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The Relationship of Investment Decisions of Cooperatives on Financial Performance

Arvee Gaye Trinidad-Badua

Saint Louis University

rvt.badua@gmail.com

Abstract

Cooperatives identify as significant contributors to socioeconomic progress. This paper looks into the impact of investment decisions on the financial performance of cooperatives as a determinant of sustainability. The study focuses on the different investment vehicles adopted by cooperatives as a means of capital accumulation and their impact on financial performance indicators. A descriptive and correlational design was applied to time-series secondary data from 2015-2019, examining 30 cooperatives across all types and categories. Results of the study show that cooperatives invested more in financial assets-current, financial assets-non-current, and investment property. While investment types adopted are varied, investing was both erratic and increased activity in cooperatives.

Further, investments had a weak and insignificant impact on cooperatives' financial performance measured by Return on Assets and Equity. The study implies that a foundational level of investment knowledge should be developed to help stakeholders comprehend how the cooperative might generate income from investments. To go beyond the traditional horizons of cooperative operations and influence the creation of investment plans and strategies to generate additional equity for shareholders.

Keywords: *Cooperatives, Investments, Financial Performance, Return on Equity*

Introduction

About 3 million cooperatives worldwide provide work opportunities to 10% of the population. World Cooperative Monitor (2020) data show that the 300 largest cooperatives generated 2,034.98 billion USD in turnover while providing daily goods, services, and infrastructure supporting communities. The International Cooperative Alliance (ICA) reports that cooperatives contribute to sustainable economic growth and stable, quality employment, providing jobs or work opportunities to 280 million people across the globe employed population. In 2015, the International Cooperative and Mutual Insurance Federation (ICMIF) launched the ICMIF 5-5-5 Mutual Microinsurance Strategy, which aims to insure 5 million lives over five years in five countries: Columbia, India, Kenya, Philippines, and Sri Lanka. The goal is to support low-income households to overcome poverty and to build resilient communities against disasters. The cooperative sector has contributed to mitigating and adapting to climate change and creating a greener society per the Sustainable Development Goal (SDG) 13 Climate Action, set by the United Nations in 2015 (World Cooperative Monitor, 2020). The ICA cites Rede CataSampa, a network of 22 cooperatives and workers, which collects recyclables to make biodiesel and other products whose network brings together over 1,200 waste pickers cooperatives and associations in Brazil.

Moreover, information from the World Cooperative Monitor and the ICA reports on the socioeconomic value and impact of the top 300 rankings of cooperatives based on turnover and ratio of turnover over Gross Domestic Product (GDP) per capita, an overall total of 2,146 billion USD, the reference year 2018 where half of the top 300 are producer cooperatives representing agricultural cooperatives and retailer cooperatives. Most large cooperatives in the rankings are from industrialized countries: the USA, France, Germany, Japan, Netherlands, and Italy. The

cooperative movement in the Philippines boasts 429.7 billion in assets, 18.6 billion in net surpluses, 10.7 million solid memberships, and contributes 580.8 thousand in employment. Eighteen thousand five hundred eighty-one (18,581) cooperatives are operating in the country as of 2019. With many significant contributions to persons and communities, the United Nations (UN) is correct to place its hope in the cooperative model as an engine of sustainability (Dale et al., 2013).

In the Philippines, the 1987 Constitution recognizes the role and importance of cooperatives in promoting equity, social justice, and economic development. The Cooperative Code of 2008 enabled cooperatives to operate and pursue their objectives. After a century, cooperatives flourished in banking, credit, transportation, electric distribution, production, agriculture, education, and labor. The Philippine Development Plan (n.d) explicitly mentions that cooperatives are expected to create rapid, inclusive, sustained economic growth, financial inclusion, and poverty reduction.

This study focuses on cooperatives in the Cordillera Administrative Region (CAR). Based on the Cooperative Development Authority (CDA) reports, 539 registered cooperatives in CAR as of 2019. Cooperatives in CAR are exposed to the challenges of building wealth through the accumulation of capital, which is attributable to adopted investment approaches. The challenge is to overcome investment decision obstacles because it is critical in realizing the role of the cooperative sector in nation-building. It reflects that investment decisions in the cooperative setting are relevant in optimizing the member-stockholders' wealth and maintaining sustainable operations. However, most research on cooperatives focuses on operations, management, and governance.

