INNOVATIONS

Impact of COVID-19 and response measures: The role of multipurpose cooperatives in Ethiopia

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Abstract : *This study was focused with the main objective of assessing the disruptions of Covid-19 and response measure of primary cooperatives in the selected Districts of Sidama Region. To address the specific objectives, 397 sample members from fifteen primary multipurpose cooperatives in three Districts namely Hawassa Zuria Woreda, Wondo Genet Woreda and Yirgalem Woreda were selected by simple random sampling technique to collect the primary data with structured interview schedule. In addition, focus group discussions and secondary data were also be used as information source. Descriptive statistical tools such as Mean, Standard Deviation, Chi-square Test, and ANOVA and ordered logistic regression were carried out for analysis and interpretation of data. Majority of the respondents agreed that well-functioning of the cooperatives were disturbed due to the Covid-19 pandemic in terms of decision making process for the day to day affairs, business turnover, loan repayment, supply of final produce to the society, revenue declining, distribution of agricultural input, productivity of employees, delivery of essential commodities. Nearly half of the respondents from the sample cooperatives agreed that their cooperatives helped in smooth production of agriculture amidst the Covid-19 situation in terms of provision of training on organic farming, production of hand sanitizer and face masks, provision of inputs to enhance the productivity of the farmers, provision of credit, involving processing of products which encourage the members in production of more agricultural products and provision of emergency funding etc. More than 70% of sample respondents agreed that the sample cooperatives have played a vital role in smoothening of distribution during the pandemic situation in terms of shortened the supply chain, reduced the risk of inflation, developed market linkages, absorbing the surplus products, arrangement of transportation facilities and providing the consumer articles etc. The sample primary multipurpose cooperatives worked for the smooth consumption which is reported by more than half of the respondents and the p value also significant at 1% level. The major factors that determine the smooth functioning of sample cooperatives are; Provision of Training on organic farming, Ensuring Quality Products, Provision of short-term credit, Accessibility of emergency fund, Ensuring transportation for smooth distribution, Make the products and services close to the members and public, Provision of storage facilities, Stabilizing commodity price, Eliminating middle man, Supply of essential commodities during the Covid-19 pandemic which are to be given due attention in the study areas.*

Key words: *1.Covid-19 2. Impact 3.Multipurpose Cooperatives 4.Prevention 5. Production*

Introduction

Background of the study

With the stretch of the COVID-19 and its economic and social impacts, the world is in front of a time of unmatched insecurity. It is a time when things that were previously inconceivable are now a reality. The mandatory shutdowns of non-essential businesses and the confinement of billions of people to their homes, are revamping societies and economies. The impact is unequally distributed for households, workers and businesses; further exacerbating inequalities that already stay alive. Cooperative and other SSE enterprises, such as mutuals, associations, foundations and social enterprises, their workers and communities are also being impacted, although asymmetrically depending on the sectors and the stage of the spread of the virus in their region or country.

The pandemic has already affected our way of life and work as the cooperative movement in Africa and globally as stated in the International Cooperative Alliance (ICA) President's message. Economically, the COVID-19 has already created an economic and labour crisis from quantity of jobs, quality of work to effects on specific groups who are vulnerable to adverse labour market outcomes. The recent, assessment by the International Labour Organization on the impact of COVID-19 on the global world of work, states that the economic effects caused calls for an immediate and urgent measures for a decisive, coordinated and immediate response (ICA-Africa, 2020).

In Ethiopia, the number of cases with COVID-19 is 3, 64,000, of which 6444 have sadly died and 338,776 were recovered as of 28th October 2021 (www.worldometers.info.et). Although the spread of COVID-19 is in its infant stage, the repercussions of COVID-19 may cause damage to the lives of millions of people in the near future and thus by keeping in view the possibility of spread, the Federal Government has declared a State of Emergency at the end of March, 2020. In response to COVID-19, the Government of Ethiopia has been receiving supports and funds from all continents to combat COVID-19.

In the context of the devastating effects of the COVID-19 pandemic, cooperative organizations around the world are mobilizing to provide relief for their workers, members, and communities. Local and national governments are starting to integrate cooperatives and the wider SSE into public relief strategies in some countries as partners and beneficiaries. Cooperatives are important instruments for the success of sustainable development (Bezabih E, 2009), socio-economic transformation (Kodama Y, 2007). They are solution for equality, poverty reduction, building social capital, improving marketing and financing system, empowering producers, women and the community at large.

According to Federal Cooperative Agency (FCA) (2020), cooperatives are providing adequate agricultural and industrial products to the public and are keenly working with producers using their chain for reliable provision during this critical time of COVID-19. FCA Public Relation Director told The Ethiopian Herald that cooperatives have adequate product in their stocks and are working keenly with producers for consistent and reliable provision of products to ease product shortage in this critical time of fighting COVID-19. According to FCA, in Ethiopia there are 90 thousand cooperatives, 388 unions and four federations across the country with over 21 million members.

