Factors determining the well-functioning of primary multipurpose cooperatives during COVID-19 – An Empirical Study in Sidama Region

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Abstract

This study aimed at assessing the factors determining the functioning of primary multipurpose cooperatives in the selected Woredas of Sidama Region. Primary data were collected from 397 sample members from fifteen primary multipurpose cooperatives in three Woredas, namely, Hawassa Zuria Woreda, Wondo Genet Woreda and Yirgalem Woreda. In addition, focus group discussions and secondary data were used as information source. Descriptive statistical tools and ordered logistic regression were carried out for analysis and interpretation of data. The study finding shows that members of primary multipurpose cooperative societies found to have adequate knowledge on the origin of COVID-19. The majority of the respondents adopt protection measures. The cooperatives have also extended support to the members to a certain extent in the form of awareness creation, distribution of free mask and hand sanitizers. The major factors that determine the smooth functioning of sample cooperatives include the 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 middleman, supply of essential commodities during the Covid-19 pandemic. As to policy measures, cooperatives may initiate monitoring the health of member periodically with the support of health bureau and ensure for better market linkage. Network for value chain and supply chain has to be augmented through linkage with regional level institutions.

Key words: Covid-19, impact, cooperatives, prevention, production

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1. Introduction

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 started to integrate cooperatives and the wider Small scale enterprises (SSE) into public relief strategies in some countries as partners and beneficiaries. Cooperatives are important instruments for the success of sustainable development (Bezabih, 2009), socio-economic transformation (Kodama, 2007). They offer solutions for equality, poverty reduction, building social capital, improving marketing and financing system, empowering producers, women and the community at large.

The cases of COVID-19 in Ethiopia are insignificant to the total population. Nonetheless, the severity of COVID-19 and possibility of the spread in society shard never be understated. Thus, the Federal Government of Ethiopia 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 (Deye 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 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). It is estimated that supply-side reductions occur due to the closure of non-essential industries and workers not being able to perform their activities at home. Moreover, demand-side changes take place due to peoples' immediate response to the pandemic, such as reduced demand for goods or services that are likely to place people at risk of infection. The financial system faces the dual challenge to sustain the flow of financing to the real economy and preserving financial resilience. 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. For example, Addis Ababa has 800 basic

cooperative shops which provide agricultural and industrial products to their members and the public. "They provide 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 want to destabilize the market by hiding products and price increment; cooperatives are stabilized 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, the level of knowledge of cooperative members about COVID-19 and the factors determining the functioning of cooperatives during COVID-19 has not been recorded until now. Thus, the study is undertaken to appraise the role of cooperatives in selected Woredas of Sidama Region in responding to the disruptions caused by COVID-19.

The main objective of the study is assessing the knowledge gap of cooperative members and factors determining the functioning of primary multipurpose cooperatives in the selected Woredas of Sidama Region. The specific objectives are:

1. To study the demographic, social and economic characteristics of the members of select cooperatives.
2. To examine the knowledge gap of COVID-19 and preventive measures adopted by the members of cooperatives.
3. To examine the factors that determine the smooth functioning of sample cooperatives during the pandemic.

2. Material and Methods

2.1. Description of the Sidama Regional State

Sidama Region is the tenth member of federation after a referendum has undergone in 2019. The region contains thirty Woredas and seven city administrations with municipality. It is located 275km away from the capital of Ethiopia Addis Ababa. The capital City of the Region is Hawassa City. In addition to this there are 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 Woredas in the newly formed Sidama Region, the study has been conducted in three Woredas namely Hawassa Zuria, Wondo Genet and Yirgalem.

2.2. Study subjects

As detailed in the specific objectives, the study has tried to address different focus areas such as understanding the knowledge of COVID-19 and preventive measures adopted by the members with the support of cooperatives, and impact of COVID-19 on the well-functioning of primary multipurpose cooperatives in the study area.

This study is primarily based on empirical analysis. Hence field survey and direct observation method of data gathering has been followed. Moreover, a multi-stage sampling procedure was followed to identify Woreda, sample Cooperatives and sample respondents.

At the first stage, Sidama Region has been selected purposively as the study area. It is justified that Sidama is one of the cooperatively developed Regions wherein significant proportion of population have been brought under the fold of cooperatives of different type and engaged in different type of production and marketing activities.

