

ISSN 2278 - 0211 (Online)

Relationship between Liquidity Management and Performance of Savings and Credit Cooperative Societies

Dr. Fred Gichana Atandi

Lecturer, Department of Business Administration and Management, School of Business and Economics, Kibabii University, Kenya

Dr. Joshua Olang'o Abuya

Senior Lecturer, Department of Business Administration and Management, School of Business and Economics, Kibabii University, Kenya

Abstract:

The purpose of the study was to determine the relationship between liquidity management and performance of savings and cooperative societies. The study was conducted through a cross – sectional, descriptive and correlational survey designs. Primary data collection was conducted using self-administered structured questionnaires. The study considered five (5) Matatu saving and Credit Cooperatives societies operating in Kitale town main stage with a total of 79 employees. The study concluded that there was a very strong positive significant relationship between liquidity management and performance of SACCOs. The study recommended that SACCOs management to ensure that specific loan processing and recovery period is observed to meet its obligations whenever they fall due in order to maintains adequate liquidity for its day-to-day operations. The study also recommended that SACCOs to provide regular training to its members before advancing loans to them. The study also recommended that SACCO's managements should be keen on improving its liquidity and strengthen liquidity management for their respective SACCOs to be competitive and investors get value for their money.

Keywords: Finance, liquidity, management, receivables, savings credit cooperative societies, performance

1. Literature Review

Financial performance is the most important indicator of the success of a business. The information about company performance, especially about profit, return on assets, and return on equity investment is useful in substantiating managerial decisions regarding potential changes in the financial resources that the company was able to control in the future. Financial performance has been the primary concern of business practitioners in all types of organizations since it has implications on the organization's health and ultimately its survival. Financial performance measures the extent to which a business generates a profit from the factors of production (Obara, 2013).

Kasim, Mutula and Antwi, (2015) observed that cash management practices have an influence on the financial performance of Small medium enterprises and thus there is need for finance managers to embrace efficient cash management practices as a strategy to improve their financial performance and survival in the uncertain business environment. Savings and Credit Cooperatives (SACCOs), are types of members owned Microfinance Institutions (MFIs), and are formed on assumption that members will save together and give loans to each other. The microfinance paradigms focus on reduction of poverty through improving access to finance and financial services. (Buwule, 2016)

In Europe, SACCOs have made a considerable contribution to the economic development especially among rural areas and are a major source of direct and indirect rural employment, a key factor in the current state of agricultural prosperity (Bogström, 2015). In India, co-operatives are unique as they were initiated and supported by common business needs and aspirations. They are basically welfare driven rather than profit-oriented and are legal institutions supported by the government. Despite all this, these Cooperatives are dogged by problems such as inadequate capital, poor member participation, absence of common brands, inadequate managerial skills, corruption, and frauds. This has engendered inefficiency and lack of competitiveness of these institutions (Siddaraju 2012).

In Africa, the first SACCO society was introduced in Ghana in 1959. Ghana's corporate sector was disintegrated similar to most less developed countries in terms of various firms using diverse approaches to deliver services to different clients. This caused the rise of informal and formal market divisions in the corporate sector. Disintegrations also signified that the segments of various markets faced with difficulties such as information that is poor, risk management, exorbitant transaction costs, funds mobilization, grants and capitalization differently (Steel, 1998).

In Malawi, the performance of the selected smallholder SACCOs was also influenced by organizational and management problems (FAO, 2012). Organizational problems gave rise to low levels of equity and debt capital, reliance on government funding, low levels of investment, and subsequent loss of members. Management problems were strongly

linked to low levels of education, lack of production and management skills training and weak marketing arrangements (FAO 2012). The forgoing case underscore, the fact that organization and saving and Credit Cooperatives and management problems was affected the financial performance of this institution. (Waweru, 2003).

The co-operative movement plays a vital role of pooling resources for investment and wealth creation contributing 43% of Kenya's gross domestic product (SASRA report, 2010). Financial performance of Kenya's SACCOs in terms of Return on assets has been varying yearly, for instance Return on assets at the beginning of 2008 was 5.30%. This increased to 7.43% in 2009. As at the year 2010, the returns on assets had increased to 10.05% which was followed by a decrease to 9.91% in 2011 and an upward trend to reach a high of 11.33% in 2012. The SACCO sub-sector recorded a general improved performance in total income driven mainly by loan interest income which increased to 33 billion in 2014 from Kshs 30.2 billion recorded in 2013 which was a percentage increase of 9.2 (SASRA, 2014).