For instance, AWACH SACCO has taken the following actions to ensure that they can still support their members as best as possible in this unprecedented situation. The society has been supplying

the necessary kits that prevent the virus for our staff and others. The society is giving all the service to members except big amount of loan disbursement. However, the society is managing the emergency loans. The society has given two months grace period for loan borrowers and facilitating withdrawal of members' saving with very short time whenever they ask. They have also given one month leave for employees who are pregnant, old aged and come from far place. But, the rest are working by shift. They have been following their staff how they keep their physical distance when they are giving service for our members and facilitated transport for our employees. They have been giving information day to day for our members and staffs about the current situation and how they protect themselves from COVID - 19 virus via our social media (ICA Coop Africa, 2020). With this backdrop, it is pertinent to have an enquiry on assessing the role of cooperatives on the disruptions and response measures on COVID-19 in the context of Ethiopia.

Statement of the problem

It was observed that 212 Countries and Territories around the world have reported a total of 246.54 million confirmed cases of the corona virus COVID-19 that originated from Wuhan, China and a death toll of 5.00 million deaths (www.worldometers.info.coronavirus). The cases of Corona in Ethiopia are increasing at an alarming. Nonetheless, the severity of COVID-19 and possibility of the spread in society never be undermined. Keeping in view, the Federal Government has declared the state of emergency.

Efforts by governments to control the COVID-19 pandemic through partial and full business closures unavoidably leads to general decline in economic activities domestically and globally. This contraction in economic activities leads to economic recession if the pandemic lasts for a prolonged period of time (Degye Goshu, 2020). Studies indicated that societies with a lower economic status are more vulnerable to rising rates of chronic illness from the COVID-19 further complicated by economic and social welfare hardships (ILO, 2020). This, in turn, further depresses productivity and raises health care costs, leading to increased poverty, and hence again more disease. This is a "disease-driven poverty trap". From an economic perspective, the key issue is not just the number of cases of the COVID-19, but the level of disruption to economic activities which in turn aggravate the level of health risks. As indicated earlier, the pandemic generates shocks to the economy through three entry points: supply, demand and financial shocks (Baldwin 2020). Overall, the pandemic will significantly reduce the economic growth of the country. If the spread of the virus is kept under control with proactive measures, its impact on economic growth will be minimized.

When the emergency phase of the public health crisis is over, societies and economies will need to be re-energized. In the medium to long term, the measures will need to look at preserving business and decent work. In supporting the reactivation and adaptation of enterprises to the new conditions after the virus is contained, it will be important to take into account, specific role that cooperatives can play in working toward a fairer and more inclusive economy that integrate values of mutuality, economic justice and organizational democracy.

In Addis Ababa there are 800 basic cooperative shops which are providing agricultural and industrial products to their members and the public. "Cooperatives are providing basic products to their members and to the society usually, but the role of cooperatives outshines during crises. Following the outbreak of COVID-19 in Ethiopia, few wholesalers and retailers wants to destabilize the market by hiding products and price increment; cooperatives are stabilizing the market by providing adequate product provision to the society especially in Addis Ababa (FCA, 2020). Cooperatives in Sidama Region are actively engaged in combating the COVID-19 since the outbreak; however, their role in response to the disruptions of COVID -19 has not been recorded until now. By keeping view

the above stated problems, the study was undertaken to appraise the role of cooperatives in selected Districts of Sidama Region in responding to the disruptions of COVID-19.

Objectives of the study

1. To analyze the impact of COVID1-19 on the well functioning of the cooperatives in delivering the services to the community.
2. To assess the role of cooperatives in ensuring smooth production, distribution and consumption of essential commodities amid pandemic.
3. To find out the influential factors that determine the smooth functioning of sample cooperatives during the pandemic

Material and Methods

Description of the Sidama Regional State: Sidama region is a newly borne the tenth federation member of the country after a referendum has undergone in this very year. The region embodied thirty Districts and seven city administration with municipality. It is found 275 KM away from the capital of Ethiopia Addis Ababa and the capital City of the region is Hawassa City in addition to this there is six municipal cities within the region. Sidama region is bordered on the south by the Oromia Region (except for a short stretch in the middle where it shares a border with Gedeo zone), on the west by the Bilate River, which separates it from Wolayita zone, and on the north and east by the Oromia Region. Towns in Sidama include Hawassa, Yirgalem, Daye, Lekue, Chuko, Wendogenet and Wendo. Sidama has a population of around 4.6 million according to the Statistical agency projection in 2017, who speak the Cushitic language Sidama Affoo. Out of 30 Districts in the newly formed Sidama Region, the study has been conducted in three Districts namely Hawassa Zuria, Wondo Genet and Yirgalem.

Study design

Study type: This study is primarily based on empirical analysis. Hence Field survey and direct observation method of data gathering has been followed.

Sample size: A two stage sampling procedure was followed to identify Woreda, sample Cooperatives and sample respondents.

