Research Article

Measuring the Sustainability of Agricultural Cooperatives in West Shewa Zone, Oromia: A Scorecard Approach

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Abstract

This research analyses the economic, social, and environmental dimensions of cooperative sustainability, evaluates the sustainability levels of selected cooperatives, and examines the competitive strategies they adopt. A field survey method with multi-stage sampling was used to select 100 respondents, employing a probability proportionate to size approach. The analysis utilized a sustainability scorecard incorporating combined environmental, economic, and social performance indicators, with the Morris Inequality Index applied for ranking cooperatives based on sustainability levels. Results indicate that while agricultural cooperatives exhibit strong economic sustainability and moderate social sustainability, their environmental sustainability remains weak, placing them at moderate to low overall sustainability levels. These findings are consistent with the sustainability strategies adopted by the cooperatives. The study highlights the urgent need for a transformative cooperative economic model that addresses economic challenges and incorporates strategies to improve social and environmental sustainability.

Key words: Sustainability, Economic, Social, environmental, Balanced Score Card

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1. Introduction

Cooperatives, though rooted in an old concept, are increasingly relevant in addressing the development challenges and opportunities of the coming decades. As the United Nations prepares to adopt the Sustainable Development Goals (SDGs), which aim to create a global framework for progress, there is a unique opportunity to eradicate extreme poverty, promote social inclusion, and align economic and social goals. Cooperatives can play a pivotal role in achieving these aims. Conventional markets and government initiatives often fail to reach many of the world's poor and marginalized populations, but cooperatives and other social economy enterprises have demonstrated their capacity to bridge this gap.

A study by the International Labour Organization (ILO) and the International Cooperative Alliance (ICA), titled *"Cooperatives and Sustainable Development Goals,"* emphasizes the significant contributions of cooperatives to sustainable development and highlights their potential to do even more. These contributions range from generating employment and promoting gender equality to providing clean energy, financial inclusion, food security, and social protection. Many of the world's working poor, hungry, and excluded individuals are rural workers, often smallholder farmers. Cooperatives have a strong history of addressing various forms of exclusion in rural areas and beyond.

Present across all sectors of the economy, cooperatives are flexible and adaptable to diverse contexts. They align with the three pillars of sustainable development: economic growth, social equity, and environmental sustainability. As such, cooperatives are enterprises well-suited for the future, complementing traditional markets and government efforts. This role was explicitly recognized in the Rio+20 Conference outcome document, *"The Future We Want."* It is vital for the international community to consider cooperatives when designing strategies and mechanisms for achieving the SDGs (ILO, 2014).

Research indicates that cooperative enterprises across various sectors have demonstrated resilience and growth during financial crises, a trend supported by survey findings. Among respondents, 68% observed an increase in the number of cooperatives in their country or region over the past decade, 63% noted a rise in individual cooperative memberships, and 57% reported growth in cooperative employment (ICA, 2011).

Historically, cooperatives faced criticism for inefficiency, discrimination against the poor and women, and corruption. Their success and sustainability have varied by country and sector. As recently as 1993, a World Bank review deemed cooperatives unviable due to flawed policy frameworks, excessive government intervention, and inadequate farmer training (Rondot, 2004). However, major global shifts such as the end of the Cold War, the implementation of Structural Adjustment Programmes (SAPs), and changes in political economies significantly influenced the structure and organization of cooperatives.

Additionally, evidence suggests that national governments, international organizations, and NGOs increasingly favor group-based initiatives as a model for rural development and poverty alleviation. These projects have become central to implementing development efforts and addressing poverty (Grootaert, 1998; Harris, 1997; World Bank, 1997).

Despite their historically limited performance, the World Bank (WB) recognizes cooperatives as "the preferred form of organization, and perhaps the only organization with which rural people are familiar" (Hussi, 1993). National governments play a crucial role in shaping policies to support the growth and restructuring of cooperatives. However, the unpredictable nature of commodity markets significantly influences cooperative success. Hedlund (1988), in his historical review of a coffee cooperative in Kenya, describes cooperatives as navigating between two opposing forces: local participation, which fosters member influence, order, and continuity, and the global market, characterized by volatility, disorder, and discontinuity. For instance, while cooperatives may secure better prices for coffee and

boost production, the depressed prices of the global coffee market mean smallholder farmers often see little financial benefit. This is not a failing of the cooperative itself but a consequence of broader structural issues in the global economic environment. The delicate balance between these pressures is key to a cooperative's performance and sustainability.