Cooperatives are unique in their purpose since they contribute to socioeconomic

development. Like other business firms, cooperatives make investment decisions to sustain their operation and improve their financial performance. They can pursue their purposes and aspirations as they achieve their expected financial performance. Hence, they can create a socioeconomic impact that benefits the members and community. Investments for cooperatives involve combining traditional investment approaches with environmental, social, and governance insights and investors ranging from global institutions to cooperatives in pursuing investment goals.

Cooperatives identify as significant contributors to socioeconomic progress. This paper aims to look at the impact of investment decisions on the financial performance of cooperatives to determine if investment decisions stimulate the sustainability of cooperative operations. Presumably, cooperative management's investment decisions should lead to increased growth, reduced risks, and a high survival rate. Mainly, cooperatives operate to provide goods and services to members at the most favorable conditions, more effectively and efficiently. However, concerns about their investments in long-term assets and profit-generating activity still need to be improved. While investments have proven to be a good source of income, the cooperative movement has yet to adopt such a scheme for generating equity.

The knowledge about investment vehicles and their impact on the growth of cooperatives will give a picture to policymakers and decision-makers as to the kind and quality of investments that best fit such entities. The majority of cooperatives need to go beyond the traditional horizons of operation. The recommendations from this study could influence the creation of investment plans and strategies to generate equity for shareholders. The findings from this study aim to create a basic level of awareness for members and management and help stakeholders understand the circumstances under which cooperatives operate and generate income from investments.

Objectives of the study

The study assesses investments' impact on cooperatives' financial performance in the Philippines' Cordillera Administrative Region (CAR). The specific objectives are:

- To investigate the different investment types that cooperatives capitalize on based on the Standard Chart of Accounts investment titles in RA 9520, enumerated as:
  (1) Financial Assets-current;
  (2) Financial Assets – non-current, Investment in Subsidiary, Investment in Joint Venture, and Investment Property.
- To determine the change in the investment types of cooperatives.
- To determine the effect of investment types of cooperatives on the identifiable financial performance indicators, namely:
  (1) Return on Equity (ROE)
  (2) Return on Assets (ROA)

Review of Related Literature

Cooperativism

According to the ICA, a cooperative is a people-centered business owned, controlled, and managed by member-owners to satisfy social, cultural, and goals. There are many different types of cooperatives in various industries, and they are created to obtain low-cost finance, buy production-related supplies, market goods, and even acquire services like irrigation, electric power, health care, and insurance.

Compared to corporations, sole proprietorships, and not-for-profit organizations, cooperatives are owned by members whose purpose is to meet member needs and services instead of generating returns on owner investment in the case of a corporation and sole

proprietorships. The issuance of shares of stock to cooperative members finances the cooperative. Rightly so, the members are at the receiving end of surpluses in proportion to capital build-up and patronage.

Cooperatives can be divided into various categories, including worker cooperatives, producer cooperatives, consumer cooperatives, credit cooperatives, electric cooperatives, cooperative banks, and multipurpose cooperatives. The cooperative structure brings individuals together in a democratic and egalitarian manner, highlighting a strong commitment to the community. Owner-members of the cooperative are the customers, employees, and residents, and they all have the same voting power. Cooperatives are unique in that surplus is reinvested in the cooperative, and a portion is returned to members as interest on share capital and patronage refunds.