In the first stage, Out of 30 Districts in the Region, Hawassa Zuria, Wondo Genet and Yirgalem Districts have been selected purposively based on the concentration of different types of primary multipurpose cooperatives, vast experience of multipurpose cooperatives in the area and location conveniences to the researchers and service Districts of Hawassa University. The number of members is also relatively huge as compared with multipurpose cooperatives of other Districts found in the Sidama Region. From each selected Woreda five primary multipurpose cooperatives were selected randomly. There are 7990 members so far registered in the selected primary multipurpose cooperatives of three Districts

In the last stage, to arrive the sample members, Yemane (1967) formula $N/1+N\ (e)^2$ has been used with 95% precision. Thus the total sample size is 397 members. Finally, the respondents were selected from all fifteen cooperatives as listed in the table 1 on the basis of proportional to size sampling.

$$n = \frac{7990}{1 + 7990\ (.05)^2} = 397$$

Table1: Sample frame

S.No.	Name of the PCS	Total Membership	Sample size
Hawassa Zuria Woreda			
1	Kare & the surrounding PMCS	612	30
2	Udanagalo PMCS	528	27
3	Shamena PMCS	542	27
4	Jara gelalcha PMCS	573	28
5	Jera chire PMCS	570	28
Wondo Genet Woreda			
6	Doyo otolcho PMCS	518	26
7	Hamo PMCS	523	27
8	Goha PMCS	564	28
9	Jara burkito PMCS	498	26
10	Kuwa PMCS	333	17
Yirgalem Woreda			
11	Waco warka	494	24
12	Idget multipurpose coops	483	24
13	Jara nines multipurpose coops	505	25
14	Jara genet multipurpose coops	498	25
15	Hayik dar multipurpose coops	679	35
	Total	**7990**	**397**

Source: ***Sidama Region Cooperative and Marketing Development Bureau, 2020***

A purposive sampling procedure has also been employed to select Key Informants (KI) and Focus Group Discussion (FGD) participants. KIs and FGD participants has been drawn from the board of directors and officials of Woreda Cooperative Promotion Bureau respectively. Ten KIs were interviewed using check list and five focus group discussions were conducted with eight participants in each group consist of board of directors.

Study methodology

Data Requirements: To meet the objectives of the study, both primary as well as secondary data were gathered and utilized with the help of appropriate instruments. Primary data was collected from the sample respondents by conducting direct face to face survey and the secondary data was collected from different documents of concerned bodies.

Instruments for data collection: To collect the primary data, structured interview schedule (SIS) was prepared and fine tuned. The interview schedule consists of questions pertaining to socio economic profile of sample respondents, level of awareness and knowledge about COVID-19, impact of COVID-19 on the well functioning of the cooperatives, role of cooperatives in ensuring production, distribution and consumption of essential commodities during pandemic. Besides SIS, focus group discussion was conducted to eliciting information and to have authentic support for validating the data. Moreover, secondary data was collected from concerned Offices by administering datasheet. To collect data, five enumerators who have BA degree in Cooperatives were appointed and trained on the data collection process in the field.

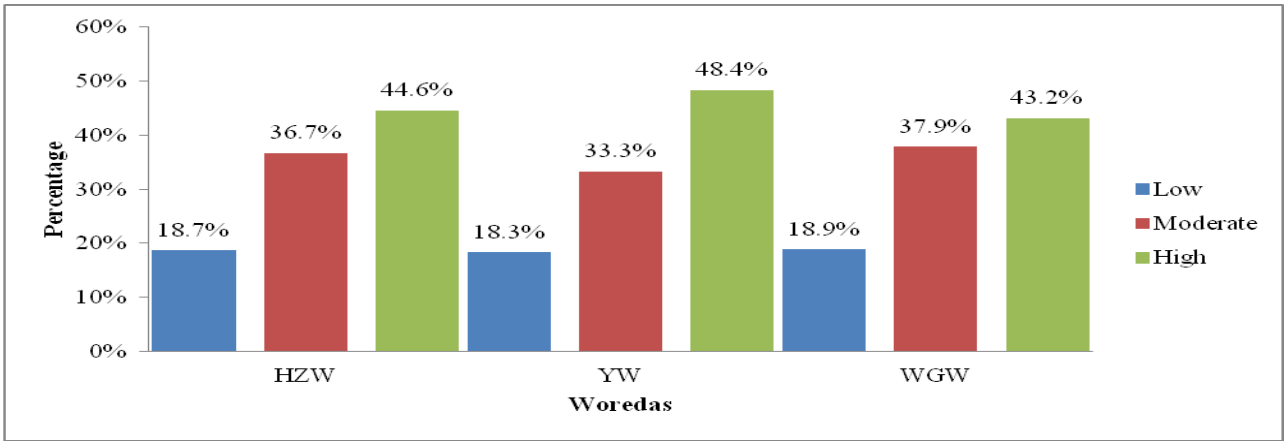
Data Management and Analysis: The collected data has been organized and edited in a meaningful form for analysis, scoring and tabulation of data. Statistical Package for Social Sciences (SPSS version 21) was used for analysis of data. Descriptive statistical tools such as Percentage, Charts, Mean,

Standard Deviation, Chi Square Test, Test of significance and Analysis of Variance were used for analysis and interpretation of data. To assess the factors determining the well functioning of cooperatives, ordered logistic regression analysis was used by considering the extent of the impact of COVID-19 on the well functioning of the primary multipurpose cooperatives as dependent variable which was orderly arranged as High, Medium and Low.