Modern cooperatives in developing countries face a host of legacy issues and new challenges, including conflict, the HIV/AIDS epidemic, rural poverty, underdevelopment, and inequitable trade policies. These factors jeopardize their viability as commercial enterprises. Many cooperatives operate in environments with declining terms of trade, restricted market access, and unfair agricultural trade practices. For example, subsidized commodities from industrialized countries frequently displace local producers, eroding farmers' competitive advantage and limiting their ability to thrive in local or national markets. Furthermore, the new global food system disproportionately harms smallholder farmers, threatening their livelihoods. Economically, cooperatives are seen as vehicles for integrating small-scale farmers into local, regional, and global markets, bridging rural societies with the larger economy. However, many restructured cooperatives are still in their infancy, making it difficult to predict their ability to overcome these significant challenges.

Under-capitalization and weak financial, accounting, and management skills persist as obstacles for cooperatives. In some countries, governments maintain a paternalistic relationship with cooperatives, while in others, cooperatives rely heavily on NGOs for credit, training, and technical support. An unresolved issue is the inherent tension between the social and economic objectives of cooperatives (Jiggens, 1988; Lele, 1981; Braverman, 1991). The challenge lies in balancing poverty alleviation, social welfare promotion, and equity with building competitive, profit-oriented private sector institutions. This dilemma remains a significant hurdle for cooperatives striving for sustainability and growth.

Cooperative revitalization programs in countries like Ethiopia place a strong emphasis on sustainability, incorporating business skill training for leadership and management teams. By design, cooperatives are socially responsible and environmentally friendly business entities. However, they often fall short in fully advancing a comprehensive sustainability agenda. It is now crucial to evaluate the sustainability of cooperatives across three key dimensions: economic, social, and environmental. This research study aims to address this gap and explore cooperative sustainability through an integrated approach.

The research specifically aims to:

1. Analyze the economic, social, and environmental dimensions of cooperative sustainability.
2. Assess the sustainability levels of cooperatives by ranking them within the study area.
3. Examine the sustainability-oriented competitive strategies adopted by the sample cooperatives.

2. Review of Literature

Cooperatives and Sustainability

Sustainability refers to the capacity to support, maintain, or endure. Since the 1980s, the concept has evolved to encompass the integration of environmental, economic, and social dimensions. Cooperatives, as forerunners of modern sustainability, inherently place human needs at their core, enabling them to address today's sustainability challenges while fostering a unique form of shared value.

Todor Ivanov, Secretary-General of Euro Coop, highlights this connection, stating: "With concern for the community as a founding principle, sustainability underpins everything co-operatives do. By looking beyond the short-term goal of maximizing profit regardless of the consequences, many are beginning to view our business model as a viable alternative to traditional forms."

The International Co-operative Alliance (ICA) recognizes the critical role of cooperatives in sustainability, with one of the goals of its *Blueprint for a Co-operative Decade* being to position cooperatives as leaders in building sustainability. The cooperative sector must communicate and demonstrate that sustainability is an intrinsic aspect of its nature and that cooperative enterprises contribute positively to sustainable development.

To support this, the ICA commissioned a global scan of cooperatives across various sectors and regions to evaluate their connection to sustainability. The report found that cooperatives integrate sustainability into their operating models and values, reinforcing their capacity to contribute meaningfully to sustainable development. The United Nations has acknowledged this potential; in a resolution adopted in December 2001, the UN urged governments to promote and support cooperatives, particularly as a means for individuals in poverty or vulnerable groups to participate voluntarily in their establishment and development.

This commitment was further emphasized at the ICA's annual conference held in Cape Town in November 2013. A presentation at the event reported on a partnership project between Community Research Connections and the Sustainability Solutions Group, which examined the relationship between the cooperative model and sustainable development. The findings underscored the deep alignment between cooperatives and the principles of sustainability.

This research utilized a distinctive methodology that compared key concepts derived from foundational literature on sustainability to two main sources: (1) the principles of cooperatives and (2) the websites and annual reports of cooperatives globally. While this global scan provided valuable insights, it was limited by the inability to conduct on-the-ground visits to validate whether cooperatives are truly operating sustainably. Nevertheless, the study serves as an important initial step in assessing whether the cooperative model inherently promotes sustainability thinking and communication.

