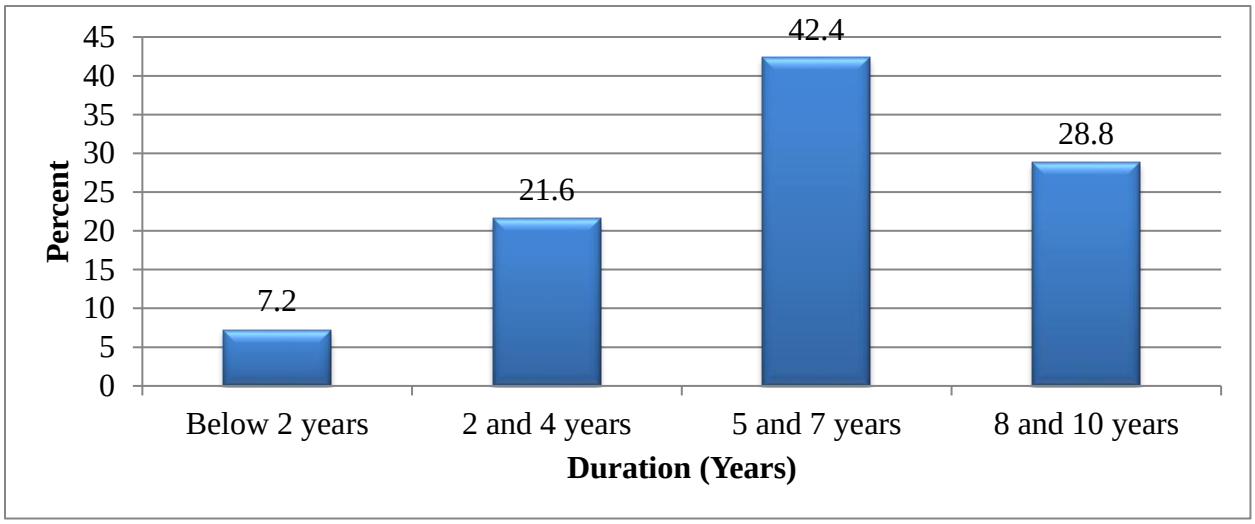

Figure 5: Work Experience of the Respondents

Descriptive Statistics

The section covers descriptive analysis of data forecasting strategies and competitive advantage of Savings and Credit Cooperative Societies. Descriptive Statistics include frequencies, percentages, mean and standard deviation.

Data Forecasting Strategies

The respondents were requested to indicate their level of agreement in relation to data forecasting strategies. The results were as shown in Table 1.

Table 2: Data Forecasting Strategies

Statements	Mean	Std. Deviation
Our organization employs advanced analytical techniques to extract valuable information from historical data.	3.848	.925
Our organization effectively identifies relevant patterns and trends using historical data analysis techniques for accurate data forecasting.	3.912	1.000
Our organization encourages a data-driven approach by utilizing historical data analysis to support decision-making at various levels.	3.760	1.080
Our organization actively applies trend projection techniques to identify growth opportunities and anticipate potential risks.	3.304	1.409
Our organization regularly evaluates and updates trend projection models to ensure their accuracy and relevance.	4.304	1.086
Our organization employs robust statistical methods and models for trend identification and analysis.	4.168	1.045
Our organization employs advanced statistical and machine learning algorithms to build predictive models.	2.424	1.336
Our organization conducts thorough model validation and performance assessment to ensure the quality	3.464	1.160
Our organization utilizes cross-validation techniques to assess the generalizability of predictive models.	3.528	1.298

The respondents agreed with a mean of 4.304 (SD=1.086) that their organizations regularly evaluate and update trend projection models to ensure their accuracy and relevance. In addition, the respondents agreed with a mean of 4.168 (SD=1.045) that their organizations employ robust statistical methods and models for trend identification and analysis. Also, the respondents agreed with a mean of 3.912 (SD=1.000) that their organizations effectively identify relevant patterns and trends using historical data analysis techniques for accurate data forecasting. With a mean of 3.848 (SD=0.925) the respondents agreed that their organizations employ advanced analytical techniques to extract valuable information from historical data.

The respondents also agreed with a mean of 3.760 (SD=1.080) that their organizations encourage a data-driven approach by utilizing historical data analysis to support decision-making at various levels. Also, the respondents agreed with a mean of 3.528 (SD=1.298) that their organizations utilize cross-validation techniques to assess the generalizability of predictive models. The respondents agreed with a mean of 3.464 (SD=1.160) that their organizations conduct thorough model validation and performance assessment to ensure the quality. In addition, they indicated with a mean of 3.304 (SD=1.409) that their organizations actively apply trend projection techniques to identify growth opportunities and anticipate potential risks. Further, the respondents agreed with a mean of 2.424 (SD=1.336) that their organizations employ advanced statistical and machine learning algorithms to build predictive models.