Impact of COVID-19 on the Well-functioning of Cooperatives

Primary multipurpose cooperatives are vital institutions to provide the services to the rural masses regularly so as to get the benefit out of that for their livelihood in terms of essential commodities, input for their agricultural activities and also timely credit for the investment. However, most of the countries are facing problem due to the pandemic and the grass root institutions were closed and stopped their functions. In this regard, it is essential to know how far the operations of the sample cooperatives were affected during the pandemic and an assessment was made in this section and results are presented in Chart 1.

Chart 1: Extent of business operation affected by COVID-19



Source: *Field survey, 2020*

It is observed from the results as depicted in Chart 1 that 45.3% of the sample members pointed out that the business operations of the sample cooperatives were highly affected during the pandemic situation and another 36% replied that the business operations of the cooperatives were affected moderately. This indicates that most of the sample cooperatives in the selected Districts were disrupted with the service provision. The trend of such condition is more or less same in all the three Districts.

Overall impact of COVID-19

The perception of the members regarding the overall impact of Covid-19 on the smooth functioning of cooperatives in terms of decision making process for the day to day affairs, business turnover, loan repayment, supply of final produce to the society, revenue declining, distribution of agricultural input, productivity of employees, delivery of essential commodities were collected and analysed through Table 2.

Table 2: Overall impact of COVID-19 on the well-functioning of Cooperatives

Variables	SDA	DA	N	A	SA	Mean (SD)	t-test (p-value)
	n(%)	*n*(%)	*n*(%)	*n*(%)	*n*(%)		
COVID-19 has impacted on the decision making process in relation to the day to day affairs of the cooperatives	0 (0.0)	0 (0.0)	100 (25.2)	139 (35.0)	158 (39.8)	4.15 (.794)	28.768 (0.000)
Social distance has limited business turnover of the cooperatives	0 (0.0)	30 (7.6)	91 (22.9)	148 (37.3)	128 (32.2)	3.94 (.923)	20.327 (0.000)
Loan repayment by the members was affected due to COVID-19	17 (4.3)	56 (14.1)	73 (18.4)	101 (25.4)	150 (37.8)	3.78 (1.21)	12.882 (0.000)
Unable to supply their final produce to the society	0 (0.0)	0 (0.0)	87 (21.9)	188 (47.4)	122 (30.7)	4.09 (.721)	30.067 (0.000)
There was a decline in the revenue of cooperatives due to COVID-19	0 (0.0)	23 (5.8)	100 (25.2)	165 (41.6)	109 (27.5)	3.91 (.867)	20.844 (0.000)
Our society has incurred loss due to covid-19	0 (0.0)	18 (4.5)	106 (26.7)	217 (54.7)	56 (14.1)	3.78 (.737)	21.165 (0.000)
Covid-19 impacted in distribution of agricultural input to the farmers	0 (0.0)	82 (20.7)	71 (17.9)	169 (42.6)	75 (18.9)	3.60 (1.02)	11.697 (0.000)
Covid-19 has impacted on distribution of essential consumer articles to the public	0 (0.0)	82 (20.7)	116 (29.2)	118 (29.7)	81 (20.4)	3.50 (1.04)	9.589 (0.000)
Covid-19 has affected the productivity of the employees of cooperatives	0 (0.0)	29 (7.3)	54 (13.6)	193 (48.6)	121 (30.5)	4.02 (.857)	23.778 (0.000)
Covid-19 has impacted on delivering the essential socio economic service to the member in particular and the society in general	0 (0.0)	0 (0.0)	33 (8.3)	171 (43.1)	193 (48.6)	4.40 (.639)	43.772 (0.000)
Total	***2 (0.4)***	***32 (8.1)***	***83 (20.9)***	***161 (40.5)***	***119 (30.1)***	***3.92 (0.880)***	***19.516 (0.000)***

Source: *Field survey, 2020* *Computed from SPSS*

It is observed from the Table 1 that majority (70.6%) of the respondents agreed that well-functioning of the cooperatives were disturbed due to the Covid-19 pandemic. This affected the smooth function of the cooperatives and the members were not able to receive the required services properly and also the cooperatives incurred loss.