Key observations from the research include:

- Cooperatives actively engage with the social, economic, and environmental dimensions of sustainability.
- The cooperative principles are most closely aligned with the social dimensions of sustainability.
- Cooperatives' websites and annual reports primarily emphasize social aspects of sustainability, though their sustainability efforts related to Principles 1 (voluntary and open membership), 2 (democratic member control), and 3 (member economic participation) are understated.
- A sustainable cooperative is defined as one that operates as an economically viable business, fully implements the seven cooperative principles with social responsibility, and preserves or regenerates the ecosystem it inhabits.
- Cooperative associations lag behind individual cooperatives in advancing a comprehensive sustainability agenda.
- Among the cooperative principles, those most strongly communicated were Principle 5 (education, training, and knowledge sharing), Principle 6 (cooperation among cooperatives), and Principle 7 (sustainable community development).
- Cooperative websites prominently highlighted sustainability concepts, while annual reports framed these concepts within the context of operational matters (e.g., business activities).

Research gap

The literature indicates a scarcity of studies on the sustainability of cooperatives, particularly comprehensive research integrating economic, social, and environmental dimensions. In the Ethiopian context, such research is notably absent. This gap underscores the importance of the current study, which aims to address this deficiency by examining cooperative sustainability holistically.

3. Materials and Methods

3.1. Description of Study Area

The West Shewa Administrative Zone is one of the 18 zones in the Oromia Regional State of Ethiopia. Geographically, it is located between 8°56'N to 9°56'N latitude and 37°17'E to 38°45'E longitude. The zone spans approximately 310 km from north to south and 200 km from east to west.

According to the 1999 population and housing census, with projections made in 2002, the zone's population was estimated at 2,134,359. Of this total, 1,736,244 individuals (88.7%) reside in rural areas, while 221,634 individuals (11.3%) live in urban areas.

3.2. Materials

The study employed a survey method using both quantitative and qualitative approaches. Primary data were collected from cooperative members, Key Informant Interviews (KIIs), and Focus Group Discussions (FGDs). A semi-structured interview schedule was developed and administered as the main data collection instrument. Additionally, a checklist was used to gather information from KIIs conducted with officials from the Woreda and Zonal Cooperative Promotion Bureau, as well as from FGDs involving management committee members of selected cooperatives.

3.3. Methodology

Since the study aimed to analyze the sustainability of cooperatives, a field survey method was employed. A multi-stage sampling technique was used to select the study area, cooperatives, and respondents.

- First Stage: Out of the 18 woredas in the West Shewa Zone, Dendi woreda was chosen due to its high concentration of agricultural cooperatives.
- Second Stage: From the 23 cooperatives in Dendi woreda, six were selected based on criteria such as larger membership size, accessibility, and the availability of data.

The sample size for respondents was determined using Yemane Taro's (1967) formula, as shown below:

$$n = \frac{N}{1 + N(e)^2}$$

$n = 7611/1 + 7611\ (0.1)^2$

$n = 7611/77.11 = 98.70$, after rounding off , $n = 100$, .95% confidence level and $p = 0.5$ are assumed.

Hence, the sample size is 100 and adopting members from each cooperative were selected.

Table 1: Sampling frame

S.No	Name of the Cooperative	Male	Female	Total	Sample
1	Gabaa Dilbataa	1482	83	1565	21
2	Oolankomii	1477	45	1522	20
3	Waamuraa Meexxii	1189	51	1240	16
4	Boddaa	1053	61	1114	15
5	Asgorii	1095	80	1175	15
6	Barooda Laga Baatuu	936	39	975	13
	Total	7232	379	7611	100

Source: Dendi Woreda Cooperative Promotion Office, 2016.

3.4. Method of data Analysis

The data were analyzed using both quantitative and qualitative approaches. The sustainability of cooperatives was evaluated using the Sustainability Scorecard Approach developed by the Measuring Cooperative Difference Research Network (MDCRN), Canada. This approach employs a combined set of environmental, economic, and social performance indicators to assess sustainability.

For descriptive analysis, statistical tools such as frequency, percentage, and mean were utilized. Additionally, to analyze and assess the sustainability levels for ranking cooperatives, the Morris Inequality Index was applied. This index is one of the latest formal models used globally to evaluate developmental conditions, such as sustainability.

