Influence Of Agricultural Cooperatives Management On Farm Household Welfare: Evidence From Tea Cooperatives In Western Province Of Rwanda

Mutambuka Faustin (Doctoral Student),
Prof Deus Ngaruko (Phd)
;Dr Christopher Awinia (Phd)
The Open University Of Tanzania

Abstract
Cooperatives have been seen by the Government of Rwanda as appropriate vehicles for agricultural development and socio-political change, but also and most importantly as a means of reducing poverty. This study determined the influence of Coop financial management in improving farm household welfare in tea cooperatives in Western Rwanda. The study adopted a causal design in a cross-sectional quantitative approach. A survey questionnaire was developed and administrated to a final sample of 318 farm households. To analyse collected data, a multiple regression analysis was applied using the statistical package for social science version 25.0. Results confirmed the influence of cooperative management practices on farm welfare is obvious; the cost of building and maintaining these management practices to achieve their mission is an issue that has not been explicitly studied. The stakeholders should directly examine the costs and benefits of developing financial management and then assess their cost-effectiveness.
Key Words: *Financial management, Farm Household Welfare*

Date of Submission: 09-03-2024   Date of Acceptance: 19-03-2024


I. Introduction

The Rwandan economy is based on agriculture, which contributes 53% of the total gross domestic product (GDP) and 45% of the country's export earnings; and over 70% of the population is engaged in agricultural production (MINAGRI, 2018). The agricultural sector has several actors, including individual farmers, associations and agricultural cooperatives. Cooperatives have been seen by the Government of Rwanda as appropriate vehicles for agricultural development and socio-political change, but also and most importantly as a means of reducing poverty. Cooperatives are channels of communication with the mass population as messages can be sent and reach members easily (Mukarugwiza, 2009).

Because of the degree of their recurrence and if not addressed in time, these problems can jeopardize the Rwandan cooperative movement and undermine all efforts made so far to improve the welfare of the population through cooperatives. This is particularly important in the Rwandan context where agricultural cooperatives are a central pillar in the country's agricultural economy.

The main problems facing co-ops in Rwanda were summarized by MoTI (2018) as non-transparent decision-making process; limited leadership/ governance; mismanagement of cooperative resources due to poor financial management capacity; embezzlement of some cooperative leaders and employees; lack of transparency; unclear limitation in terms of members of a single family allowed to participate in one Cooperative; and limited information and awareness of existing policies, laws and internal rules and regulations, and even decisions made within the cooperative movement (Confederation, Federation, Unions). This scenario has in no small measure led to the continual dwindling returns on their investments.

Statement of the Problem

The effects of cooperative management on member welfare have rarely been analyzed with noticeable exception of Rwekaza, Kayunze, & Kimaryo (2018); Ortega *et al.,* (2019); Rahmiyati, Andayani, & Indartuti (2020) and Messabia, Beavoir, & Kooli (2022). Therefore, studying the implication of cooperative management on farm household welfare in the tea sector of western Rwanda is a step in the recognition of the role of cooperatives in poverty alleviation in Rwanda. A few qualitative studies have highlighted that cooperatives in Rwanda are exclusionary and exacerbate existing inequalities in rural communities (Ansoms, 2010; Nabahungu
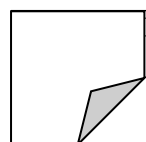
& Visser, 2011; Pritchard, 2013). Yet there are very few quantitative studies that analyze the impact of cooperative membership on members' well-being to complement these qualitative insights. Many authors and commentators such as MoTI (2010); Verhofstadt & Maertens (2014); Mubirigi (2016); and Harelimana & Mukarukaka (2020) have assumed a relationship but have not provided empirical evidence or in-depth analysis to support this thinking; nor have they examined the influence of cooperative management on the welfare of tea farm households. The researcher hopes that accelerated progress in this sector will positively develop Rwanda's economy and play an important role in improving the living conditions of members.