Table 3: Overall impact of COVID-19 on the well-functioning of cooperatives (District wise) ANOVA Result

Statements	HZW	YW	WGW	Total	F-test	p-value
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)		
COVID-19 impacted on the decision making process	4.17 (0.789)	4.10 (0.808)	4.16 (0.790)	4.15 (0.794)	.279	.757
Social distance limited has business turnover of the cooperatives	3.96 (0.928)	3.91 (0.921)	3.95 (0.927)	3.94 (0.923)	.104	.901
Loan repayment by the members was affected due to COVID-19	3.81 (1.203)	3.78 (1.213)	3.77 (1.229)	3.78 (1.212)	.040	.961
Unable to supply their final produce to the society	4.07 (0.729)	4.10 (0.709)	4.10 (0.730)	4.09 (0.721)	.054	.947
There was a decline in the revenue of cooperatives due to COVID-19	3.94 (0.849)	3.83 (0.910)	3.94 (0.845)	3.91 (0.867)	.662	.516
Our society has incurred loss due to covid-19	3.72 (0.723)	3.87 (0.763)	3.77 (0.727)	3.78 (0.737)	1.312	.271
Covid-19 impacted in distribution of agricultural input to the farmers	3.60 (0.990)	3.53 (1.071)	3.65 (0.996)	3.60 (1.017)	.451	.637
Covid-19 impacted on distribution of essential consumer articles to the public	3.55 (1.008)	3.42 (1.098)	3.52 (1.007)	3.50 (1.036)	.571	.566
Covid-19 affected the productivity of the employees of cooperatives	4.00 (0.843)	4.06 (0.861)	4.02 (0.874)	4.02 (0.857)	.146	.864
Covid-19 impacted on delivering the essential socio economic service	4.40 (0.645)	4.40 (0.633)	4.41 (0.641)	4.40 (0.639)	.012	.988

Source: *Field survey, 2020 Computed from SPSS*

The ANOVA results in Table 3 depicts that there is no much variation observed in different Districts regarding the disruption of smooth functioning of cooperatives which indicate that the situation is more or less same in the selected Districts as well. Focus Group Discussion with the board of directors of selected primary multipurpose cooperatives reveals that most of the members were unable to repay their loan on due date owing to the pandemic. This resulted for the management of cooperatives to reschedule the repayment period by extending three to six months. They also further added that due to the pandemic, temporary employees and unskilled laborers lost their job as cooperatives couldn't pay for them due to low turnover. Moreover, employees who are the victims of COVID-19 positive have been permitted to staying at home on fully paid salary.

Role of Cooperatives in Ensuring Smooth Production, Distribution and Consumption amid COVID-19

The rural farmers are isolated, under-educated and lack the means to win greater access to means of production such as capital, labour and this engendered pulling together financial resources towards a common goal. The cooperative movements among farmers are viewed to be instrumental to agricultural transformation and boosting productivity in the sector. Cooperatives are the agencies through increased efficiency in their distribution efforts pass the benefits of better performance

directly on the farmers. Hence, it is essential that how the cooperatives have played a vital role in smoothening the production, distribution and consumption during the pandemic situation.

Role of Cooperatives in Ensuring Smooth Production amid COVID-19

Increasing the agricultural production is a vital for ensuring the household food security which needs adequate knowledge to the farmers in application of appropriate input and technology. Also they need timely credit so as to purchase the farm input and implements. Further, during the harvest season they need to know the processing methods so as to maintain the quality of the produce to increase the value of the product. In this background, it is essential to see whether the sample cooperatives have assisted the farmers in extending the appropriate necessary services during the pandemic time. Different statements as specified in the table were forwarded and their agreements were collected and analysed as in the Table 4.

The comparison of three sample Districts through the mean value and the ANOVA results indicate that there is no significant difference regarding the support of cooperatives in ensuring smooth production. That means the sample cooperatives in all three Districts functioning equally in supporting the members to ensure smooth production during the COVID-19 pandemic situation. However, the mean values show that the agreement level is slightly above average of 3 which indicates that the support is only satisfactory.

Key informant interview with the officials of Regional Cooperative Promotion Bureau shows that they have made tie up with all the primary cooperatives in the Region to provide short term training on coping with the effect of pandemic as to how to engage in production activities with all necessary protection measures such as mask, sanitizer, etc through extension wing of the bureau. They added further that in order to ensure smooth production, they have made arrangements to provide all necessary agricultural inputs like fertilizers, seeds, pesticides, etc for the members through primary multipurpose cooperative societies.

Table 4: Overall perception of members on ensuring smooth production - ANOVA result

Statements	HZW	YW	WGW	F-test	p-value
	Mean (SD)	Mean (SD)	Mean (SD)		
Provides training to farmers on organic farming	3.29 (0.951)	3.13 (1.061)	3.35 (0.933)	1.647	.194
Shifting production toward much needed supplies like hand sanitizers and face masks	2.82 (1.118)	2.79 (1.182)	2.81 (1.113)	.018	.982
Ensures quality and safety of products	3.38 (0.959)	3.37 (0.993)	3.35 (0.981)	.038	.963
Supply of agriculture input to enhance production	3.67 (0.784)	3.66 (0.821)	3.66 (0.799)	.007	.993
Provision of short term credit to ensure production process	2.96 (0.904)	3.02 (0.934)	3.02 (0.903)	.190	.827
Undertakes needy processing service	3.24 (0.788)	3.13 (0.848)	3.27 (0.790)	1.094	.336
Help increasing in local food production	3.47 (0.837)	3.30 (0.923)	3.42 (0.857)	1.363	.257