In the Morris model, available information for each cooperative was used to determine its sustainability level based on selected indicators. The mean of the index sum was calculated using the development index analysis method, which provided a simple yet robust approach to ranking the cooperatives. The calculation process for the Morris Inequality Index is as follows:

$$Y_{ij} = \frac{X_{ij} - X_{ij}(\min)}{X_{ij}(\max) - X_{ij}(\min)} \times 100$$

Where, Xij (min) and Xij (max) are the lowest and highest values the variable X can attain, respectively. Yij is Morris Inequality Index for each variable and Xij is amount of variable in each cooperative.

The important point in this model is that the applied indexes must be homodirection. The main developmental index may calculate through this formula:

$$DI = \frac{\sum_{i=1}^{n} y_{ij}}{n}$$

Where, n is the number of the studied indexes and DI is the main developmental index.

The Morris Inequality Index ranges from 0 to 100, with values closer to 100 indicating a higher level of development or sustainability. The results from the Morris Inequality Index showed the following:

- Economic Sustainability of agricultural cooperatives, based on 36 attributes, ranged from a minimum of 20% to a maximum of 87%. This means that the sampled cooperatives were assigned the lowest and highest economic sustainability indexes, respectively.
- Social Sustainability of agricultural cooperatives, estimated from 25 attributes, ranged from a minimum of 20% to a maximum of 81%. Thus, the cooperatives were ranked from the lowest to the highest social sustainability index.
- Environmental Sustainability of agricultural cooperatives, based on 29 attributes, ranged from a minimum of 17% to a maximum of 53%. As a result, cooperatives were assigned the lowest and highest environmental sustainability indexes accordingly.

These findings highlight the varying levels of sustainability across the different dimensions (economic, social, and environmental) among the agricultural cooperatives in the study.

The overall sustainability of agricultural cooperatives was assessed based on the average score percentage across the three sustainability dimensions—economic, social, and environmental. The combined score ranged from a minimum of 19% to a maximum of 69%, with cooperatives assigned the lowest and highest sustainability indexes, respectively.

Separate indices were developed for each sustainability dimension to determine the level and rank of sampled cooperatives. By calculating the average score percentage, the sustainability level and ranking of cooperatives were established. Using the development coefficient for each dimension and the overall cooperative sustainability, agricultural cooperatives were classified into five levels:

- Sustainable (80-100)
- Slightly Sustainable (60-79)
- Moderate (40-59)
- Slightly Unsustainable (20-39)
- Unsustainable (0-19)

Ranking was assigned based on the cooperatives' percentage scores for each sustainability dimension and the overall cooperative sustainability. Sustainability-oriented competitive strategies were examined using descriptive statistics, based on responses from the respondents. The sequence/order of cooperatives can be observed as listed in Table 1 of the sampling process.

4. Results and Discussion

The economic dimension of cooperative sustainability for the sampled agricultural cooperatives, as assessed by member respondents, is presented in Table 2. Based on the findings, Coop 1, Coop 2, Coop 4, and Coop 6 were identified as having a high level of economic sustainability, while Coop 3 and Coop 5 were classified at a medium level. Overall, the majority of respondents (64%) indicated that their cooperatives operate at a high level of sustainability in terms of the economic dimension.

Table 2: Economic Sustainability Dimension of Cooperatives

Coop / Level	Coop 1	Coop 2	Coop 3	Coop 4	Coop 5	Coop 6	All coops
Low (1-60)	-	-	-	-	-	-	-
Medium (61-120)	0 (0.0)	0 (0.0)	16 (44.4)	01 (02.8)	15 (41.7)	04 (11.1)	36 (36.0)
High (121-180)	21 (32.8)	20 (31.3)	0 (0.0)	14 (21.9)	0 (0.0)	09 (11.1)	64 (64.0)
Total	21	20	16	15	15	13	100

Figures in brackets are percentage to row total

Table 3: Social Sustainability Dimension of Cooperatives

Coop / Level	Coop 1	Coop 2	Coop 3	Coop 4	Coop 5	Coop 6	All coops
Low (1-42)	0 (0.0)	0 (0.0)	16 (43.2)	01 (02.7)	15 (40.5)	05 (13.5)	37 (37.0)
Medium (43-82)	21 (33.3)	20 (31.7)	0 (0.0)	14 (22.2)	0 (0.0)	08 (12.7)	63 (63.0)
High (83-125)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Total	21	20	16	15	15	13	100

Figures in brackets are percentage to row total

Table 3 presents the social dimension of cooperative sustainability for the sampled agricultural cooperatives, as assessed by member respondents. According to the findings, Coop 1, Coop 2, Coop 4, and Coop 6 were rated at a medium level of sustainability in the social dimension, while Coop 3 and Coop 5 were categorized at a low level. Overall, the majority of respondents (63%) indicated that their cooperatives operate at a medium level of sustainability in terms of the social dimension.