Objective
To determine the influence of Coop financial management in improving farm household welfare in tea cooperatives in Western Rwanda.

Research Hypothesis of the Study
H_0: Cooperative financial management does not have a significant influence on farm household welfare in western Rwanda tea cooperatives.

Relevance of the Study
Apart from providing academic and scientific knowledge for theory testing, the study has provided practical implications for practitioners and policymakers. The results of this research will be a source of reference in policy formulation on how to improve farm household through agricultural cooperative management. Practitioners and the cooperatives community will use the findings of this study to educate themselves conspicuously, on the decisions about where more efforts should be placed to make the cooperative fulfill its mission: improving living conditions of its members.

II. Literature Review
According to (ILO, 2014), cooperative (or co-op henceforth) is an organization of persons, usually of limited means who have voluntarily joined together to achieve a common economic end through the formation of a democratically controlled business organization making equitable contribution to the capital required, and accepting fair share of the risks and benefits of the undertaking.

Cooperatives are good mechanisms for pooling together people's meagre resources with a view to helping them have enough capital for easy business operations and transactions. For that reason, most of Rwandans are doing businesses through cooperative, currently there are 10,025 cooperatives and members estimated to be 4,872,729 people with share capital estimated as Rwf 50 billion. Rwandan cooperatives are structured into primary cooperatives, union, federation and confederation at National level; and they are categorized basing on ten main economic sector including agriculture on which this study is based.

Cooperative Management
According to Mendoza (2011) and as it will be used in this study co-op management is the efficient use of resources within the cooperative as a business organization, focused on meeting the needs of its members, according to the accepted cooperative principles. Zhang (2011) believes that cooperative management represents a basis for solving all managerial problems. According to him, cooperative management provides the conditions for creating a cooperative system based on the efficient use of resources and technologies. Literature disclosed that co-op management is an essential ingredient to the success or failure of cooperatives which in turn can affect the welfare of its members. According to Chloupková (2002), for cooperatives to be a success they should be organized on interests that are really homogenous. Cooperative management encompasses several indicators, such as sound finances, good revenues, marketing, planning and business management skills (Garnevska *et al.,* 2011).

Farm Household Welfare
According to Yuliarmi, Dunggio, & Yas (2020), welfare is a condition of satisfaction of life needs of each individual or society, both material and non-material. According to the Central Statistical Agency (2019), welfare is a condition in which all physical needs of the household can be satisfied by following the standard of living. In the cooperative literature, farm household welfare is a state of positive changes in the living conditions of farmers at the individual and household level that are necessary to bring about scale improvement and growth in all aspects of the cooperative member.

In relation to cooperatives, welfare theory assumes an economically efficient distribution of cooperative resources for the well-being of its members. It provides an understanding of how management efficiency can help members to overcome poverty and undertake investments, and thus increase income and self-employment, which in turn changes their overall welfare. For allocative efficiency to be present,
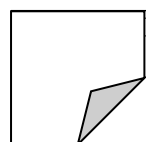
management must be not only strong but also transparent in responding to the needs and projects of members who want to see their socio-economic well-being improved. The welfare theory will be applied to establish how governance, financial management practices and member engagement can be effectively applied to improve co-op member welfare. The importance of cooperatives in the economic growth of nations is documented and most of the studies reviewed show that membership in agricultural cooperatives is beneficial in the context of improving the welfare of farm households (Getnet, & Anullo (2012) and Ahmed & Mesfin (2017) in Ethiopia; Ankrah *et al.,* (2021) in Ghana; Hoken, & Su (2018) in China and Eliott, Elliott, & Van de Sluis (2018) in USA).

Financial management is a recurring issue in any organization, whether for-profit or not. And for good reason, the success of co-operatives in providing benefits to their members depends on their ability to offset collective action problems such as fundraising and distribution. When financial decisions are made according to financial principles, performance will be more than evident. This conclusion has been reached by a number of studies. For example, Muthoni (2016) found a relationship between financial management and SACCO performance in the hotel industry. The financial management variable was measured by cash management, credit risk and dividend policy. The study used a descriptive research design and data was collected using a survey questionnaire from a final sample of 119 respondents selected from 13 SACCOs of five star hotels in Kenya.