Provision of emergency funding to cover the cost of seeds fertilizers and land preparation, etc.	2.84 (1.187)	2.94 (1.205)	2.83 (1.182)	.325	.723
Overall	**3.2113**	**3.1677**	**3.2131**	**.198**	**.821**

Source: *Field survey, 2020* *Computed from SPSS*

Role of Cooperatives in Ensuring Smooth Distribution amid COVID-19

It is well known fact that during the pandemic situation, most of the people in the villages were advised not to move outside and they were sat in the home itself. Thus, most of the people did not get sufficient materials to consume in their day to day life. However, the cooperative organizations especially the consumer cooperatives played their role in supply of the essential commodities to their members. Further, the agricultural products produced in the field are to be sold in the market. Otherwise the farmers may not be benefitted from their yield. During the pandemic situation, since the transportations are curtailed, the farmers could not bring their product to the markets. In this regard the cooperatives are expected to make arrangement for smooth distribution of products by arranging transportation or purchasing their products. In connection this, an assessment was carried out whether the sample cooperatives in three selected Districts have done their role or not and the results are presented in the following Table 5.

Table 5: Overall perception of members on ensuring smooth distribution - ANOVA result

Statements	**HZW**	**YW**	**WGW**	**F-test**	**p-value**
	Mean (SD)	**Mean (SD)**	**Mean (SD)**		
Shortening supply chains by establishing direct purchasing lines between producer and consumer cooperative	3.73 (0.738)	3.56 (0.908)	3.70 (0.771)	1.607	.202
Reducing the risk of inflated food prices	3.41 (1.041)	3.33 (1.123)	3.34 (1.076)	.235	.791
Develop market linkages	3.54 (0.973)	3.29 (1.125)	3.51 (0.992)	2.185	.114
Helping vulnerable people who cannot go shopping by themselves including through partnering	3.00 (0.963)	3.00 (1.058)	3.01 (0.977)	.003	.997
Absorb surpluses and prevent the loss of perishable products for producer	3.75 (0.743)	3.71 (0.780)	3.77 (0.730)	.209	.812
Strengthened value chain network	3.72 (0.723)	3.66 (0.728)	3.69 (0.732)	.230	.795
Ensure transportation for smooth distribution of essential consumer articles to the public	3.37 (0.965)	3.36 (0.967)	3.35 (0.957)	.025	.975
Distribution of essential consumer articles through kebele consumer cooperative	3.51 (0.871)	3.50 (0.817)	3.48 (0.860)	.054	.947
Overall	**3.5045**	**3.4256**	**3.4792**	**.509**	**.602**

Source: Source: *Field survey, 2020* *Computed from SPSS*

The ANOVA results indicate that there is no much variation on the distribution service between the cooperatives in the sample three Districts. The P value also shows that no significant variation of services between the Districts. This indicates that the sample cooperatives in all three Districts work equally for the benefit of their members during the pandemic period. FGD with board of directors confirms that the primary multipurpose cooperative societies have arranged transportation facilities to collect farmers produce at their field in order to curtail mobility of farmers from their place to cooperatives to bring the agricultural produces.

Role of Cooperatives in Ensuring Smooth Consumption amid COVID-19

It is expected that cooperatives are supposed to smoothen the consumption pattern of members through providing the consumable products at low price so that all are affordable to purchase the same and use it to increase the immunity among the people to avoid the problem of virus infection. Also they are able to keep the products according to the necessity of the consumers to reduce the demand gap which will balance the pricing mechanism. Further, to make the consumption process smoothening, it is expected to supply the products through different outlets so that the consumers could get the products in their own vicinity which will avoid the transportation cost and timely available. Again if the cooperatives are able to sell the needed products for reasonable price, it will also reduce the middle men in the market.

Table 6: Overall perception of members on ensuring smooth consumption - ANOVA result

Statements	**HZW**	**YW**	**WGW**	**F-test**	**p-value**
	Mean (SD)	**Mean (SD)**	**Mean (SD)**		
Cooperatives have supplied essential consumer articles at cheaper rate	3.47 (0.783)	3.40 (0.830)	3.48 (0.796)	.464	.629
Cooperatives have reduced demand and supply gap	3.85 (0.825)	3.82 (0.814)	3.83 (0.815)	.053	.948
Cooperatives enables consumption of good through its retail outlets	3.17 (0.890)	3.14 (0.918)	3.17 (0.909)	.028	.972
Make the products and service close to the members and public	3.35 (0.892)	3.22 (0.954)	3.33 (0.887)	.743	.476
Oppose the hoarding of wholesalers and retailers by ensuring that they store large quantities of production	3.50 (0.896)	3.38 (0.987)	3.43 (0.934)	.574	.564
Help stabilize commodity prices by selling good to members at reasonable price	3.36 (0.817)	3.33 (0.867)	3.36 (0.811)	.038	.962
Eliminate middlemen's activities by buying good directly from the manufacturer	3.94 (0.791)	3.75 (0.954)	3.90 (0.846)	1.772	.171
Cooperative buy a variety of good from manufacturers or wholesalers	3.47 (1.112)	3.31 (1.156)	3.45 (1.135)	.819	.442
Overall	**3.5144**	**3.4187**	**3.4934**	**.817**	**.442**

Source: Source: *Field survey, 2020* *Computed from SPSS*

The ANOVA results point out that there is a slight variation between the Districts in maintaining the smooth consumption by the sample cooperatives. The mean value indicates that the cooperatives in Hawassa Zuria District function slightly more followed by Wondo Genet and Yirgalem Districts. However, the p value shows that this is not that much significant difference.