In the second stage, out of 30 Woredas in the Region, Hawassa Zuria, Wondo Genet and Yirgalem Woredas 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 Woredas of Hawassa University. The number of members is also relatively huge as compared with multipurpose cooperatives of other Woredas 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 Woredas.

In the third stage, to arrive the sample members, Yemane (1967) formula 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.

$$n = \frac{N}{1+Ne^2}$$

n = 7990/1 + 7990 $(.05)^2$ = 397

Table 1: Sampling

S.No.	Name of the PMCS	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 PMCS	494	24
12	Idget PMCS	483	24
13	Jara Nines PMCS	505	25
14	Jara Genet PMCS	498	25
15	Hayik Dar PMCS	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 officials of Woreda Cooperative Promotion Bureau and board of directors 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.

2.4: 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.

To collect the primary data, structured interview schedule (SIS) was prepared and fine-tuned. Besides SIS, focus group discussion was conducted to eliciting information and to have authentic support for validating the data.

2.5: 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 and Chi Square Test were used for analysis and interpretation of data. To assess the factors determining the smooth functioning of cooperatives, ordered logistic regression analysis was used.

3. Data Analysis, Interpretation and Discussion

Demographic characteristics

Table 2 presents demographic characteristics, namely, age and sex of the respondents. As far as age is concerned, nearly half (48.9%) of the respondents belong to the age category 29-38 followed by 34.8 percent lies in between the age category 39 and 48. Respondents belong to the age of above 49 forms insignificant percentage to total respondents. There is no disparity in age group between Woreda. The mean age of the respondents was worked out to be 40.95. This finding shows that majority of the respondents belong to young and middle age category. It indicates that youngsters are taking up membership in cooperatives in recent years.

Table 2: Demographic characteristics of sample respondents

Variables	**Categories**	**HZW**	**YW**	**WGW**	**Total**
		n (%)	*n* (%)	*n* (%)	*n* (%)
Age	29-38	70 (50.4)	58 (46.0)	66 (50.0)	194 (48.9)
	39-48	51 (36.7)	40 (31.7)	47 (35.6)	138 (34.8)
	49-58	9 (6.5)	15 (11.9)	7 (5.3)	31 (7.8)
	59-68	4 (2.9)	7 (5.6)	6 (4.5)	17 (4.3)
	69-78	5 (3.6)	6 (4.8)	6 (4.5)	17 (4.3)
	Total	***139(100)***	***126(100)***	***132(100)***	***397(100)***
	Mean(SD)	**40.95 (10.548)**			
Sex	Male	112 (80.6)	107 (84.9)	106 (80.3)	325 (81.9)
	Female	27 (19.4)	19 (15.1)	26 (19.7)	72 (18.1)
	Total	***139(100)***	***126(100)***	***132(100)***	***397(100)***

Source: *Field survey, 2020.*

With regard to sex, as much as 81.9 percent of the respondents were male and the rest 18.1 percent were female. Female members were more in Hawassa Zuria Woreda and Wondo Genet Woreda whereas male members are more in Yirgalem Woreda. This finding indicates that cooperatives in the region are dominated by male members and female representation in cooperatives was found to be insignificant.

Table 3: Social characteristics of sample respondents

Variables	**Categories**	**HZW**	**YW**	**WGW**	**Total**
		n (%)	*n* (%)	*n* (%)	*n* (%)
Marital status	Single	3(2.2)	0(0.0)	2(1.5)	5(1.3)
	Married	130(93.5)	123(97.6)	121(91.7)	374(94.2)
	Widowed	6(4.3)	3(2.4)	9(6.8)	18(4.5)
	Total	***139(100)***	***126(100)***	***132(100)***	***397(100)***
Family size	1-3	14(10.1)	7(5.6)	13(9.8)	34(8.6)

	4-6	78(56.1)	75(59.5)	73(55.3)	226(56.9)
	7-9	47(33.8)	44(34.9)	46(34.8)	137(34.5)
	Total	***139(100)***	***126(100)***	***132(100)***	***397(100)***
	Mean (SD)	**5.60 (1.658)**			
Education status	No formal education	66(47.5)	52(41.3)	62(47.0)	180(45.3)
	Grade 1-4	21(15.1)	23(18.3)	19(14.4)	63(15.9)
	Grade 5-8	41(29.5)	45(35.7)	41(31.1)	127(32.0)
	Grade 9-12	3(2.2)	0(0.0)	2(1.5)	5(1.3)
	Certificate	5(3.6)	6(4.8)	6(4.5)	17(4.3)
	Degree & above	3(2.2)	0(0.0)	2(1.5)	5(1.3)
	Total	***139(100)***	***126(100)***	***132(100)***	***397(100)***