The ideals for cooperative enterprises in 1844 were the Rochdale principles outlined by the Rochdale Society of Equitable Pioneers. Cooperatives all across the world continue to operate based on these ideals. The ICA approved these Rochdale principles in 1937, and the most recent revision was incorporated into the Statement on Cooperative Identity in 1966. The ICA Revision 1966 cites the following principles: open, voluntary membership; Democratic governance; limited return on equity; surplus belongs to members; autonomy and independence; education of members and public in cooperative principles; cooperation between cooperatives. Voluntary and open membership means that the cooperative is open to all persons, without discrimination, who are willing to accept membership responsibilities and commit to patronizing available resources. Democratic member control refers to the active participation of members in policy and decision-making. Member economic participation emphasizes members' participation through democratic and equitable capital contribution, where such capital remains the

cooperative property and is not redistributed to its members. Members usually receive limited compensations on capital subscribed as part of the cooperative's capital is common property. Surpluses are allocated to set up reserves and develop cooperatives, patronage, and other relevant activities. The autonomy and independence principle pertains to cooperatives as self-help organizations controlled by members who can engage and enter into agreements with other organizations or raise capital from external sources. The education, training, and information principle states that cooperatives must provide education and training to members and the public to develop the cooperative and educate people about its mission and operations. Cooperation among cooperatives refers to the relationship among cooperatives to work together in improving and developing sustainable communities.

Because they counterbalance power and lessen economic concentration, cooperatives are still important today. In the truest sense, cooperatives are dependable, inclusive businesses that make goods and services available to communities and foster shared prosperity in economies. Cooperative values are demonstrated in the goods and services provided, which also fosters community involvement and employment in nearby areas, all of which contribute to the development and expansion of economies.

Investments and Investment Decisions in the cooperative context

In the efforts to grow, cooperatives are making investments to sustain operations. Reilly and Keith (1997) define investments as a commitment of funds for a given period to generate future payments that will compensate the investor for time value, expected rate of inflation, and uncertainty of future payments. Investment is generally defined as an asset owned or controlled by an investor, directly or indirectly, that has the characteristics of the commitment of capital or other resources, the anticipation of gain or profit, or the assumption of threat (Puaha & Tilly,

2003). Investments are assets acquired in anticipation of future returns and wealth acquisition plus a premium to cover inflation, risk, and interests forgone. An investment is directed towards more significant pay-offs in the future than what was initially spent for it. It can refer to any mechanism used to generate future income and come in many forms, such as bonds, stocks, or real property. Because investing is oriented toward future potential growth and income, it is always associated with a certain level of risk. An investment can be characterized by safety, income, and capital growth. By this definition, the process involves both value preservation and generation.

Cooperatives support savings as one of the critical features of the structure. Compared to investments, savings are monies from income set aside for future use and are often accumulated to anticipate unexpected and sudden expenses and money requirements. On the other hand, investment involves using funds to generate gains over a period and is typically made to help build more capital. Unlike savings, investment involves a potential risk of losing money, with a comparatively lower risk of loss.

Memorandum Circular (2016).-06 of the CDA, entitled Revised Standard Chart of Accounts for Cooperatives, took effect on November 2, 2016. The chart identifies account titles explicitly related to investments and will determine the financial impact of investments on returns. Table 1 shows the investment account titles used in the study.

Table 1

Account titles relating to investments

Account Code	Account Title	Definition
11400	Financial assets	These are financial instruments excluding cash and cash equivalents, loans and receivables, Investment in associates, Investment in joint ventures, and investments in subsidiaries
13100	Financial Assets Long Term	(excluding cash and cash equivalents, loans, and receivables, Investment in associates, Investment in joint ventures, and investments in subsidiaries)
13200	Investment in subsidiaries	This account refers to the amount of the cooperative's investment in the equity instruments of non-cooperative subsidiaries (ownership of more than 50% of the voting shares)
13400	Investment in Joint ventures	This account refers to the cooperative's investment in shares of stocks of joint ventures as evidenced by a contractual agreement that gives the venturers joint control.
13500	Investment property	Investment property is property (land or a building, or part of a building, or both) held by the cooperative to earn rentals or for capital appreciation or both, rather than for: (a) use in the production or supply of goods or services or for administrative purposes, or (b) sale in the ordinary business.

Translating the aspirations and circumstances of cooperatives into appropriate investment decisions is daunting. Many investment principles are general and apply to a variety of circumstances. However, issues such as the type of investor, tax considerations, preferences, and risk appetite influence efficient investment decision-making.