KII & FGD results shows that all the primary multipurpose cooperatives have joined hands with Kebele consumer cooperatives to ensure with smooth distribution of essential consumer articles for consumption to not only members but also to the community amid pandemic situation. Further KII with officials said that i) ensuring distribution from Addis Ababa to regions, then to zones, and on to cooperatives and farmers (in the best case); ii) shipment of inputs from abroad; iii) the availability of public services, if Regional Bureau of Agriculture and Cooperatives staff are unable to move within and between regions due to travel restrictions even though this is critical for the upcoming agriculture season; and iv) access to financial services falling outside the reach of farmers were although found to be challenging but with the support of Regional Bureau they were able ensure smooth production, distribution and consumption.

Factors determining the well functioning of Cooperatives during COVID-19

The results of the ordered logistic regression model as depicted in Table 7 shows the factors determining the well functioning of primary multipurpose cooperatives in the study area.

Table 7: Factors determining smooth functioning of cooperatives amid pandemic

Variables	Estimate	Std. Error	Wald	Sig	Odds ratio
1. Provision of Training on organic farming	2.249**	.309	52.896	.000	0.106
2. Ensuring Quality Products	1.828**	.385	22.605	.000	0.161
3. Supply or Agriculture inputs	-.436	.311	1.972	.160	0.647
4. Provision of short-term credit	2.185**	.387	31.923	.000	0.112
5. Accessibility of emergency fund	2.619**	.306	72.998	.000	13.72
6. Developing marketing Linkage	-.394	.203	3.751	.053	0.677
7. Ensuring transportation for smooth distribution	2.539**	.428	35.102	.000	12.67
8. Make the products and services close to the members and public	810**	.185	19.212	.000	0.445
9. Provision of storage facilities	1.375**	.226	36.866	.000	0.253
10. Stabilizing commodity price	.583*	.258	5.113	.024	1.699
11. Eliminating middle man	1.300**	.201	41.686	.000	2.273
12. Supply of essential commodities	1.124**	.278	16.364	.000	3.077
LR Chi^2(12)	**261.057**				
Prob > Chi^2	**0.000**				
Pseudo R^2	**0.551**				
Number of obs	**397**				

Note: * p<0.05, **p<0.01, Dependent variable = Smooth functioning of cooperatives during COVID Pandemic (1=Low, 2=Medium, 3=High)

As can be seen from the ordered logistic regression output, out of twelve variables which were included in the model, ten variables have found to be significant effect on smooth functioning of cooperatives. Based on the model results on Table 7, ***Provision of Training on organic farming*** (B= 2.249, p<0.001) is one of the important factors which influence positively on smooth functioning of cooperatives. The odds ratio of 0.106 indicates that a unit increase of training to the members increase the smooth functioning by 0.106 units.

Ensuring quality products (B=1.828, p<0.001) is another factor that influence positively on smooth functioning of cooperatives. The results of odds ratio (0.161) indicated that one unit of ensuring quality products to the members, increase the probability of the smooth functioning of cooperatives by 0.161 units

Provision of short-term credit (B= 2.185, p<0.001) also influence smooth functioning of cooperatives positively. The odds ratio shows that a one unit increase in provision of short-term credit, expected to change the smooth functioning of cooperatives by 0.112 units given other variables in the model are held constant.

Accessibility of emergency fund (B= 2.619, p<0.001) has positive and significant effect on smooth functioning of cooperatives. It can be inferred from the values of odds ratio that a one unit increase in accessibility of emergency fund will increase the smooth functioning of cooperatives by 13.72units.

Ensuring transportation for smooth distribution was found to be the determinant factor for smooth functioning of cooperatives. The coefficient for ensuring transportation for smooth distribution was found to be positive and statistically significant at one percent level (B= 2.539, P<0.001). The positive relationship implies that the probability of smooth functioning of cooperatives increases as ensuring transportation for smooth distribution. The odds ratio of 12.67 indicates that other independent variables being constant, the likelihood of smooth functioning of cooperatives increases by a factor of 12.67 as ensuring transportation for smooth distribution increased by one unit.

Make the products and services close to the members and public has a positive (B=810, p<0.001) and significant effect on cooperative smooth functioning. It can be inferred from the values of odds ratio that if the products and services are available close to the members and public is a favorable condition the response variable smooth functioning of cooperatives will expect to change by 0.445 regardless of other independent variables in the model.

Provision of storage facilities (B=1.375, p<0.001) has positive and significant effect on smooth functioning of cooperatives. The results of odds ratio indicated that as a unit increase in provision of storage facilities creates a 0.253 unit increase in smooth functioning of cooperatives.