Table 4: Environmental Sustainability Dimension of Cooperatives

Coop / Level	Coop 1	Coop 2	Coop 3	Coop 4	Coop 5	Coop 6	All coops
Low (1-48)	21 (31.3)	20 (29.9)	01 (01.5)	15 (22.4)	02 (03.0)	08 (11.9)	67 (67.0)
Medium (49-98)	0 (0.0)	0 (0.0)	15 (45.5)	0 (0.0)	13 (39.4)	05 (15.2)	33 (33.0)
High (99-145)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Total	21	20	16	15	15	13	100

Figures in brackets are percentage to row total

Table 4 displays the environmental dimension of cooperative sustainability for the sampled agricultural cooperatives, as evaluated by member respondents. According to the findings, Coop 3 and Coop 5 were rated at a medium level of sustainability in the environmental dimension, while Coop 1, Coop 2, Coop 4, and Coop 6 were rated at a low level. Overall, the majority of respondents (67%) indicated that their cooperatives operate at a low level of sustainability in terms of the environmental dimension.

Table 5: Overall Coop Sustainability of sampled cooperatives

Coop / Level	Coop 1	Coop 2	Coop 3	Coop 4	Coop 5	Coop 6	All coops
Low(1-42)	0 (0.0)	0 (0.0)	16 (55.2)	0 (0.0)	12 (41.4)	01 (03.4)	29 (29.0)
Medium (143-285)	21(29.6)	20 (28.2)	0 (0.0)	15(21.1)	03 (04.2)	12 (16.9)	71 (71.0)
High (285-427)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Total	21	20	16	15	15	13	100

Figures in brackets are percentage to row total

Table 5 presents the overall cooperative sustainability of the sampled agricultural cooperatives, as assessed by member respondents. The results indicate that Coop 1, Coop 2, Coop 4, and Coop 6 are rated at a medium level of overall sustainability, while Coop 3 and Coop 5 are classified at a low level. Overall, the majority of respondents (71%) opined that their cooperatives operate at a medium level of overall cooperative sustainability.

Table 6: Economic Sustainability level and ranking of sampled cooperatives

Level of Economic Sustainability	**Agricultural Coops (% SCORE / RANK)**
Sustainable (80-100)	Coop 1 (87% / 1), Coop 2 (84% / 2)
Slightly Sustainable (60-79)	Coop 6 (69% / 3), Coop 4 (62% / 4)
Moderately Sustainable (40-9)	Coop 5 (42% / 5)
Slightly Unsustainable (20-39)	Coop 3 (20% / 6)
Unsustainable (0-19)	----

Figures in brackets are percentage score and rank of agricultural coops

Cooperatives are categorized into different levels of economic sustainability. The percentage scored and rank are given to each cooperative under study. Table 6 shows the economic sustainability level and ranking of cooperatives. Coop 1 (87%) and Coop 2 (84%) are at 'sustainable' range which are ranked as first and second respectively; Coop 6 (69%) and Coop 4 (62%) are at 'slightly sustainable' range which are ranked as third and fourth respectively followed by Coop 5 (42%) as 'moderately sustainable' ranked fifth, and Coop 3 (20%) as 'slightly sustainable' ranked sixth among achieved level of sustainability of all sampled cooperatives.

Table 7: Social Sustainability level and ranking of sampled cooperatives

Level of Social Sustainability	**Agricultural Coops (% Score / Rank)**
Sustainable (80-100)	Coop 6 (81% / 1)
Slightly Sustainable (60-79)	Coop 1 (66% / 2), Coop 2 (62% / 3)
Moderately Sustainable (40-59)	Coop 4 (53% / 4), Coop 5 (41% / 5)
Slightly Unsustainable (20-39)	Coop 3 (20% / 6)
Unsustainable (0-19)	-----

Figures in brackets are percentage score and rank of agricultural coops

As per the analysis procedures stated in the method of data analysis the cooperatives are categorized into different levels of social sustainability. The percentage scored and rank are given to each cooperative under study. Table 7 shows the social sustainability level and ranking of cooperatives. Coop 6 (81%) is at 'sustainable' range which is ranked first; Coop 1 (66%) and Coop 2 (62%) are at 'slightly sustainable' range which are ranked as second and third respectively followed by Coop 4 (53%) and Coop 5 (41%) as 'moderately sustainable' ranked fourth and fifth, and Coop 3 (20%) as 'slightly sustainable' ranked sixth among achieved level of sustainability of all sampled cooperatives.