Source: *Field survey, 2020*

With regard to marital status, the survey result as depicted in Table 3 shows that as high as 94.2 percent of the respondents were married followed by 45% widowed and single forms a very insignificant percentage (1.3%) to total population. Woreda wise analysis shows that respondents who were under married category are found high (97.6%) in Yergalem Woreda as compared to Hawassa Zuria (93.5%) and Wondo Genet (91.7%) woredas. Nonetheless, there are no significant variations on the marital status of the respondents between Woredas. This finding indicates that majority of the sample respondents under study are married.

As far as family size is concerned, Table 3 shows that more than half (56.9%) of the respondents' family size lies between 4 and 6 family members followed by 34.5% of the respondents' family size was in between 7 and 9. Respondents' family size in between 1 and 3 is found to be insignificant (8.6%). The average family size was worked out to be 5.60. There is no much disparity on the family size of the respondents between Woredas. This finding denotes that majority of the respondents under study were belong to medium and large size family.

A perusal of Table 3 reveals that 45.3 percent of the respondents had no formal education. Nearly one third (32.0%) of the respondents had their education level between 5-8 grades. Only 15.9 percent of the respondents had their education level between Grade 1 and 4. Respondents' with level of education grade 9-12, certificate, and degree form lowest percentage to the total population. Woreda-wise analysis shows that the percentage of respondents has no formal education is found to be high in Hawassa Zuria and Wondo Genet Woredas. None found under the educational status of grade 9-12 and Degree and above in Yirgalem Woreda. This finding shows that majority of the respondents have no formal education, and more than 40 percent of the respondents had their education level of primary and middle schooling.

Economic characteristics of the respondents: It is observed from Table 4 that more than half of the respondents (54.4%) have monthly income ranging between Birr. 1000 and Birr.2810. Only 18.1 percent of the respondents have monthly income in the range of Birr.2811-Birr.4621. Nonetheless, 14.1 percent of the respondents have monthly income in the range of Birr.8244- Birr.10,

054. Further 12.8 percent of the respondents have monthly income in the range of Birr.4622-Birr.6432. Woreda wise analysis shows that there are no significant differences on the monthly income of the respondents between Woredas. The average monthly income of the respondents was worked out to be Birr.3667.20. This finding indicates that more than half of the respondents were found to be in low income category. It is also interesting to note that 14 percent of the respondents have monthly income of more than Birr. 8000 which shows that they are farmers and employees of government sector as well.

Table 4: Economic Characteristics of Sample Respondents

Variables	Categories	HZW	YW	WGW	Total
		n (%)	*n* (%)	*n* (%)	*n* (%)
Monthly income	1000-2810	78(56.1)	66(52.4)	72(54.5)	216(54.4)
	2811-4621	27(19.4)	20(15.9)	25(18.9)	72(18.1)
	4622-6432	14(10.1)	19(15.1)	18(13.6)	51(12.8)
	6433-8243	0(0.0)	0(0.0)	2(1.5)	2(.5)
	8244-10054	20(14.4)	21(16.7)	15(11.4)	56(14.1)
	Total	***139(100)***	***126(100)***	***132(100)***	***397(100)***
	Mean (SD)	**3667.20 (2670.498)**			
Occupation	Farmer	100(71.9)	80(63.5)	91(68.9)	271(68.3)
	Govt. Employee	05 (3.6)	03 (2.4)	02 (1.5)	10 (2.5)
	Petty Trade	34(24.5)	43(34.1)	39(29.5)	116(29.2)
	Total	***139(100)***	***126(100)***	***132(100)***	***397(100)***
Land size (in Hectare)	Below 1	76(54.7)	83(65.9)	77(58.3)	236(59.4)
	1-2	48(34.5)	34(27.0)	42(31.8)	124(31.2)
	Above 2	15(10.8)	9(7.1)	13(9.8)	37(9.3)
	Total	***139(100)***	***126(100)***	***132(100)***	***397(100)***
	Mean (SD)	**1.2103 (.64562)**			

Source: *Field survey, 2020*

With regard to occupation, the survey results as depicted in the Table 4 reveals that more than two thrid of the respondents (68.3%) are farmers followed by 29.2 percent of them are engaging in petty trade and farming and only 2.5 percent of the respondents are employees of government sector. Woreda wise analsis indicates that the respondents under farmers category was found more in Hawassa Zuria Woreda as compared to other two woredas. Also the number of government employees too found more in Hawassa Zuria Woreda as comapred to other woredas. This finding confirms that majority of the respondents are engaged in farming and petty trade.