In the same context, Bamidele, Adigun, Folayan, & Ibrahim (2018) investigated the impacts of financial management on the performance of cooperative organizations in selected cooperative societies in Osun State, Nigeria. Findings from data collected from 160 respondents selected from 15 cooperatives and analyzed using SEM showed that the performance of the cooperative organization is significantly influenced by financial management practices. A similar argument was raised by Tonui, & Otinga (2019) who revealed that financial management measured by liquidity management, capital adequacy, capitalization and leverage, is a significant predictor of SACCO performance in Kenya.

Research Gap

Therefore the examination of harmonized effect of several components of cooperative management on farm household welfare in a single study should be able to provide a more holistic view on the welfare theory. Also, most reviewed empirical studies have used different indicator variables to measure farm household welfare mostly focusing on income. Methodologically, the use of a multi-industry sample in testing the effects of cooperative management on farm household welfare was evident in previous empirical studies; this study focusses on a single industry: the tea sector. Contextually, most of the studies regarding these cooperative management components have been customarily conducted in other developing countries and none in Rwanda. It is then unclear whether geographical and cultural differentials could allow smooth replication of those studies in Rwanda. Thus, this study goes somewhat towards filling these gaps by testing the welfare theory using governance, financial management and member engagement as component factors of cooperative management in a single study for tea sector in the western part of Rwanda. The farm household welfare was assessed using the consumption per adult equivalent approach.

III. Research Methodology

Research philosophy presents the foundation behind the choice of a methodology. To conduct successful research, a researcher must predict the ontological paradigm of research to establish the nature of knowledge and reality, and the epistemological view of a study to define the standard method available for analysing the nature of knowledge and reality (Bryman & Bell, 2015). The nature of knowledge contains important assumptions in which researchers perceive the world (Rehman & Alharthi, 2016); the ontology and epistemology. Objectivism and constructionism are two opposing ontological assumptions (Bryman & Bell, 2015); while positivism and interpretivism are the two epistemological points (Rehman & Alharthi, 2016).

Positivists assert the world exists knowingly as it is and is detachable from the influence of researchers; its objective is to develop the causes and effects as a universal truth (Rehman & Alharthi, 2016). The interpretivism on the other hand advocates that society-wise norm or standard does not exist thus researchers are necessary to grip the subjective meaning of individual social actions (Bryman & Bell 2007).

This study seeks to investigate the influence of Agricultural Cooperatives Management on Farm Household Welfare: Evidence from Tea Cooperatives in Western Province of Rwanda. To achieve this objective, this study used the positivism philosophy to test the welfare theory through hypothesizing then deducing the observations (Rehman & Alharthi, 2016). The study adopted the positivism stance because hypotheses were tested against the welfare theory to explain the dimensions of cooperative management influencing farm household welfare in tea sector.

Research Design
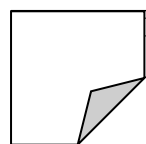
Research design is the blueprint for conducting research and specifying the means to collect and analyze data (Saunders, Lewis, & Thornhill, 2016). To achieve its objectives, the research adopted an explanatory survey research design, which is consistent with the positivist research and theoretical testing method (Rehman & Alharthi, 2016).

Survey research collects primary data to understand and predict certain aspects of human behavior. As a result, survey questions are generally defined to emphasize behaviors, attitudes, opinions, and beliefs (Kotler and Armstrong, 2012; Hair, Celsi, Money, Samouel, & Pages, 2016). The basis of this research is that the influence of cooperative management on farm household welfare is social-wise, and that beliefs can be generalized. Apart from aforementioned practical concerns, this study is coherent with past studies that investigated the effect of cooperative on welfare in general such as Verhofstadt & Maertens (2014), the adoption of survey design to gather data is regarded as appropriate for the research.