Investment decisions are made by top-level management concerning the funds deployed in investment opportunities. According to Pandey (2008), investment decisions entail an organization's decisions to invest current assets most efficiently in anticipation of the expected future flow of benefits over time; these investment decisions require exceptional attention

because they influence a firm's growth risk impacts. Investment decisions are typically challenging, often irreversible, and involve many funds. The investment process specifies how an investor selects from multiple types of investments, the extent of investment, and the timing of the investment. The process goes through four key stages: specifying objectives, determining constraints, formulating policy, and monitoring and updating the portfolio as needed.

Measures of financial performance

Cooperatives are unique in operations because of dividends, surpluses, and deficits to measure financial performance compared to other financial institutions. The impact of investment decisions is measured and reflected in the cooperatives' financial performance. Financial performance refers to a combination of short and long-term decisions and techniques geared towards enhancing growth and reflects an organization's overall financial health over time. Enhancing the growth of organizations is measured by returns on capital exceeding costs of capital and performance measures. Performance measures pertain to the degree by which certain activities have been accomplished by maintaining quality and the utility of assets in creating revenue-enhancing financial soundness. It measures the efficient employment of scarce resources to generate gains (Kiaritha, 2015). Performance measures are categorized into profitability, liquidity, leverage, and efficiency ratios. Most organizations measure financial performance through profitability ratios, return on assets, return on equity, and after-tax profit ratios (Hadi & Nurhayati, 2018) because profitability ratios represent investment decisions, while leverage and current ratios represent financial decisions. These ratios are generally used to investigate the effect of investment and financing decisions on financial performance. Empirical findings show that asset turnover, return on assets, intangible assets, current ratio, stock turnover rate, and profit per share variables positively and significantly affect financial performance (Afşar & Karaçayir,

2020). The uncertainty and risk related to cash flows, cost of funds, and returns on investment in the current market require organizations to develop investment strategies for effective and efficient portfolio management, leading to robust returns for members.

Theoretical Framework

The theories used in this study are the Q Theory of Investment, the Modigliani-Miller Theorem, the Modern Financial Portfolio Theory, and the Pecking Order Theory.

The Q Theory of Investment

The Q Theory of Investment, developed by James Tobin and William Brainerd in 1968, suggests that investment capital plays a direct role in portfolio decisions and that investments should be made only when capital (Q) is more than one. Average Q is the ratio between the market value of assets and replacement cost. Q is zero at the equilibrium point, suggesting that the difference between the cost of capital and the restoration cost of capital is zero. When the market value surpasses recorded assets, Q becomes greater than one, indicating that the assets are worth more than the stipulated price. Therefore, investors will increase portfolio choice if Q> one and reduce investment if Q<1. However, the key challenge is determining the marginal Q because only the average Q is known with certainty. The theory is relevant to this study in determining the financial performance of cooperatives because the generation of investment returns may impact improving financial performance. This highlights that decision-makers must carefully consider factors such as the availability of unrestricted funds and costs to be incurred at present and in the future as funds are sourced from owner-members equity.

The Modigliani-Miller theory

Modigliani and Miller (1958) argue that the investment cost is the same regardless of the finance methods used under perfect capital markets. The theory further suggests that the

investment amount is independent of the financing method under some conditions since the firm's value is the same regardless of the financing source. The theory states that investment means and methods do not cause a change in an organization's value due to market imperfections. The theory highlights that the impact of investments on the financial performance of cooperatives is independent of influence from financing methods. Cooperative decision-makers must be extra vigilant in their investment decisions as the funds for such endeavors are sourced internally, specifically from the capital build-up of members. It is important to note that investors must consider investment opportunities and alternatives well, whatever the source of the fund, internal or external.

Modern Financial Portfolio Theory

The theory states that an investor's portfolio choice is geared towards maximizing returns for a given risk. Harry Markowitz came up with assets and attached risks; the expected return standard deviation measured asset risk. Risk tolerance levels differ from one investor to another, triggering different assets to invest in. The return level motivates investors on which risk to bear. The varying types of investments are expected to provide a specific, expected future return depending on the attached risks. The theory highlights that the asset choice of management in terms of investment and risk appetite enables the cooperative's desirable performance. The theory lends itself to study by supporting the analysis of decision-makers as to the optimum combination of investment types or vehicles to generate maximum gains for the cooperatives.