A perusal of Table 4 reveals that 59.4 percent of the respondents own the land size of below 1 Hectares. Respondents' own the land size between 1 and 2 hectares is 31.2 percent to the total population. Further analysis shows that the respondents own land size of above 2 hectares is 9.3 percent which indicates that they might be salary earners. Woreda wise analysis shows that respondents own below 1 hectare of land is found to be high in Yirgalem Woreda as compared to

other Woredas. Moreover, respondents reported to own more than 2 hectares of land is found to be high in Hawassa Zuria Woreda and Wondo Genet Woreda. The average land holding size of the respondents was worked out to be 1.2103 hectares. This finding indicates that majority of the respondents own land size of below 1 hectare which confirms that they are involving in subsistence farming.

Knowledge about COVID-19 and adoption of protection measures

Table 5 shows that as high as 87.7 percent of the respondents know that China is the origin of COVID-19. It is surprising to note that the remaining 12.3 percent do now know that China is the origin of the current pandemic. Woreda wise analysis shows that high majority (91.3%) respondents of Yirgalem Woreda know that the origin of COVID-19 is China. This finding indicates that majority of the respondents know that the origin of COVID-19 is China.

Table 5: Knowledge of respondents about origin of COVID-19

Statements	**Categories**	**HZW**	**YW**	**WGW**	**Total**
		n (%)	*n* (%)	*n* (%)	*n* (%)
COVID origin is China	Yes	120(86.3)	115(91.3)	113(85.6)	348(87.7)
	No	19(13.7)	11(8.7)	19(14.4)	49(12.3)
	Total	***139(100)***	***126(100)***	***132(100)***	***397(100)***
Time COVID case recorded in Ethiopia	Feb2020	11(7.9)	13(10.3)	11(8.3)	35(8.8)
	March2020	40(28.8)	30(23.8)	37(28.0)	107(27.0)
	April2020	35(25.2)	33(26.2)	36(27.3)	104(26.2)
	May2020	19(13.7)	18(14.3)	19(14.4)	56(14.1)
	Do not Know	34(24.5)	32(25.4)	29(22.0)	95(23.9)
	Total	***139(100)***	***126(100)***	***132(100)***	***397(100)***
COVID spread indication	Coughing	12(8.6)	9(7.1)	13(9.8)	34(8.6)
	Sneezing	10 (7.2)	12 (9.5)	11 (8.3)	33 (8.3)
	Both	117(84.2)	105(83.3)	108(81.8)	330(83.1)
	Total	***139(100)***	***126(100)***	***132(100)***	***397(100)***