Research Area

The study was conducted in the western part of Rwanda comprising of seven districts: Karongi, Ngorero, Nyabihu, Nyamasheke, Rubavu, Rusizi and Rutsiro. The western province was chosen due to its high number of tea co-ops in the country. There are currently 24 tea cooperatives in western province of Rwanda, however, only seven were selected in each district to make the study inclusive.

Sampling Technique

Sampling is the selection process by which a number of individuals are chosen for a study so that they can represent a larger population to which they belong. According to Kline, (2016), the objective of sampling is to obtain population information from the sample. The more representative the sample is of the population, the more generalizable the results of the research are to the population.

In this context, proportional stratification based on the share of the stratum in the total population was applied in order to obtain the minimum sample in each stratum (Cooper & Schindler, 2014). The inclusion criteria for the selection of participants were as follows: (1) be part of a cooperative and have been operational for at least five years; (2) have participated in the last three meetings of the General Assembly.

Sample Size

Sample size is the number of observations included in the research study (Zikmund et al. 2015; Saunders, *et al.,* 2016) and it is the absolute sample size that is important, not its size relative to the population (Saunders, *et al.,* 2016). So, in this study, the suitable sample size was calculated according to the Slovin's formula $n: \dfrac{N}{1+N(e2)}$ Where: n = the required sample size; N= the known population size = 17,561 and e = the level of significance = 0.05.

Table 1: Sample Size Stratification

Location of co-ops	# of co-ops	Target Population	Proportion %	Sample Size
Karongi	1	2,035	11.6	45
Ngorero	1	1,236	7	27
Nyabihu	1	2,710	15.4	61
Nyamasheke	1	3,378	19.2	75
Rubavu	1	1,338	7.6	30
Rusizi	1	4,133	23.5	92
Rutsiro	1	2,731	15.5	61
TOTAL	**7**	**17,561**	**100%**	**391**

Source: Researcher's compilation, 2022   N=17,561 n= 391

To ensure that all sample estimates are contemplative of the population parameters weights for the different strata against the respective sample sizes were tabulated and reported. Weights were computed using $w = \dfrac{n}{N}$, the reciprocal of which was used to weight the sample results to get the overall population magnitude.

Research Instrument and Methods

A survey questionnaire was adopted from previous studies such (e.g. Rwekaza *et al.,* 2018; Oboth, 2020 and Rurangwa, 2020) and adapted to the Rwandan context. The questionnaire comprised of 36 closed-ended questions which are formulated in line with the research objectives. For the independent variables, respondents were asked to provide their perception about the level of satisfaction of the management of their cooperative on an interval (5-point scale). The questionnaire was first be designed in English, then translated

into the local language (Kinyarwanda), followed by a back-translation procedure to check for equivalence between the English and Kinyarwanda versions.

Pre-Testing the Questionnaire and Pilot Study

Both the pre-test and the pilot study are essential elements of questionnaire survey design, and they should be conducted prior to the initial data collection phase or the main survey in order to validate the instrument and ensure that the survey questionnaire is free of errors and ambiguities. Therefore, the aim of the preliminary tests and the pilot study was to avoid confusion and misinterpretations by participants, as well as to identify and detect errors and ambiguities (Kumar, Talib, & Ramayah, 2013). Table 2: presents the Cronbach's alpha coefficients for all constructs obtained in the pilot study.

Table 2: Cronbach's Alpha Coefficients for all Constructs in Pilot Study

S/N	Constructs	Cronbach's Alpha
1	Cooperative governance (CoGov)	0.885
2	Cooperative financial management (CFinM)	0.839
3	Cooperative member engagement (CMEng)	0.811
4	Farm household welfare (FHWel)	0.893

Source: SPSS Results, 2023

All of the measures used in the pilot study showed an adequate reliability with Cronbach's alpha values, which ranged between 0.839 and 0.893 that are considered good.