The respondents were requested to indicate strategies that had been adopted by the organizations in data forecasting. From the findings, the respondents indicated that SACCOs often use time series analysis to forecast financial variables such as member savings, loan disbursements, and delinquency rates. This involves analyzing historical data to identify patterns and trends over time. In addition, the respondents indicated that data forecasting is crucial in assessing credit risk. SACCOs use historical loan repayment data, credit scores, and other financial indicators to

predict the likelihood of loan default for individual members. The respondents also indicated that forecasting models can predict member growth and identify members at risk of leaving the SACCO. This information helps in retention strategies and resource planning. Further, the respondents indicated that SACCOs employ forecasting to manage their loan portfolios. They forecast loan demand, assess the performance of existing loans, and plan for loan disbursements accordingly. In addition, forecasting cash flows is crucial for managing liquidity and ensuring that SACCOs have sufficient funds to meet member withdrawals and operational expenses. Also, the respondents indicated that SACCOs use data forecasting to predict interest rate movements, helping them make decisions regarding loan and deposit interest rates.

The findings concur with Mbugua, Wamitu and Kinyamu (2017) findings that strategic forecasting has a significant effect on manufacturing enterprises' performance in the Region of Central Kenya. These findings also concur with Danese and Kalchschmidt (2019) observation that firms make use of statistical methods and models to identify and analyze trends, which in turn improved performance. These findings are also in line with Iheanacho (2020) findings that firms make use of advanced analytical techniques to extract valuable information from available data, which help in improving performance.

The findings are in agreement with Chindia, Wainaina, and Kibera (2018) findings that organizations conduct thorough model validation and performance assessment processes to ensure the quality, accuracy, and reliability of their predictive models, machine learning algorithms, and analytical tools. The findings are also in agreement with Chindia, Wainaina, and Kibera (2018) findings that organizations conduct thorough model validation and performance assessment processes to improve organizational performance.

Competitive Advantage

The dependent variable in this study was competitive advantage of Savings and Credit Cooperative Societies in Nairobi City County, which was measured in terms of market share, customer Satisfaction and number of members. From the results, as shown in Figure 6, the average market share among Savings and Credit Cooperative Societies in Nairobi City County was 12.10% in 2018, which increased to 13.64% in 2019, decreased to 12.54% in 2020, 11.89% in 2021 and 10.91% in 2022. The findings agree with SASRA (2021) report that indicates that market share among SACCOs in Kenya has been declining due to competition from financial institutions.

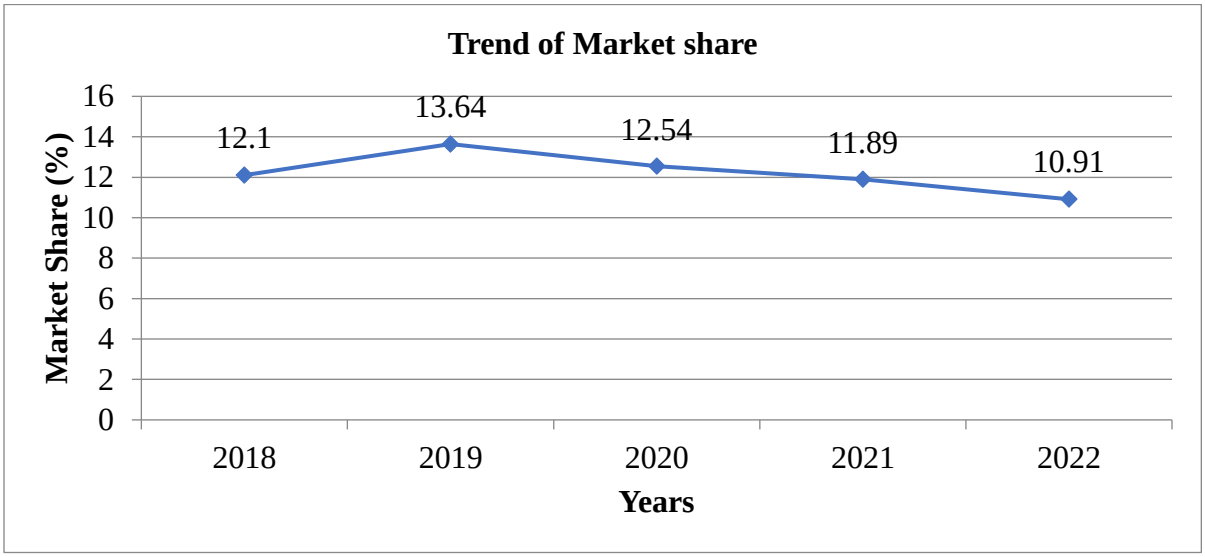

Figure 6: Trend of Market share

As shown in Figure 7, the average customer satisfaction among Savings and Credit Cooperative Societies in Nairobi City County was 75.53% in 2018, which increased to 79.62% in 2019, increased to 81.58% in 2020, decreased to 78.06% in 2021, but increased to 79.74% in 2022.