Barus, Muturi & Kibati (2017) established that capital adequacy positively impacted financial performance of SACCOs in Kenya. However, Jansson (1997) established that capital adequacy ratio negatively influenced firm's profitability. Marwa & Aziakpono (2016) examined the link between efficiency and profitability amongst SACCOs in Tanzania. The study adopted correlational design. The study concluded that to have a viable performance in the sector there is need for development of a complete turnaround strategy geared towards enhancing SACCO performance.

Basley and Brigham (2015) described the cash management as the length of time taken from accessing a Credit facility until the collection of account receivable which impacts on working capital. Cash management include repayment period, Credit level, collateralized, cost of lending, interest, collection period and more others, Although the length of the cash management is an important measure of the efficiency of working capital management, the cash management influences organizational financial performance if the cash management is not well managed it can lead to poor financial management.

Lukorito et al (2014) reported that liquidity is significantly related with profitability, but when liquid assets are held entirely, they yield low interest or not at all. liquidity sources should be adequate in comparison to present and future needs and easily exchangeable to cash with minimal or no loss. The fund's manager of the financial entity should ensure that the level of liquidity is adequate since liquidity is an important indicator of financial stability in a SACCO society as it shows the SACCO"s ability to meet obligations as they fall due (Kimathi, 2014).

1.1. Working Capital Management Theory

The study was guided by Working Capital Management theory (WCM) which is based on the traditional models of the CM that is initiated by (Richards &Laughlin ,1980). The theory of working capital management contends that if working capital is managed accordingly then it would be expected that businesses would invest in working capital, finance working capital, monitor factors that influence working capital, manage cash, accounts receivable, inventory, accounts payable, the cash management (aggregative approach), and measure and analyze performance to ensure that the long term (fixed) assets are utilized effectively and efficiently Working capital management is said to be the life blood of a business.

Working capital signifies funds required for day-to-day operation of the firm. In financial literature, there exist two concepts of working capital namely: gross and net. Accordingly, gross concept working capital refers to current assets, cash, marketable securities, inventories of raw materials, work-in process, finished goods, receivables, and payables. According to net concept, working capital refers to the difference between current assets and current liabilities. Ordinarily, working capital can be classified into fixed or permanent and variable or fluctuating parts. It is a great measure to know that how fine a corporation is organizing its working capital. Nobanee, Abdullatiff and Alhajjar,2011 on the other hand shortening the cash management could harm the firm's operations and reduce profitability. This could happen when taking actions to deal with the inventory Management period, a firm could face inventory shortages; when reducing the receivable collection period, a firm could lose its good Credit customers which in turn lead to poor performance.

2. Methodology

The study was conducted through a cross – sectional, descriptive and correlational survey designs using both quantitative and qualitative research approaches. Combining the two methods pays off in improved instrumentation for all data collection approaches and in sharpening the evaluator understandings of findings, (Patton, 2002). Cross-sectional research design helped the researcher to collect data of both independent variable and dependent variable at one time in moment across the respondence and then compare how they relate. Descriptive survey research design helped the researcher to obtain important information concerning the status of phenomena and in drawing a general conclusion where necessary from the facts that was discovered. According to Role (2013), descriptive survey is a method of collecting information by interviewing or administering a questionnaire to a sample of individual's respondents. Correlational research design helped the researcher to determine whether there is any significant relationship the independent and dependent variables (Kothari, 2011).

2.1. Sample Size and Sampling Techniques

According to Ken (2004), target population is total group of individuals from which the sample might be drawn. The study considered five (5) Matatu saving and Credit Cooperatives societies operating from Kitale town main stage but who were performing dismally for the last three (3) years between 2018-2020. They included board members, cashiers, marketers, bringing the target population to 79 workers. According to Sekarani (2000) in dealing with a small population the researcher can use a census method to get a clear picture.