IV. Findings

This sub-section presents descriptive statistics of constructs, bearing in mind that there are four constructs namely cooperative governance, cooperative financial management and cooperative member engagement (IV) and farm household welfare (DV) for which descriptive statistics are presented. The test generated the mean scores and standard deviation. Mean scores indicate the extent of respondents' variability in the level of cooperative governance. Standard deviation is a measure of dispersion and shows how the data is distributed around the mean. Cooperative Governance (CoG): The survey respondents were asked to rate the level of governance of their cooperative over five years using the following scales 1 = Very Low, 2= Low, 3=Moderate, 4= High and 5= Very High. The construct of cooperative governance consisted of nine (9) items towards the test generated the mean scores and SD.

Table 3: Descriptive Statistics of Measured Items of CoG (n=318)

	Descriptive Statistics			
	N	Mean	Rank	Std. Deviation
CoG1	318	1.7642	1	.54255
CoG2	318	1.8522	2	.74099
CoG3	318	1.9025	4	.74930
CoG4	318	1.9591	5	.72466
CoG5	318	1.8994	3	.74253
CoG6	318	1.9717	6	.75510
CoG7	318	2.0849	9	.80360
CoG8	318	2.0723	8	.80874
CoG9	318	2.0692	7	.67042
Valid N (listwise)	318			

Source: Primary Source (2023)

The results are the mirror image of the level of cooperative governance in selected tea cooperative in the western Rwanda. Form the statistical evidences; the aggregate Mean is 1.95 and the SD 0.72 while each question item varied in its mean and standard deviation. An aggregate mean of 1.95 falls under the **moderate level of cooperative governance**. On the other side, the SD score ranged between 0.54255 and 0.80874 with an average SD of 0.72 greater than 0.5 ($\delta > 0.5$) implying that the perceptions of respondents about the level of the governance of their cooperatives were heterogeneous. The implications are that tea cooperative members are not satisfactorily confident about how their cooperatives are governed. These findings are almost in line with exiting studies (e.g. Artega, 2019; Harelimana, 2020) which emphasized the lack of serious governance mostly

characterised by lack of accountability. Even if there is a certain level of improvement as the results showed a moderate level of governance; a lack of transparency was reported by (MoTI, 2018).

Cooperative Financial Management (CFinM): The survey respondents were asked to rate the level of the financial management of their cooperative over five years using the following scales 1 = Very Low, 2= Low, 3=Moderate, 4= High and 5= Very High. The construct of cooperative financial management consisted of nine items. The results of the respondents' ratings for each item of this construct are reported in Table 4.

Table 4: Descriptive Statistics of Measured items of CFinM (n=318)

	Descriptive Statistics			
	N	Mean	Interpretation	Std. Deviation
CFm10	318	1.8585	2	.76317
CFm11	318	1.9434	5	.78427
CFm12	318	1.9371	4	.65196
CFm13	318	2.0597	8	.68758
CFm14	318	2.0126	7	.78622
CFm15	318	2.0786	9	.80030
CFm16	318	1.8522	1	.74099
CFm17	318	1.8994	3	.75098
CFm18	318	1.9591	6	.73332
Valid N (listwise)	318			

Source: Primary Source (2023)

The results of the statistical data highlight the level of cooperative financial management in selected tea cooperative in the western Rwanda. Form the statistical evidences, the *aggregate Mean* was 1.89 and the *SD* 0.74 while each question item varied in its mean and standard deviation. An aggregate mean of 1.89 falls under the **Moderate level of cooperative financial management**. Furthermore, the *SD* score ranged between 0.54255 and 0.80874 with an average SD of 0.74 greater than 0.5 ($\delta > 0.5$) implying that the perceptions of respondents about the level of the financial management of their cooperatives were heterogeneous. The implications are that tea cooperative members are not satisfactorily confident about how financial resources are managed in their cooperatives. These findings accord very well with those of MoTI (2018) that cooperatives have poor financial management.