Table 8: Environmental Sustainability level and ranking of sampled cooperatives

Level of Environmental Sustainability	**Agricultural Coops(% SCORE / RANK)**
Sustainable (80-100)	------
Slightly Sustainable (60-79)	------
eModerately Sustainable (40-59)	Coop 1 (53% / 1), Coop 2 (52% / 2)
Slightly Unsustainable (20-39)	Coop 4 (35% / 3), Coop 5 (34% / 4), Coop 6 (26% / 5)
Unsustainable (0-19)	Coop 3 (17% / 6)

Figures in brackets are percentage score and rank of agricultural coops

The cooperatives are categorized into different levels of environmental sustainability based on their percentage scores and ranks. Table 8 presents the environmental sustainability level and ranking of the cooperatives.

- Coop 1 (53%) and Coop 2 (52%) fall within the 'moderately sustainable' range, ranked first and second, respectively.
- Coop 4 (35%), Coop 5 (34%), and Coop 6 (26%) are categorized as 'slightly unsustainable,' ranked third, fourth, and fifth, respectively.
- Coop 3 (17%) is in the 'unsustainable' range and ranked sixth.

These rankings highlight the varying levels of environmental sustainability achieved by the sampled cooperatives.

Table 9: Coop Sustainability level and ranking of sampled cooperatives

Level of Coop Sustainability	Agricultural Coops (% SCORE / RANK)
Sustainable (80-100)	------
Slightly Sustainable (60-79)	Coop 1 (69% / 1), Coop 2 (66% / 2)
Moderately Sustainable (40-59)	Coop 6 (59% / 3), Coop 4 (50% / 4)
Slightly Unsustainable (20-39)	Coop 5 (39% / 5)
Unsustainable (0-19)	Coop 3 (19% / 6)

Figures in brackets are percentage score and rank of agricultural coops

According to the analysis procedures outlined in the method of data analysis, the cooperatives are categorized into different levels of overall cooperative sustainability. The percentage scores and ranks for each cooperative are provided. Table 9 shows the overall cooperative sustainability level and ranking of the cooperatives.

- Coop 1 (69%) and Coop 2 (66%) are in the 'slightly sustainable' range, ranked first and second, respectively.
- Coop 6 (59%) and Coop 4 (50%) fall within the 'moderately sustainable' range, ranked third and fourth, respectively.
- Coop 5 (39%) is classified as 'slightly unsustainable,' ranked fifth.

- Coop 3 (19%) is categorized as 'unsustainable,' ranked sixth.

These rankings reflect the varying levels of overall sustainability achieved by the sampled cooperatives.

Table 10: Cooperative Sustainability Level & Ranking - Score Card Results

Response / Coop	Economic sustainability			Social sustainability			Environmental sustainability			overall coop sustainability		
	Score (%)	Level	Rank	Score (%)	Level	Rank	Score (%)	Level	Rank	Score (%)	Level	Rank
Coop 1	87	S	1	66	SS	2	53	MS	1	69	SS	1
Coop 2	84	S	2	62	SS	3	52	MS	2	66	SS	2
Coop 3	20	SUS	6	20	SUS	6	17	US	6	19	US	6
Coop 4	62	SS	4	53	MS	4	35	SUS	3	50	MS	4
Coop 5	42	MS	5	41	MS	5	34	SUS	4	39	SUS	5
Coop 6	69	SS	3	81	S	1	26	SUS	5	59	MS	3

S-Sustainable (80-100)*; SS-Slightly Sustainable* (60-79)*; MS-Moderately Sustainable* (40-59)*; SUS-Slightly Unsustainable* (20-39)*; US-Unsustainable* (0-19)

Table 10 shows the comprehensive coop sustainability by dimension level and ranking of cooperatives. As far as economic sustainability dimension is concerned, Coop1 is in the most sustainable condition with sustainable level and Coop 3 is the least with the level slightly unsustainable condition, whereas social sustainability dimension the most sustainable is Coop 6 with sustainable level and the least sustainable is Coop 3 with slightly sustainable level. With regard to environmental sustainability dimension Coop 1 is found to be the most sustainable condition with moderate sustainable level and Coop 3 is in the least sustainable condition with unsustainable level.