Pecking Order Theory

Pecking order theory was proposed by Donaldson and, in 1984, modified by Stewart Myers and Nicholas Majluf. The proponents observed that organizations typically prefer internal funding, including retained earnings and depreciation expenses, external funding (Goyal,

Rahman & Kazma, 2013), and seek external funding only if undue demand exists. This theory emphasizes heavy reliance on internal funds. According to this theory, internal funds are not associated with adverse selection problems, while equity has more of this problem than debt. Both require adverse selection premiums, but equity needs more. From the investors' point of view, equity is riskier than debt; for this reason, shareholders will demand a high return on equity. This theory is relevant to this study because cooperatives generally use equity to finance activities, including investment decisions. The unique structure of cooperatives requires decision-makers to cautiously contemplate available investment types aligned with the organization's risk appetite and its member owners. Cooperatives are usually limited to obtaining equity capital from members. This means that cooperatives can only create equity when profitable, thus underscoring vigilance in investment decision-making.

Methodology

Research Design

This study used a quantitative approach to representing behavior, such as relationships, models, estimates, and numerical representations. This research involves 30 samples of registered, operating, and compliant cooperatives in CAR as of FY 2015. Time-series data were collected as per the registry of the CDA CAR EO.

Population and Locale of the Study

The population includes 30 cooperatives registered in CAR, except those registered at CDA Central Office. The population represents all the regional cooperatives whose data was lifted from available secondary data records for 2015-2019 from the CDA system Cooperative Annual Progress Report (CAPR) and Cooperatives Annual Financial Statements Information System (CAFSIS).

Table 2

Distribution of samples by province

Abra	Apayao	Baguio	Benguet	Ifugao	Kalinga	Mountain Province	Total
2	0	7	14	3	0	4	30

Table 3

Distribution of samples by cooperative type

Multipurpose	Credit	Consumer	Federation	Agriculture	Service	Total
19	6	2	1	1	1	30

Data Gathering Tool

Research information was derived from secondary data, specifically audited financial statements, textbooks, journals, newspapers, and internet articles, in formulating the conclusions and recommendations of the study.

The inputs considered for this research are financial assets-current, financial assets non-current, investment in subsidiaries, investment in a joint venture, and investment property. Financial performance is measured by Return on Assets (ROA) and Return on Equity (ROE).

Treatment of Data

The profile of cooperatives was treated by frequency distribution, which is the organization of data in a tabular form, using mutually exclusive classes showing the number of observations in each grouping of the data into categories showing the number of observations in each overlapping class. Descriptive statistics were used, such as mean, mode, skewness, and standard deviation, to evaluate the impact of investment on financial performance.

As a result of the low correlation between the investment variables, Return on Equity, and Return on Assets, regression analysis was not employed in this study.

Normality Test

The normality test was conducted using Shapiro-Wilk Test, and the result reveals that the significance value is lower than 0.05, indicating that the data significantly deviates from a normal distribution. Hence, the degree of linear relationship can be interpreted using a range of values for Spearman's rho Coefficient of Correlation. The normality test is presented below.

Table 4

Normality Test

	Percentage of total investment to total assets	**Financial assets**	**Financial assets-long-term**	**Investment in Subsidiary**	**Investment in Joint Venture**	**Investment Property**	**Return on Assets**	**Return on Equity**
W	0.225792	0.398501	0.092687	0.055998	0.117929	0.548793	0.909091	0.458928
p-value	0	0	0	0	0	0	4.46E-08	0
alpha	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
normal	no	no	no	no	no	no	no	no

Results

Table 5 presents a trend in the percentage change in investment type per year for 2015-2019. Results show that the changes are erratic. While the changes specifically in the account financial assets-current show significant drops in investment, the increases are likewise large in 2017 and 2019. Investments in financial assets non-current, Investments in Subsidiaries, and Investments in Joint Ventures show an increasing trend for the five years. Investment Property shows a significant increase in 2017 compared to 2015 initial values, continuously increasing in

2018 and slightly dropping in 2019. The results imply changes in investment types over the five years, and while erratic, cooperatives are increasingly investing.