Names of Credit and Saving Cooperative Societies	Employees	Sampling Technique
1.Matisi SACCO	13	Census
2.Town service SACCO	14	Census
3 Kape SACCO	19	Census
4.Kiminini SACCO	18	Census
5.Maili saba SACCO	15	Census
Total	79	

Table 1: Sample Size and Sampling Technique Source: Trans Nzoia County Cooperative Office (2020)

2.2. Data Collection Methods and Instruments

The researcher used a self-administered questionnaire as an instrument which was developed based on the study objectives. Mugenda & Mugenda, (2003) recommended the use of multiple instruments to provide a wealth of data that meets the objectives of the study and enhance the extent to which the study findings can be trusted and generalizations made from them.

The responses were measured using mean and standard deviation on a 5 Likert scale. Strongly agree = 5 (very high mean) with mean range of 4.20-5.00, agree = 4 (high mean) with a mean range of 3.40-4.19, Not sure = 3 (average mean) with mean range of 2.60-3.39, disagree = 2 (low mean) with a mean range of 1.80-2.59 and strongly disagree = 1 (very low mean) with mean range of 1.00-1.79. The objective questions were guided by five-point Likert scale.

Questionnaire Scale	Value	Mean Range	Interpretation
Strongly Agree	5	4.20 - 5.00	Very high
Agree	4	3.40 - 4.19	High
Not Sure	3	2.60 - 3.39	Average
Disagree	2	1.80 - 1.00	Low

Table 2: Likert Scale

2.3. Validity and Reliability of the Instrument

According to Heale& Twycross (2015), an instrument is valid if it measures what it was intended to measure and covers all research issues both in terms of content and detail. Validity of the instruments was achieved by ensuring that questions or items in the research instrument was in line with the study objectives. To test the validity of the research instrument, the researcher used the expert judgment of the experts for checking the items in terms of relevance, clarity, and ambiguity.

2.4. Reliability of Instruments

The extent to which research instrument gives consistent results, consistently after repeated trials of whatever it is measuring under identical conditions is termed as reliability of that instrument Mugenda and Mugenda (2003). The index that indicates the degree of internal consistency is called Cronbach's Alpha coefficient whereby the minimum recommended value is 0.7 and above as emphasized by Cronbach (1951). The reliability test results for the instrument were reliable with a coefficient value of 0.886, which is above the recommended value of 0.7.

3. Results and Discussion

The study sought respondents' information on demographics in terms of respondents' sex, age group in terms of years, work experience, and level of education. These were all presented using frequency distributions. The results are presented in table 1.

Characteristics	Category	Frequency	Percent (%)	
Sex	Male	32	64.0	
	Female	Female 18		
Age Group	21-30	21-30 33		
	31-40	14	28.0	
	41-50	3	6.0	
Working experience	Less than 2 years	29	58.0	
	3-5 years	15	30.0	
	6-9 years	3	6.0	
	10 years and above	3	6.0	
Level of Education	Secondary	29	58.0	
	Training/vocational	14	28.0	
	University degree and above	7	14.0	

Table 3: Background Information of the Respondents

3.1. Respondents Sex

The findings in Table 3 revealed that majority 32(64.0 %) of respondents were males and 18(36.0%) were females. This could be attributed to the phenomena that males unlike females are SACCO's members. This is because more males are working in transport industry than females.

3.2. Respondents Age

The findings showed that majority 33 (66.0%) of respondents were in age category of 21-30 years and very few 3(6.0%) were above 40 years. This suggests that younger community members were joining the SACCOS and that is because they have higher chances of getting jobs in SACCOs than old people.

3.3. Working Experience

The majority 44 (88.0%) respondents had been SACCOS members for less than 5 years and few 6 (12.0%) have been SACCOS members for more than 5 years. This suggests that majority of SACCOs' respondents are relatively new members because SACCOs have not been in operation for long period.

3.4. Level of Education

In reference to the section to the education levels, more than half 29 (58.0%) were secondary graduates and only 7 (14.0%) of the respondents were university graduates. This implies that majority of employees in SACCOs attained secondary level of education and above while few were university graduates.

3.4.1. Relationship between Liquidity Management and Perfomance of SACCOS

The objective of the study was to establish the relationship between liquidity mangement—and perfomance of SACCOs. The researcher used pearson correlation to find out the strength of the relationship and the results are presented in the Table 4

		Performance of SACCOS
Liquidity Management	Pearson Correlation	.884**
	Sig. (2-tailed)	.000
	N	50
**. Correlation is significant at the 0.01 level (2-tailed).		