As for comprehensive coop sustainability, Coop 1 (69%) is at slightly sustainable level with first rank followed by Coop 2 (66%) at slightly sustainable level with second rank, while Coop 3 is at unsustainable level with sixth rank among achieved level of sustainability of all sampled cooperatives

As far as competitive sustainability strategies adopted by sampled cooperatives is concerned, cooperatives sustainability level is associated with strategies practiced. Five different sustainability strategies viz., safe, credible, efficient, innovation, and transformation have been used to elicit information on sustainability strategies adopted.

The study outlines five key strategies designed to enhance the sustainability and competitiveness of cooperatives:

1. 'Safe' Strategy: This strategy concentrates on minimizing and managing risks, helping the cooperative maintain stability during uncertain or challenging times.
2. 'Credible' Strategy: Aimed at addressing concerns related to reputation and image, this strategy focuses on building trust and credibility with stakeholders.

3. 'Efficient' Strategy: This approach is centered around improving productivity and operational efficiency within the cooperative.
4. 'Innovative' Strategy: The goal of this strategy is to differentiate the cooperative's products and services in the market through creativity and new ideas.
5. 'Transformative' Strategy: This strategy seeks to create new markets by altering existing institutional frameworks, leading to significant change and growth.

Responses from cooperative members, Key Informant Interviews (KIIs), and Focus Group Discussions (FGDs) were collected to assess the application and impact of these strategies.

Coop 1, Coop 2, and Coop 4 practice at a high level followed by Coop 5 and Coop 6 at moderate level, and Coop 3 at low level. The overall cooperatives on adoption of sustainability strategy 'safe' is 55 percent at high level followed by 32 percent at moderate level.

- Coop 1, Coop 2, and Coop 4 practice at a high level followed by Coop 6 at moderate level, Coop 3 and Coop 5 at low level. The overall cooperatives on adoption of sustainability strategy 'credible' is 59 percent at high level followed by 21 percent at moderate level, and 20 percent at low level.

- Coop 1, Coop 2, and Coop 4 practice at a high level followed by Coop 5 and Coop 6 and Coop 3 at moderate level. The overall cooperatives on adoption of sustainability strategy 'efficient' are 61 percent at high level followed by 32 percent at moderate level.

- Coop 1and Coop 2 practice at a high level followed by Coop 3, Coop 4, Coop 5 and Coop 6 at moderate level. The overall cooperatives on adoption of sustainability strategy 'innovation' is 50 percent at high level followed by 40 percent at moderate level.

- Coop 1, Coop 2, and Coop 4 practice at a high level followed by Coop 5 and Coop 6 and Coop 3 at moderate level. The overall cooperatives on adoption of sustainability strategy 'transformation' are 60 percent at high level followed by 37 percent at moderate level.

The key informants and Focus Group Discussion (FGD) participants shared similar findings regarding the sustainability strategies, though with some variations. For the safe, efficient, and innovative strategies, Coop 3 exhibited moderate and low levels of adoption. Specifically, 25% to 38% of the respondents indicated a low level of adoption, while 62% to 75% reported a moderate level. As for the innovative strategy, Coop 5 demonstrated both moderate (60%) and low (40%) levels of adoption. Coop 6, on the other hand, showed both high and moderate levels of adoption for the innovative (69.2% high and 30.8% moderate) and transformative (76.9% high and 23.1% moderate) strategies.

5. Conclusion and Recommendations

The agricultural cooperatives in the study area are engaged in economic, social, and environmental dimensions of cooperative sustainability. Based on the analysis, it can be concluded that these cooperatives show relatively strong economic sustainability and moderate social sustainability. However, they face challenges in environmental sustainability, resulting in a moderate to low level of sustainability overall.

The sustainability level and ranking of cooperatives align with the sustainability strategies they have adopted. To enhance cooperative sustainability, a new and dynamic economic model must be developed, addressing both economic and environmental challenges, alongside social issues. Achieving this requires adopting effective sustainability strategies at the right time.