The results of the statistical data highlight the level of cooperative financial management in selected tea cooperative in the western Rwanda. Form the statistical evidences, the *aggregate Mean* was 1.654 and the *SD* 0.74 while each question item varied in its mean and standard deviation. An aggregate mean of 1.654 falls under the **Moderate level of cooperative member engagement**.

Table 5: Pearson's Bivariate Relation between Latent Factors.

Correlations		CoGov	CFinM	CM|Eng	FHWel
CoGov	Pearson Correlation	1	.896**	.896**	.905**
	Sig. (2-tailed)		.000	.000	.000
	N	318	318	318	318
CFinM	Pearson Correlation	.896**	1	.908**	.939**
	Sig. (2-tailed)	.000		.000	.000
	N	318	318	318	318
CMEng	Pearson Correlation	.896**	.908**	1	.951**
	Sig. (2-tailed)	.000	.000		.000
	N	318	318	318	318
FHWel	Pearson Correlation	.905**	.939**	.951**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	318	318	318	318
**. Correlation is significant at the 0.01 level (2-tailed).					

Form the statistical findings, a positive significant relationship was noted between Cooperative governance and farm household welfare when the coefficient of correlation r= 0.905 and was significant at 1%. Further, the statistical evidence on cooperative financial management was investigated and a relationship was observed to exist between financial management and farm household welfare among the surveyed group. The financial management is significant with farm household welfare when r= 0.939 and was positive and strongly
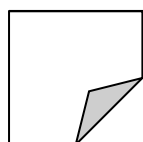
significant at 1%. Last, a positive relationship which appeared between cooperative member engagement and farm household welfare the coefficient of correlation r-0.951 and was significant at 1%.

Based on the results from preliminary analysis, all measured constructs achieved satisfactory validity and reliability, and fulfilled regression assumptions. On this basis, they are suitable for hypotheses testing to be discussed in the next section.

Table 6: Multiple Regression Analysis Results

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.057	.030		3.865	.063
	CoGov	.118	.037	.113	3.219	.001
	CFinM	.399	.039	.380	10.185	.000
	CMEng	.515	.038	.504	13.518	.000
a. Dependent Variable: FHWel						

$Y = 2.057 + 0.118X_1 + 0.399X_2 + 0.515X_3 + e$, this means that if Cooperative Governance, cooperative financial management and cooperative member engagement are zero, then farm household welfare has a value of 2.057. The cooperative governance variable has a regression coefficient value of 0.118, this means that if the other independent variables are fixed or unchanged, then every 1 point or 1% increase in the cooperative variable will increase welfare of tea farm household by 0.118. The coefficient of cooperative governance is positive, leading to the conclusion that there is a positive relationship between cooperative governance and farm household welfare. This implies that the more the value of cooperative governance increases, the more farm household welfare can increase.

The cooperative financial management variable has a regression coefficient value of 0.399, this means that if the other independent variables are fixed or unchanged, then every 1 point or 1% increase in the cooperative financial management variable will increase farm household welfare by 0.399. The coefficient of cooperative financial management is positive, leading to the conclusion that there is a positive relationship between cooperative financial management and farm household welfare. The results imply that the more the value of cooperative financial management increases, the more farm household welfare will increase.

V. Discussions

The following sub-section contains discussions of the findings on Cooperative Financial Management and farm Household Welfare where the results on cooperative financial management do not have a significant influence on the farm household welfare in tea sector of Western Rwanda. Based on the obtained CFinM *t*-value (10.185) greater than the *t*-table (1.986) and the sig value of 0.000 which is less than 0.05, it was concluded that the null hypothesis that cooperative financial management does not influence the farm household was rejected. Therefore, cooperative financial management influences the welfare of tea farm households in the Western Province of Rwanda. This finding implies that the effective of funds mobilization and allocation will always lead to a faire distribution of earnings which in turn will lead to the improvement of welfare for cooperative members. When financial decisions are made according to financial principles, performance will be more than evident. Therefore, the users/owners felt that poor financial management has led to theft, fraud and misuse of funds and properties of cooperative with an impact on their living conditions that they wanted to see improved much better than their counterparts not involved in tea farming.