Stabilizing commodity price (B= 0.583, p<0.05) has positive and significant effect on smooth functioning of cooperatives. It can be inferred from the values of odds ratio that if the commodity price is stabilized by one unit, the response variable smooth functioning of cooperatives will be expected to change by 1.699 irrespective of other independent variables in the model.

Elimination of middle man (B= 1.300, p<0.001) has positive and significant effect on smooth functioning of cooperatives. It can be inferred from the values of odds ratio that if the middle man

elimination increased by one unit, the response variable smooth functioning of cooperatives will be expected to increase by 2.273 irrespective of other independent variables in the model.

Supply of essential commodities has a positive (B=1.124, p<0.001) and significant effect on cooperative smooth functioning. It can be inferred from the values of odds ratio that if the supply of essential commodities is a favorable condition the response variable smooth functioning of cooperatives will expect to change by 3.077 regardless of other independent variables in the model.

Conclusion and Recommendations

Conclusions

From the foregoing analysis, it can be concluded that primary multipurpose cooperatives in the selected Districts have been supporting their members to protect them against the repercussions of the pandemic. Primary multipurpose cooperatives in the selected Districts have extended its support to the members to a certain extent in the form of awareness creation, distribution of free mask and hand sanitizers.

Majority of the respondents have agreed that the impact brought out by COVID-19 has negatively affected the business operations of the primary multipurpose cooperative societies. Majority of the respondents agreed that well-functioning of the cooperatives were disturbed due to the Covid-19 pandemic in terms of decision making process for the day to day affairs, business turnover, loan repayment, supply of final produce to the society, revenue declining, distribution of agricultural input, productivity of employees, delivery of essential commodities. There is no much variation observed in different Districts regarding the disruption of smooth functioning which indicate that the situation is more or less same in different Districts as well.

Nearly half of the respondents from the sample cooperatives agreed that their cooperatives helped in smooth production of agriculture amidst the Covid-19 situation in terms of provision of training on organic farming, production of hand sanitizer and face masks, provision of inputs to enhance the productivity of the farmers, provision of credit, involving processing of products which encourage the members in production of more agricultural products and provision of emergency funding etc. The comparison of three sample Districts indicates that the mean value and the ANOVA results indicate that there is no significant difference regarding the support of cooperatives in ensuring smooth production. More than 70% of sample respondents agreed that the sample cooperatives have played a vital role in smoothening of distribution during the pandemic situation in terms of shortened the supply chain, reduced the risk of inflation, developed market linkages, absorbing the surplus products, arrangement of transportation facilities and providing the consumer articles etc. There is no much variation on the distribution service between the cooperatives in the sample three Districts. The sample primary multipurpose cooperatives worked for the smooth consumption which is reported by more than half of the respondents and the p value also significant at 1% level. There is a slight variation between the Districts in maintaining the smooth consumption by the sample cooperatives.

The major factors that determine the smooth functioning of sample cooperatives are; Provision of Training on organic farming, Ensuring Quality Products, Provision of short-term credit, Accessibility of emergency fund, Ensuring transportation for smooth distribution, Make the products and services close to the members and public, Provision of storage facilities, Stabilizing commodity price, Eliminating middle man, Supply of essential commodities during the Covid-19 pandemic which are to be given due attention in the study areas.

Recommendations

Based on the conclusion, certain workable recommendations have been forwarded to ensure well functioning of the primary multipurpose cooperative societies in the study Districts.

1. It was found that development market linkage has negative influence on the well functioning of the primary multipurpose cooperative societies. Thus, it is recommended that the primary multipurpose cooperatives at the Woreda level need to get support and assistance from the Regional Cooperative Promotion Bureau and Regional Farmers Cooperative Federation to ensure better linkage with markets.
2. Monitoring the health periodically is found to be absent among the sample respondents. In this regard, the primary multipurpose cooperatives in association with the Health Bureau and Regional Cooperative Promotion Bureau to have medical camps at the farmers site to check their health status at free of cost.
3. It was found that development market linkage has negative influence on the well functioning of the primary multipurpose cooperative societies. Thus, it is recommended that the primary multipurpose cooperatives at the Woreda level need to get support and assistance from the Regional Cooperative Promotion Bureau and Regional Farmers Cooperative Federation to ensure better linkage with markets.
4. The daily routine functions of the sample cooperatives have been affected due to COVID-19. This is also the resultant outcome of the Government's announcement of Emergency at the entry level of pandemic. In order to ensure smooth daily routine works, the board of management needs to consult each other through telephonic conversation to take up the day to day functions by deploying minimum number of staffs as suggested by the Government Protocol.
5. It is now right time for the primary multipurpose cooperative societies to think of shift in production by producing essential health related products such as mask and sanitizer to engage the members in production related activities.
6. Network for value chain and supply chain has to be augmented through joining hands with the Regional Cooperative Promotion Bureau, Regional Farmers Cooperative Federation and Ethiopia Commodity Exchange.

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