Table 4: Relationship between liquidity management and Performance of SACCOs

The results of Pearson correlation on the relationship between liquidity management and performance of SACCOs show a very strong positive significant relationship ($r=0.884^{-+}$, P=0.000<0.05) as per Creswell (2015) who indicated that r=0.00-0.199 (very low correlation), 0.20-0.399 (low correlation), 0.40-0.599 (average/medium correlation), 0.60-0.799 (high correlation, 0.80-1.00 (very high). The results implied that when there is low liquidity management there is poor performance of the SACCOs.

The findings are supported by Raheem and Ali Malik (2013) who stated that cash management is having a significant influence on financial performance and it has association with both return on assets and equity indicating that the lesser the cash management greater would be poor financial performance measured through return on assets and equity. Hence the receivable collection period must be reduced along with the extension of payment period to increase the financial performance of SACCOS.

The study also conducted a regression analysis between liquidity management and performance of SACCOS. The results are shown in the Table 1.5

	Coefficients ^a					
	Model Unstandardized		tandardized	Standardized	Т	Sig.
		Coefficients		Coefficients		
		В	Std. Error	Beta		
1	(Constant)	0.325	0.158		2.057	0.045
	Account payables	0.341	0.047	0.493	7.206	0
	Account receivables	0.582	0.057	0.695	10.16	0
a. Dependent Variable: Dependent variable						
Model	R	R Square	Adjusted R Square	Std. Error of the		
				Estimate		
1	.884a	0.782	0.772	0.21431		

Table 5: Regression Analysis on Liquidity Management and Performance of SACCOS

The study found a very strong positive significant relationship between liquidity management and performance of SACCOs with (r=0. 884^{**} , P= 0.000<0.05) as per Creswell (2015) who indicated that r= 0.00 - 0.199 (very low correlation), 0.20 - 0.399 (low correlation), 0.40 - 0.599 (average/medium correlation), 0.60 - 0.799 (high correlation, 0.80 - 1.00 (very high). This implied that when there is low liquidity management there will also be poor performance of the SACCOs

4. Conclusion

The study concluded that there was in a very strong positive significant relationship between liquidity management and performance of SACCOs. Therefore, poor liquidity management could harm the firm's operations and reduce profitability.

5. Recommendations

The SACCOs management to ensure that specific loan processing period to meet obligations whenever they fall due in order to maintains adequate liquidity for its day-to-day operations are maintained and to provides regular training before advancing the loans. The study also recommends that SACCO's managements should be keen on improving its liquidity and strengthen liquidity processing for their respective SACCOs to be competitive and investors get value for their money.

6. Acknowledgments

We most sincerely thank the support received from Kibabii university administration by providing the most amble facilities to help us complete this study.