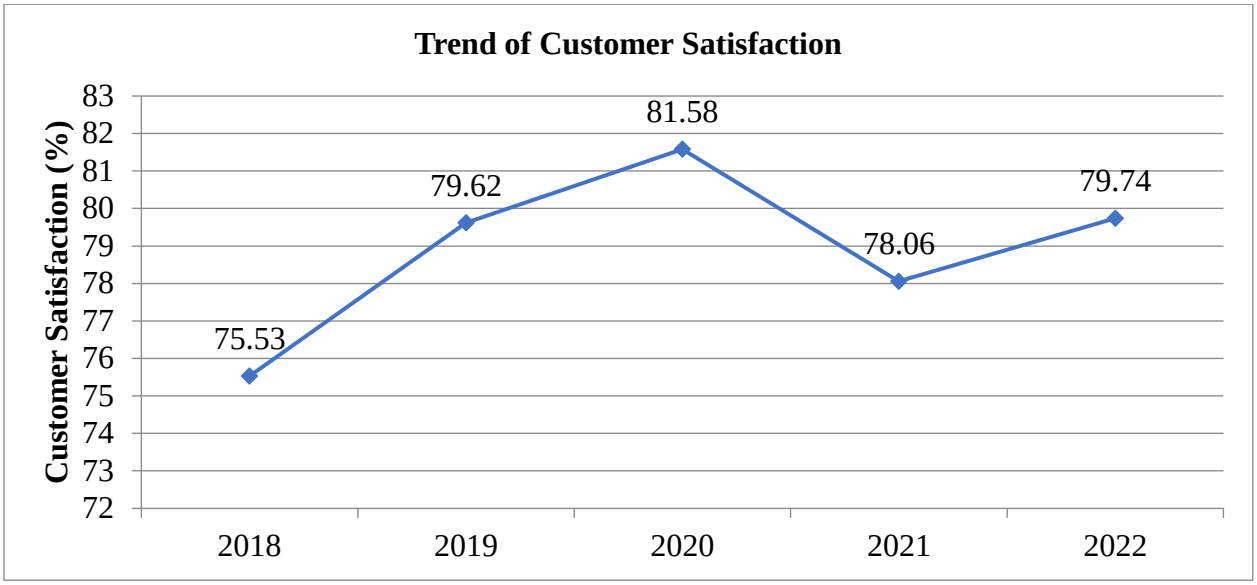

Figure 7: Trend of Customer Satisfaction

As shown in Figure 8, the average change membership percentage was 12.05% in 2018, which increased to 13.20% in 2019, increased to 13.25% in 2020, decreased to 10.70% in 2021 and 9.95% in 2022.