Table 5

Percentage Change in Investments

Investment type	Percentage Change in Investment Types				
	2015	2016	2017	2018	2019
Financial Assets	100%	-0.06%	270.47%	-71.91%	466.24%
Financial Assets-long-term	100%	0.01%	6.92%	22.20%	30.32%
Investment in Subsidiary	100%			e	e
Investment in Joint Venture	100%				e
Investment Property	100%	0%	415.41%	552.20%	448.68%

The descriptive statistics represent the mean, minimum, and maximum values of variables presented along with standard deviations. Table 5 shows the statistics of the variables used. An output of all the variables was extracted using SPSS software annually for five years (2015-2019). The research aims to determine the impact of various investment vehicles on financial performance. The following table gives a summary of descriptive statistics.

Table 6

Descriptive Statistics

	Percentage of total investment to total assets	Percentage of cooperative investments in Financial assets	Percentage of cooperative investments in Financial assets-long-term	Percentage of cooperative Investment in Subsidiary
Mean	0.009728	0.044898	0.000136	0.006122
Standard Error	0.003725	0.009586	9.59E-05	0.006122
Median	0	0.01	0	0
Mode	0	0	0	0
Standard Deviation	0.045163	0.116221	0.001162	0.074231
Sample Variance	0.00204	0.013507	1.35E-06	0.00551
Kurtosis	33.23587	29.5851	70.94454	147
Skewness	5.625926	5.12991	8.484068	12.12436

Range	0.33	0.84	0.01	0.9
Maximum	0.33	0.84	0.01	0.9
Minimum	0	0	0	0
Sum	1.43	6.6	0.02	0.9
Count	147	147	147	147

Table 7

Descriptive statistics

	Percentage of cooperative Investment in Joint Venture	Percentage of cooperative investments in Investment Property	Return on Assets (ROA)	Return on Equity (ROE)
Mean	0.007551	0.080068	0.057667	0.060867
Standard Error	0.005957	0.013972	0.006255	0.016724
Median	0	0.02	0.05	0.05
Mode	0	0	0	0
Standard Deviation	0.072221	0.169405	0.07661	0.204831
Sample Variance	0.005216	0.028698	0.005869	0.041956
Kurtosis	135.5005	11.63847	5.877885	70.51873
Skewness	11.40553	3.306662	0.330562	-6.45505
Range	0.94	0.99	0.69	2.87
Maximum	0.86	0.9	0.45	0.87
Minimum	-0.08	-0.09	-0.24	-2
Sum	1.11	11.77	8.65	9.13
Count	147	147	150	150

The highest value for Return on Assets is .45%, while the lowest value was -.24%. The following measure of central tendency was exhibited: a mean of .057667, the standard deviation value depicts a variability in the financial performance of +/-0.07661. The data for Return on Assets exhibits a skewness value of 0.330562, greater than the standard error, emphasizing that the data is abnormal. This implies that Investments positively impact assets even after factoring in standard deviation.

The highest value for Return on Equity is .87%, while the lowest value was -.2%. The measure of central tendency exhibited a mean of 0.060867, and the standard deviation depicts a variability in the financial performance of +/-0.204831. The data for Return on Equity exhibits a skewness value of -6.45505, which indicates that the data is not normal. This implies that Investments do not generally impact equity because the average Return on Equity is negative after factoring in the standard deviation. The negative skewness may represent many small wins and a few significant losses on the investment.

Positively skewed investment returns are preferred over negatively skewed return distributions since significant gains may cover frequent but small losses. However, investors may prefer investments with negatively skewed returns because of the preference for frequent small gains and only a few significant losses over frequent small and few large gains. The skewness values may be representative of recurrent small losses and few significant returns on investment. The absolute skewness values show that they are greater than the standard error, thus emphasizing the irregularity of data.