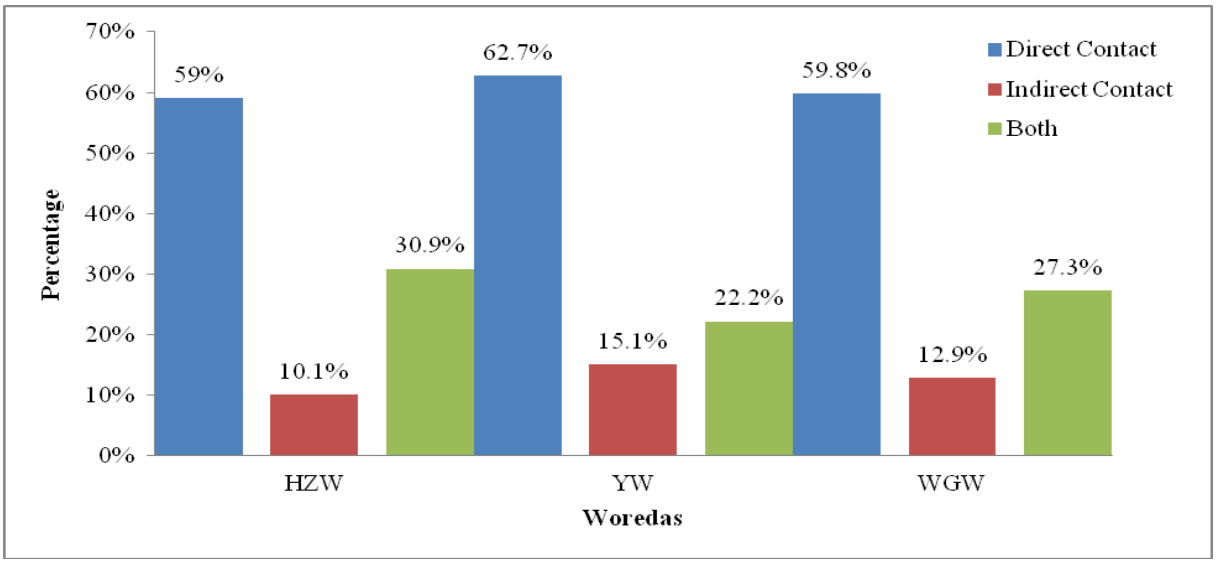
Source: *Field survey, 2020*

Only 27 percent of the respondents know that the first COVID-19 case was recorded in Ethiopia in the month of March 2020. Moreover, 23.9 percent of the respondents do not know about the first case recorded in Ethiopia. Nonetheless, significant percentages of respondents have known that the first case of COVID-19 was recorded in February, April and May, 2020. Woreda wise analysis shows that more than one fourth of the respondents from Hawassa Zuria and Wondo Genet have indicated the exact month of the case recorded in Ethiopia (Table 5). This finding confirms that

though majority of the respondents do not aware about the exact month in which the first case was recorded, they came to know that Ethiopia is not exceptional from the effect of the pandemic.

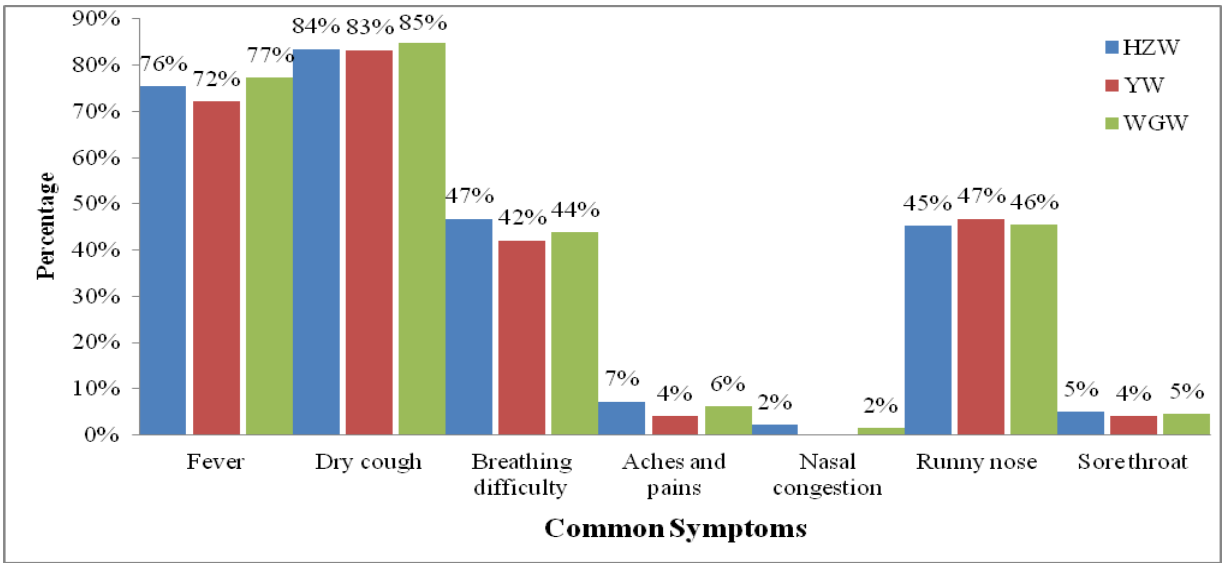
With regard to indication of COVID-19 spread, 83.1 percent of the respondents know that both coughing and sneezing are the common indicators for the spread of the pandemic. Woreda wise analysis shows that there are no significant differences observed among the respondents irrespective of Woreda on the knowledge about the spread of COVID-19.