Recommendations for Improvement:

1. Alignment of Cooperative Principles with Sustainability: The principles and values of cooperatives must be closely aligned with the economic, social, and environmental dimensions of sustainability. Cooperatives will be most sustainable when they are economically viable, socially responsible, and contribute to the regeneration of ecosystems.
2. Improvement of Sustainability Levels: Cooperatives at moderate and low levels of sustainability must adopt targeted strategies to reach higher sustainability levels. Specifically, Coop 3, ranked lowest, needs to implement effective sustainability strategies, while Coop 5 and Coop 6 should focus on improving their adoption of all sustainability strategies. Coop 4 should concentrate on improving its innovative strategy.
3. Economic Sustainability: Agricultural cooperatives must increase their membership base and capital to improve business volume and income. Regular financial review systems should be implemented to assess financial performance, and comparing budgeted versus actual results will contribute to economic sustainability.
4. Social Sustainability: Creating social funds for community projects and CSR activities such as educational support, insurance, and medical facilities for employees, as well as socializing agricultural practices, will contribute to social sustainability.
5. Environmental Sustainability: Cooperatives must focus on improving environmental sustainability by adopting organic farming, waste management, and adhering to environmental policies. Educating farmers on sustainable agricultural practices and ecosystems will also help cooperatives offer eco-friendly products and services.
6. Adoption of Strategies:
    - Safe Strategy: Cooperatives should train farmers to assess, manage, and mitigate risks in agricultural activities.
    - Credible Strategy: Enhancing the reputation of cooperatives will help build a positive image and attract suitable members, employees, and customers.
    - Efficient Strategy: Best agricultural practices, resource optimization, and socio-eco-efficiency applications should be adopted to increase productivity. This should be accompanied by innovative strategies such as product differentiation and eco-friendly product innovation.
    - Transformative Strategy: Cooperatives should explore new markets by driving institutional changes, establishing sustainable standards, and creating recognizable "Coop" branded products and services.

In conclusion, by adopting and implementing the right sustainability strategies, agricultural cooperatives can improve their sustainability across all dimensions and contribute to the long-term prosperity of their members and the community.

References

Braverman, A. and Guasch, J.L , Huppi, M. and Pohlmeier, L. (1991). 'Promoting Rural Cooperatives in Developing Countries: The Case of Sub-Saharan Africa'. Washington, D.C.,

Community Research Connections (CRC), 2013, Cooperatives and Sustainability: An investigation into the relationship

Grootaert, C. (1998). Social Capital: The Missing Link? *Social Capital Initiative*. Washington, DC.

Harris, John and de Renzio P. (1997). 'Missing Link' of Analytically Missing?: The Concept of restructuring. Washington, DC.

Hedlund, H., Ed. (1988). *A Cooperative Revisited*. Sweden, Scandinavian Institute of African Studies.

Hussi, J. M., Ole Lindberg, and Lyle Brenneman (1993). *The Development of Rural Organisations.* World Bank Report.

ICA (2011), Global 300 Report 2010: The world's major cooperatives and mutual businesses. Available at http://ica.coop/sites/default/files/attachments/Global300%20Report%202011.pdf

ICA (2013), Global 300 Report 2010: The world's major cooperatives and mutual businesses. Available at http://ica.coop/sites/default/files/attachments/Global300%20Report%202011.pdf

International labour organization. (2014). 'Cooperatives and the Sustainable Development Goals A Contribution to the Post-2015 Development Debate A Policy Brief'

Jiggins, J. (1988). 'Beware the Greeks Bearing Gifts: Reflections on Donor Behaviour and Cooperative Performance'. Ed. Hedlund, H. *A Cooperative Revisited*. Sweden: Scandinavian Institute of African Studies.

Lele, U. (1981). 'Co-operatives and the Poor: A Comparative Perspective.' *World Development* 9: 55-72.

Rondot, P. (2004). *Presentation: Reaching the Poor: Issues and Challenges. The World Bank and Rural Producer Organizations and Cooperatives*. Washington D.C., COPAC Open Forum 2004.

World Bank. (1997). Empowering Producer's Organizations: Issues, Goals and Ambiguities' Agricultural Producer Organizations: Their Contribution to Rural Capacity Building and Poverty Reduction, Washington, DC.

Yamane, T. (1967) Statistics: An Introductory Analysis. 2nd Edition, Harper and Row, New York