The descriptive results further reveal that the highest value of Financial Assets is .84%, while the lowest is 0%. This result implies that Investment in Financial Assets is moderate, going by the mean ratio. The measure of central tendency exhibited a mean of 0.044898 based on total assets. The value of the standard variation depicts variability in the investment of Financial Assets-Current of +/- 0.116221. The data exhibits an abnormal distribution because the skewness value of 5.12991 is far greater than the standard deviation.

The highest value of Investments in Financial Assets Long-term is .01%, while the lowest value is 0%. On average, cooperatives invest in Financial Assets Long-term at 0.000136%. Investments in Financial Assets Non-current are meager. The data exhibits an abnormal

distribution because the skewness value of 5.12991 is far greater than the standard deviation variability of 0.001162.

The highest value of the Investment in Subsidiary is at .9%, while the lowest is 0%. On average, cooperatives invest in subsidiaries at a rate of 0.006122%. The data exhibits an abnormal distribution because the skewness value of 12.12436 is vastly more significant than the variability exhibited by the standard deviation of 0.074231. Investments in Subsidiaries are meager.

The highest value of Investment in a Joint Venture at .86%, while the lowest is 0%. On average, cooperatives invest in joint ventures at a rate of 0.007551%. Investments in Joint ventures are meager. The data exhibits an abnormal distribution because the skewness value of 11.40553 is largely greater than the variability exhibited by the standard deviation of 0.072221.

The highest value of Investment Property is at .9%, while the lowest is -0.09%. On average, cooperatives invest in property at a rate of 0.080068%. The data exhibits an abnormal distribution because the skewness value of 3.306662 is largely greater than the variability exhibited by a standard deviation of 0.169405. Cooperatives invest more in property than any other investment types used in the study.

The variables Financial Assets-Current, Financial Assets Non-current, Investment in Subsidiary, Investment in Joint Venture, Investment Property, and Return on Assets are skewed to the right, indicating that data is outside the range of normality. In contrast, the Return on Equity is skewed to the left. Results show that distribution cannot be considered normal.

Correlation

Correlation analysis establishes an association between two variables: a strong negative correlation and a perfect positive correlation. The correlation between investments to financial

performance was computed using Spearman's correlation coefficient to assess how well the relationship between the variables can be described using a monotonic function. A Spearman correlation of 1 results when variables compared are monotonically related, even if the relationship is not linear. The study employed a confidence interval of 95 percent and a two-tailed test, as it is the most utilized in social sciences. Table 6 shows the correlation analysis outcome.

Table 8

The Relationship of Cooperative Investments to the ROA and ROE

Correlations			ROA	ROE
Spearman's rho	Financial assets	Correlation Coefficient	0.052	0.032
		Sig. (2-tailed)	0.535	0.702
		N	147	147
	Financial assets long-term	Correlation Coefficient	0.102	0.073
		Sig. (2-tailed)	0.218	0.378
		N	147	147
	Investment in Subsidiaries	Correlation Coefficient	-0.13	-0.091
		Sig. (2-tailed)	0.116	0.274
		N	147	147
	Investment in Joint Ventures	Correlation Coefficient	-0.106	-0.087
		Sig. (2-tailed)	0.203	0.297
		N	147	147
	Investment property	Correlation Coefficient	-0.141	-0.081
		Sig. (2-tailed)	0.089	0.327
		N	147	147
	Total Investments	Correlation Coefficient	0	-0.024
		Sig. (2-tailed)	0.999	0.777
		N	147	147

A correlation is significant when its significance level is less than 0.05 at a 95 percent degree of confidence. A positive correlation indicates that when one variable increases, so does the other. In contrast, a negative correlation indicates that as one variable increases, the other decreases. The strength of the relationship is given by the numeric value where one (1) indicates a perfect relationship and zero (0) indicates no relationship between variables. The correlation coefficient exhibits the strength of a relationship: weak: .10 to .29, moderate .30 to .49, and strong .50 to 1.

Table 6 shows that Investment in Financial Assets (r=.052, p=.535) and Investment in Financial Assets Long-term (r=0.102, p=0.218) show a positive but weak correlation and an insignificant relationship with ROA and ROE. This correlation implies that as Investments in Financial Assets and Investments in Financial Assets Long-term increase, their impact on ROA and ROE increases.