This result is consistent with that of Bamidele, *et al.,* (2018) in Nigeria; Tonui and Otinga 2019 in Kenya; Wuryani (2019) in Indonesia; and Wajid, *et al.,* (2021) in Pakistan. For instance, Tonui and Otinga (2019) found that financial management is a significant predictor of SACCOs performance in Kenya. One of the performance measures was meeting members' needs. This finding accords with that of the MoTI, 2018 that poor financial management has led to theft, fraud, misuse of funds and properties of cooperatives.

VI. Conclusions And Recommendations

The study revealed that level of cooperative management was moderate leading to a moderate level of farm household welfare. The policy makers and industry practitioners should work hand in hand in order to equip the beneficiaries with financial development. For government agencies, especially the Rwanda Cooperation Agency (CAR); the results of the study revealed that the level of management practices is not satisfactory; the leaders of the cooperatives exploit the cooperatives in their own benefit. The law provides for sanctions against such individuals, but the sanctions do not appear to be coercive and convincing to deter such

malfeasance. Therefore, it is recommended to increase up to 10 years' imprisonment and a fine of more than 5 million Rwandan francs if convicted. In addition, the unregulated remuneration of the members of the co-operative's executive committee currently encourages the embezzlement of funds.

It is recommended that the law address this issue by regulating executive compensation. Co-op members said that they do not fully own their co-ops because incentives and benefits are insufficient and sometimes non-existent. It is recommended that the policy provide guidelines on how profits are to be distributed to its members and that it provides a dividend on share capital to its members. Within this context, the government should put in place mechanisms for classification of the performing and non-performing cooperatives; the government should trough RCA to institutionalize results and performance-based management of cooperatives 'Imihigo'.

Recommendations for Further Research

It was demonstrated that the combination of corporate governance, financial management and member engagement in one study is helpful to apprehend the holistic view of the welfare theory in Rwanda as a less researched country in terms of cooperative management-welfare nexus. It will be interesting for future research to test and explore the model developed for this study in other culture settings, like other countries from the East African Community (EAC). This will be valuable in providing evidence concerning the robustness of the research model across different cultural settings. It is assumed that the robustness of the model may vary across different cultural settings and thus there is a need for an empirical test. Additional investigations in different regions in developing countries can improve the validity of operational and dynamic capability multidimensional measures.

References

Abro ZA, Alemu BA, Hanjra MA (2014). Policies for agricultural productivity growth and poverty reduction in rural Ethiopia. *World Dev* 59:461–474, http://dx.doi.org/10.1016/j.worlddev.2014.01.033.

Ahmed, M. H., and Mesfin, H.M. (2017). The impact of agricultural cooperatives membership on the wellbeing of smallholder farmers: empirical evidence from eastern Ethiopia. *Agricultural and Food Economics,* 5(6), pp.1-20

Hair, J. F., Celsi, M., Money, A. H., Samouel, P., & Page, M.J. (2016). *Essentials of business research methods* (3rded). Armonk, NY: Sharpe.

Hair, J.F., Babin, B. J., & Krey, N. (2017). Covariance-based structural equation modelling in the Journal of Advertising: Review and Recommendations. *Journal of Advertising*, 46(1), 163-177. Doi: http://dx.doi.org/10.1080/00913367

Heggestad, E. D., Scheaf, D. J., Banks, G. C., Hausfeld, M. M., Tonidandel, S., & Williams, E. B. (2019). Scale adaptation in organizational science research: A review and best-practice recommendations. *Journal of Management*, 45, 2596–2627.