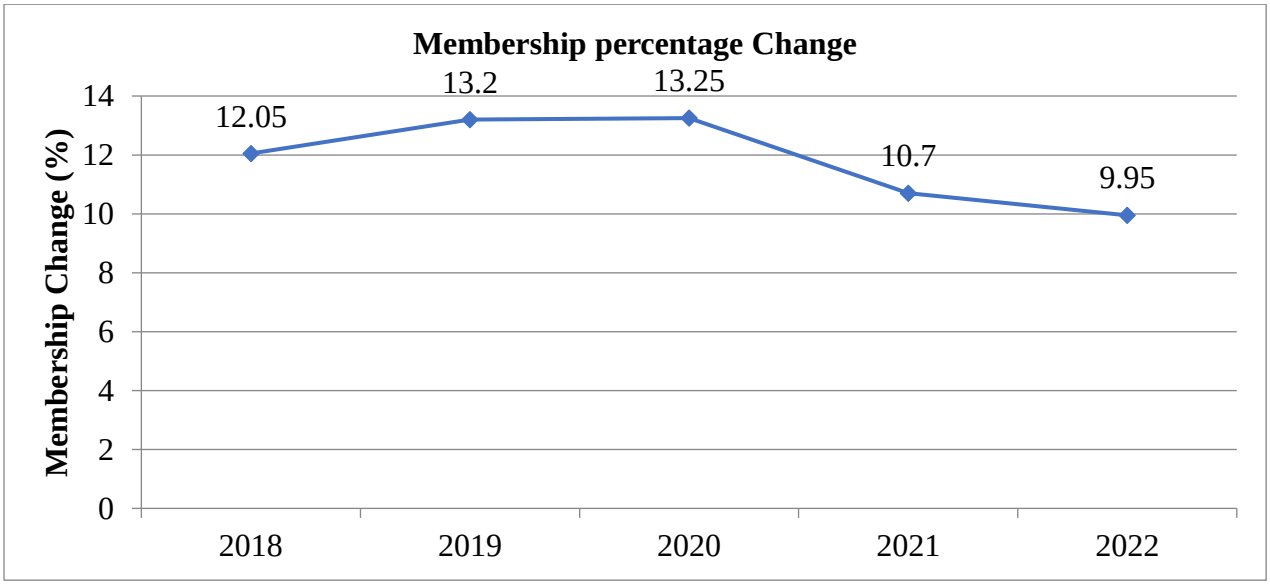

Figure 8: Trend of Membership

Inferential Statistics

Linear regression analysis is a statistical method used to model and analyze the relationship between a dependent variable and an independent variable. Linear regression analysis was carried out to examine the relationship between independent variable (data forecasting strategies) and dependent variable (competitive advantage). As depicted in Table 2, R-squared for the relationship between data forecasting strategies and competitive advantage was 0.279 which

means that 27.9% of the variation of dependent variable (competitive advantage) was explained by independent variables (data forecasting strategies).

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.528a	0.279	0.259	0.17568

a. Predictors: (Constant), Data forecasting strategies

In this study, the ANOVA was performed to determine if the model was good fit for the data. As shown in Table 3, the F-calculated was 249.885 and the F-critical from the F-distribution table was 3.94. Because the F-calculated was greater than F-critical and the p-value (0.000) was not more than the significance level (0.05), the model was considered to be a good fit for the data.

Table 3: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.525	1	7.525	249.885	.000[b]
	Residual	3.704	123	0.030		
	Total	11.229	124			

a. Dependent Variable: Competitive advantage
b. Predictors: (Constant), Data forecasting strategies

Regression equation for the unstandardized coefficients was;

$Y = 1.616 + 0.784X_1$

The study found that data forecasting strategies has a positive and significant effect on competitive advantage of Savings and Credit Cooperative Societies in Nairobi City County, Kenya (β_1=0.784, p-value=0.000). P-value (0.000) was less than 0.05 (significant level) and hence the effect was considered to be significant. This denotes that an improvement in data forecasting strategies would lead to 0.784 improvement in competitive advantage of Savings and Credit Cooperative Societies in Nairobi City County. These findings are in agreement with Chindia, Wainaina, and Kibera (2018) findings that accuracy of performance forecasting (APF) has a significant effect on performance of large manufacturing enterprises in Kenya. The findings also concur with Mbugua, Wamitu and Kinyamu (2017) findings that strategic forecasting has a significant effect on manufacturing enterprises' performance in the Region of Central Kenya.

Table 4: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.616	0.293		5.515	0.000
	Data forecasting strategies	0.784	0.175	0.884	4.480	0.000

a. Dependent Variable: Competitive advantage

Conclusions

The study concludes that data forecasting strategies have a positive and significant effect on competitive advantage of Savings and Credit Cooperative Societies in Nairobi City County, Kenya. The study revealed that demand forecasting trend analysis, risk assessment and economic forecasting, as data forecasting strategies, have an effect on competitive advantage of Savings and Credit Cooperative Societies. These findings imply that an improvement in data reporting

strategies would lead to an improvement in the competitive advantage of Savings and Credit Cooperative Societies in Nairobi City County, Kenya.

Recommendations

The study established that data forecasting strategies have a positive and significant effect on competitive advantage of SACCOs in Nairobi City County, Kenya. The study recommends that SACCOs should invest in advanced data forecasting tools and technologies that can provide accurate and reliable predictions. These tools may include machine learning algorithms, predictive analytics software, and data visualization platforms. In addition, they should conduct regular demand forecasting trend analysis to anticipate member needs and preferences. SACCOs should use historical data and market research to identify emerging trends in financial services and adapt their offerings accordingly.

Areas for Further Research

The study sought to examine the influence of data forecasting strategies on competitive advantage of SACCOs in Nairobi City County. Having been limited to SACCOs in Nairobi City County, the findings of this study cannot be generalized to SACCOs in other counties in Kenya as well as in other financial institutions. This study suggests that further studies should be conducted on the influence of data forecasting strategies on competitive advantage of SACCOs in other Counties in Kenya. Also, further studies should be conducted on the influence of data forecasting strategies on competitive advantage of other firms in Kenya including financial institutions, insurance companies and manufacturing firms among others. The findings indicated that data forecasting strategies explain 27.9% of competitive advantage in SACCOs. Therefore, further studies should be conducted on other factors influencing the competitive advantage of SACCOs in Nairobi City County.

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