Table 7 shows that Investment in subsidiaries (r=-0.13, p=0.116), Investment in Joint Ventures (r=-0.106, p=0.203), and Investment Property (r=-0.141, p=0.089) show a negative correlation and an insignificant relationship with ROA and ROE. This correlation implies that as Investment in Subsidiaries, Investment in Joint Ventures, and Investment Properties increase, their impact on ROA and ROE decreases.

Investments show zero (0) correlation with ROA, a negative correlation with ROE, and an insignificant relationship to both determinants of financial performance, as per the results shown in Table 8.

Overall, the study found no weak correlation between cooperatives' investments and their financial performance, thus affecting the employability of regression analysis in this study. The results are corroborated by Morwabe (2019) and Odihiambo (2019), where the correlation

coefficient and linear regressions exhibited a weak, positive correlation but contrasted with the results of a significant correlation between investments and financial performance. Their study implied that the multiple linear regressions exhibited a significant relationship between investments and financial performance. The study of Rop, Kibet, and Bogonko (2016) shows that in the context of commercial banks, covering the financial soundness of investment diversification, determined that there is a positive relationship between government securities, insurance investment, and front office service activities investment and buying of shares with the financial performance of commercial banks. However, in terms of fixed deposit investment, it was determined that there is a weak, positive, and insignificant correlation between fixed deposit investment and the financial performance of savings and credit cooperative societies in Kenya, implying that fixed deposits have no significant impact on financial performance. In contrast, Ariemba, Evusa, and Muli (2016) study found a positive correlation between investment decisions to surplus or deficits as financial performance measures.

Conclusion

The research concluded that the selected investment variables have no weak relationship to financial performance. The low investment values made by cooperatives on the different types of investments may have contributed to the weak relationship between investment and financial performance. Among the variables selected, the investments patronized by cooperatives are ranked as follows: (1) Investment Property, (2) Investments in Financial Assets-Current, (3) Investments in Joint Venture, (4) Investment in Subsidiary, and (5) Investment in Financial Assets Non-current. Increases or decreases in these types of investments will play a direct role in impacting financial performance.

Additionally, with equity forming the more significant part of investment financing for cooperatives, the investments prove no change in the cooperative's value. In this light, the sources of funds assumed to be primarily sourced internally from share capital contribution did not impact the investment decision made by management and financial performance as measured by Return on Assets and Return on Equity.

As such, theoretical and practical implications can be derived, given the results of this study. While cooperatives are often organized to encourage thrift and savings, increasing investing activities in cooperatives opens doors to more significant growth potential primarily due to the power of compounding and the risk-return tradeoff. Investing may help reach long-term goals and would typically have the potential for a higher return than a savings account. However, it is essential to note that savings are critical to the economic progress of a country because of their relation to investments. Progress is not dependent on savings alone, so cooperatives must be willing to invest in increasing production capacity and improving financial performance in the long run.

Stakeholders and decision-makers can use this knowledge to strategize because investing activities can provide insights into how the cooperative might grow and earn more returns. This includes improved capacities in terms of looking for other sources and uses of funds other than those coming from equity or internally generated funds.

While the results show no weak relationship with financial performance, investment is one source of income, provided they are managed well. Concerning the strong preference for long-term investments, cooperatives can consider short-term investments to help boost profit because investments in the short term often allow money to outpace inflation and increase in value.

Limitations and Recommendations for Future Research

The study enables cooperatives to create policies to address low investments. A foundational level of knowledge on investments promotes a vital aspect of growth and capital in cooperatives. Hence, knowledge about investments should be developed, if not strengthened, to help stakeholders comprehend how the business might generate income from investments. The stakeholders can derive future value regarding increased returns and improved services. The research encourages cooperatives to balance resource use to enhance operations and financing, as both dimensions are significant in long-term sustainability.

Further study may be performed to investigate financial performance and other variables. This research focused only on the monetary aspect of an investment. Thus, other research can be done on management styles, board composition, and mix of investment vehicles to determine the impact on financial performance, if any.

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