7. References

- i. Addae, A.A., Nyarko-Baasi, M., & Hughes, D. (2013) The Effects of Capital Structure on Profitability of Listed Firms in Ghana, Accra: University of Ghana
- ii. African Development Fund. May(2019) 'Appraisal Report: Rural Microfinance Support Project
- iii. (RMSP) Republic of Uganda.' Abidjan: African Development Fund.
- iv. Afza, T., &Nazir, M. (2009) Impact of aggressive working capital management policy on firms' profitability. The IUP Journal of Applied Finance, 15(8), 20-30.
- v. Ahmet, G. S., and Emin, H. C. (2012) Effects of working capital management on firms performance. International Journal of Economics and Financial Issues, Vol. 2(4), 488-495.
- vi. Al-Debi'e, M. (2011) Working Capital Management and Profitability: The Case of Industrial Firms in Jordon. European Journal of Economics, Finance and Administrative Sciences, 36, 75-76.
- vii. Basleyf. and Brigham D (2005) Credit risk management and profitability of commercial banks in Kenya. School of Business, Nairobi: University of Nairobi.
- viii. BNR (2016) National Bank of Rwanda annual report JULY 1st, 2015 JUNE 30th 2016.
 - ix. Bogstrom, G. (2003) The Potential of the Social Economy for Local Development in Africa. European: An Exploratory Report. European Union, Policy Department DG External Policies. doi:10.2861/59977
 - x. Boss, B. (2013) The impact of working capital management practices on firms profitability. International Journal of AppliedResearch and Studies, 2(6), 1-15.
- xi. Brag, J. (2005) Fundamentals of Corporate Finance (2 ed.). London: Pearson Education.
- xii. Buwule,J (2016) The effect of cash managementon the profitability of firms listed on the Nairobi securities exchange, Nairobi: SAGE
- xiii. Chebii, E.K., Kipchumba, S.K. &Wasike, E. (2011) Relationship Between Firms Capital Structure and Dividend Payout Ratios: Companies Listed at Nairobi Stock Exchange, Nairobi: Kabarak University.
- xiv. David,O (2002) The relationship between loan policy and financial performance in Saccos in Nairobi county, Kenya reg. D61 / 72372 / 2011 research project submitted in partial fulfillment of the requirements for the award of degree of Master of Business Administration
- xv. Davidson, T. (2011) The effectiveness of cash management policies. Hunyani flexible products.
- xvi. de Caux, T. (2005) Cash Forecasting. The International Treasurer's Handbook. London: London Association of Corporate Treasurers.
- xvii. Deloof, M. (2003) Does working capital management affect profitability of Belgian firm Journal of Business finance and Accounting 30, (3 and 4), 573-587.
- xviii. Eliots, V. (2009) The role of customers in financial profitability. Journal of Management and Education, 11(12): 2-5.
 - xix. Finscope,K (2017) Working capital and financial Performance SACCOs, Bugisu Sub-Region, Uganda
 - xx. Food and Agriculture Organization . (2012). Agricultural Cooperatives: key to feeding the world. Geneva: Food and agriculture organization press.
- xxi. Foster, B. P. (1997) Corporate Cash Management: Strategy and Practice (2nd ed.). Cambridge: Woodhead Publishing Ltd.
- xxii. Gentry, J. V. (1990) A Weighted Cash Conversion Cycle. Financial Management, 19 (1), 90-99.
- xxiii. Gill, A., Bigger, N., and Atnur, C. (2010) The Relationship between working capital management and profitability: Evidence from the United States. Business and Economic Journal, Bej-10, 1-9.
- xxiv. Gitau, B. N., Nyangweno, G., Mwencha, N., and Onchagwa, G.A. (2014) Influence of cash management practices on Financial Performance of Agribusiness Enterprises in Kenya. International Journal of Social Studies and Enterprises, Vol. 1. Issue 12.
- xxv. Gitman, L. A. (2009) Principles of Managerial Finance. New York: Addison Wesley Publisher.
- xxvi. Grablowsky, B. J, (1978) Management of cash position. Journal of Small Business Management, 22(3), p. 59 65.I. P. (2008).