Hidayat, K. , Suharyono, Kumadji, S. and Solimun (2014). The effect of members' participation on business self-reliance and members welfare (Study on Cooperative Corporation in East Java Indonesia). *IOSR Journal of Business and Management (IOSR-JBM)*, 16 (6), pp.15-21

Keasey, K., Thompson, S. Wright, M. (1997). *The Corporate Governance Problem – Competing Diagnoses and Solutions, in Corporate Governance: Economic and Financial Issues*, Oxford: Oxford University Press, 18pp

Kevin, Shimon, Elijah, & Leah (2017). How important are High Response Rates for College Surveys. *The Review of High Education,* 40(2), 245-265

Kumar, M., Talib, S. A., & Ramayah, T. (2013). *Business Research Methods*. Selangor, Malaysia: Oxford University Press.

Ministry of Trade and Industry (2018). National Policy on Cooperatives in Rwanda: *"Toward Private Cooperative Enterprises and Business Entities for Socio-Economic Transformation."* Author, Kigali-Rwanda

Mukarugwiza, E. (2009). The hope for rural transformation: A rejuvenating cooperative movement in Rwanda, *coop-Africa working paper No 12. ILO Publication*.

Nabahungu, N.L., and S.M. Visser (2011). Contribution of wetland agriculture to farmers' livelihood in Rwanda. *Ecological Economics* 71(15): 4-12

National Agricultural Export Development Board (NAEB) (2020). Annual Report 2019-2020. Author: Kigali-Rwanda

Ortmann, G. F. and King, R. P. (2007). Agricultural Co-operatives II: Can they Facilitate Access of Small-Scale Farmers in South Africa to Input and Product Markets? *Agrekon* 46(2): pp. 219-244.
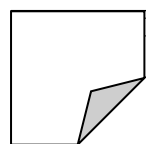
Puri, D.L., and Walsh (2018). Impact of good governance on performance of cooperatives in Nepal. *Management & Marketing*, 16(2), pp. 208-224

Rahman, A.A. & Alharthi, K. (2016). An Introduction to Research Paradigms. *International Journal of Educational Investigations*, 3(8), 51-59.

Rwanda Cooperatives Agency (RCA), (2020). Quarter one report 2020-2021. Author: Kigali-Rwanda

Rwanda Cooperative Agency (2012). Rwanda Cooperative Agency (RCA) Annual Report. Retrieved August 30, 2021, from http://www.shakisha.com/en/home/ads/view/610.html

Rwekaza, G. C., Kayunze, K.A. , and Kimaryo, L. P. (2018). Members' participation in decision making in primary agricultural marketing cooperatives in Tanzania, evidence from selected primary cooperatives of Bukoba and Moshi districts. *International journal of academic research and reflection*, 6(2), pp. 1-35

Rwekaza G.C and Anania, P. (2018). Co-operative Decision Making Structure and Its Effectiveness in Promoting Sustainable Co-operative Organizations in Tanzania: A Case of Selected Agricultural Marketing Co-operatives in Shinyanga Region. *Journal of Arts and Social Sciences*. 9(1), 320. DOI: 10.4172/2151-6200.1000320.

Stadler, M., Cooper-Thomas, H. D., & Greiff, S. (2017). A primer on relative importance analysis: Illustrations of its utility for psychological research. *Psychological Test and Assessment Modeling*, 59, 381–403.

Tonui, C.K., and otinga, H.N. (2019). Effect of financial management practices on financial performance of savings and credit cooperative societies in Kisumu county, Kenya. *The Strategic Journal of Business and Change Management, 6(1), pp. 699-718.*

Tortia, E., Valentinov, V. and Iliopoulos, C. (2013). Agricultural cooperatives. *Journal of Entrepreneurial and Organizational Diversity,* 2, pp. 23–36.

US Agency for International Development USAID (2013). *Cooperative performance index: Field results and analysis*. USAID Report, Global Communities, Silver Spring: USA

Verhofstadt, E., and Maertens, M. (2014a). Smallholder cooperatives and agricultural performance in Rwanda: do organizational differences matter? *Agricultural economics*, 45(S1), 39-52.