- xxvii. Gtnews, & SEB. (2009) Cash management survey 2009: Corporates put accounts receivable and centralization in the spotlight.
- xxviii. Heale R. &Twycross, A. (2015) Validity and reliability in quantitative studies, New York: Longman.
- xxix. Henry BuwuleMusoke and Rebecca MirembeNyonyintono (2017). Financial controls and profitability performance of Savings and Credit Cooperatives in Uganda
- xxx. Kathleen, M. K., and Rene, M. S. (2010) Financial Policies and the Financial Crisis. NBER. Working Paper No.16310.
- xxxi. Kwapong, N. A., & Korugyendo, P.L. (2010) Revival of agricultural Cooperatives in Uganda. Kampala: IFPRI.
- xxxii. Lazaridis I., Tryfonidis D. (2006) Journal of Financial Management and Analysis, 12 (1), 125-147.
- xxxiii. M. &Dennick R. (2011) Making sense of Cronbach's alpha, Retrieved on 2nd November 2017
- xxxiv. Mugenda, M, andMugenda.O (2003) Research Methods, 2nd Ed, Nairobi Laba Graphics Service, Limited, Nairobi: University of Kenya.
- xxxv. Mwangi L. W., Makau, M. S., &Kosimbei G., (2014) Relationship between Capital Structure and Performance of Non-Financial Companies Listed In the Nairobi Securities Exchange, Nairobi: Lampert Academic Publishing.
- xxxvi. Myers, S. C. (2009) The Capital Structure Puzzle. Journal of Fimnce, 39, 575-592.
- xxxvii. Napompech, T. (2012) Promoting the role of Cooperatives in the consumption of agricultural products. Communist Rev , 29, 31-33.
- xxxviii. Nobanee, H., Abdullatiff, M., & Alhajjar, M. (2011) Cash Managementand Fims'Performance: An Analysis of Mauritian Small Manufacturing Firms. International Research Journal of Finance and Economics, 123-134.
- xxxix. Obara,E. (2013) The effect of Budgets on Financial Performance of Manufacturing Companies in Nairobi County. Msc Finance Dissertation, University of Nairobi
 - xl. Ochanda M. (2013) East African Counter Human Trafficking Efforts in Economy Enterprise and Livelihoods Nairobi, Kenya: Kenya, Poverty, Social Enterpreneurship
 - xli. Opoku, E. (2015) Liquidity Management and Its Effect on Profitability in a Tough Economy: (A Case of Companies Listed on the Ghana Stock Exchange). International Journal of Research in Business Studies and Management, 2(11), 34-66.
 - xlii. Owolabi, S. A., & Obida, S. S. (2012) Business Management Dynamics. International journal of management, 2(2), 10-25.
 - xliii. Patricia, M. S., & Nandhini, R. (2013) A Playbook for Research Methods: Integrating Conceptual Frameworks and Project Management]. Stillwater: New Forums Press.
 - xliv. Peterssen N, Rajan,S, (2007) Financial Practice as a Determinant of Growth of Savings and Credit Co-Operative Societies. International Journal of Business and Social Science, 3, 24.
 - xlv. Picho, E.O. (2016) The Relationship between Employee Reward and Job Satisfaction in Uganda Management Institute: An Empirical Study. The Ugandan Journal of Management and Public Policy Studies, 9 (1)1-20.
 - xlvi. Raheem, A, and Ali Malik, (2013) Cash managementand Profitability Case of Pakistani Firms, International Review of Business Research Papers, 3(1), 279-300.
- xlvii. Richard, C. (2015) Working capital management and firm's profitability: an interaction of corporate governance mechanism. Kual Lumpur: UniversitiTeknologi MARA Kelanta.
- xlviii. Rwanda Cooperative Agency. (2011) Definition of a Cooperative. Retrieved June 2013, from http://www.rca.gov.rw/
- xlix. Singh, D. (2014) Effects of Working Capital Management on the Profitability of Thai Listed Firms. International Journal of Trade, Economics and Finance, 3 (3), 227-23.
 - I. Slovenes,R (1970) Educational research: Planning, conducting, and evaluating quantitative and qualitative research. New York: Upper Saddle River, NJ: Prentice Hall.
 - li. Svinicki, M. (2010) A Guidebook on Conceptual Frameworks for Research in Engineering Education, University of Texas. To cite this article: Sociological Research, 4 (1), 124-144.
 - lii. Szabo, P. T. (2012) A roadmap for effective Credit policy collective wisdom magazine. Retrieved from http://www.sciencedirect.com
- liii. Tie Iv Public instustion Research and Analysis. (2015) Uganda Economic Report 2015: Creating an Enabling Environment for Stimulating Investment for Competitive and Sustainable Cooperatives
- liv. Tumwebaze, P. (2013, December 09) Poor soils, low prices demoralize Muhanga rice farmers. Retrieved from New times: www. New times.co.rw.
- Iv. Uganda Cooperative alliance Itd (2019) Project for Financial Inclusion in Rural Areas (PROFIRA) report
- lvi. Vandemerwe, C.(2000) The Effect of customer satisfaction and Profitability of retail Stores in Migori County-Kenya. (Masters Dissertation) University of Nairobi: University of Nairobi.
- lvii. Vatavu S. (2015) The impact of capital structure on financial performance in Romanian Companies. Procedia Economics and Finance 32 (2015) 1314 1322, www.sciencedirect.com. Retrieved on 20th October 2017
- Iviii. Wandera Z (2015) The relationship between Credit risk management practices and financial performance of SACCOS in Wakiso District, Uganda. The Relationship between Credit Risk Management Practices and Financial Performance of SACCOS in Wakiso, Kampala: Makerere University.
 - lix. Waweru, K.M. (2003)Determining cash balance management practices: A case study of SACCOs in Nakuru District, Unpublished MBA project. Egerton University.
 - lx. Weston, A., & Copeland A. (2005) Inventory Management in Small Business Finance: Empirical Evidence from Kwara State, Nigeria. British Journal of Economics, Finance and Management Sciences, 2(1), 49-57.

DOI No.: 10.24940/ijird/2022/v11/i4/APR22020

Ixi. Yamane, T. (1967) Statistics an introductory analysis, 2ndEd. New York: Harper and Row.