Figure 1: Knowledge about source of COVID-19 infection transmission



A per figure 1, 60.5 percent of the respondents know that infection transmission is due to the direct contact with the COVID-19 infected people. Only 12.6 percent of the respondents know that infection transmission is due to indirect contact. Nonetheless, 27 percent of them know that infection transmission is possible from both direct and indirect contact with the people tested with COVID-19 positive. Woreda wise analysis indicates that a significant proportion of respondents from Hawassa Zuria and Wondo Genet Woredas know that transmission is possible for both the contacts. This finding indicates that majority of the sample respondents do have sound knowledge about the source of COVID-19 infection transmission.

Figure 2: Knowledge about common symptoms of COVID-19



It is observed from Figure 2 that majority of the respondents know that dry cough (83.9%) and fever (75.1%) are the common symptoms of COVID-19 infection. Further, nearly half of the respondents know that runny nose (45.8%) and breathing difficulty (44.3%) are the other common symptoms of COVID-19 infection. Respondents irrespective of their place of domicile (Woreda) dreadfully sound about the common symptoms of corona infection.

Table 6: Knowledge about people who are at high risk of getting infected

Group of people at risk of getting infected^	**HZW**	**YW**	**WGW**	**Total**
	n (%)	*n* (%)	*n* (%)	*n* (%)
People who have travelled to other countries in last 14 days	65(46.8)	52(41.3)	57(43.2)	174(43.8)
People coming from other regions	34(24.5)	25(19.8)	33(25.0)	92(23.2)
Family members and contact of patients	95(68.3)	83(65.9)	88(66.7)	266(67.0)
People other than 60years of age and people with medical problems	122(87.8)	108(85.7)	115(87.1)	345(86.9)

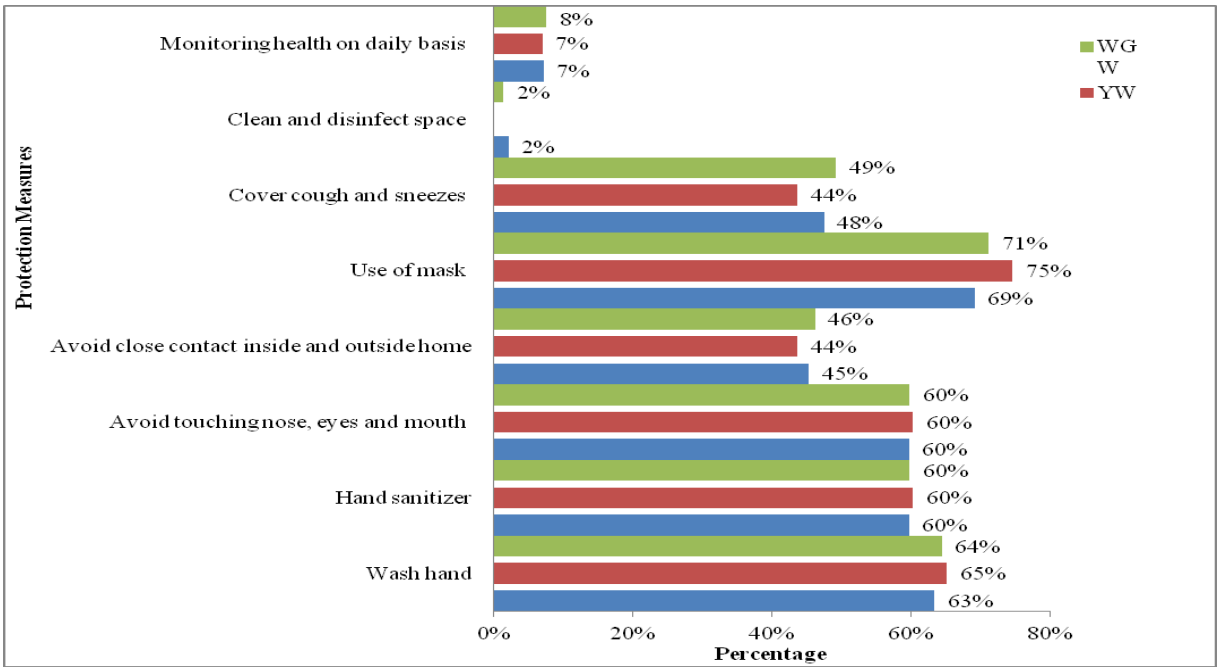
Source: *Field survey, 2020*

Note: ^ Multiple response questions

Table 6 deals with the knowledge of the respondents about the people who are at high risk of getting infected of COVID-19. The survey result reveals that 86.9 percent of the respondents know very well that people other than 60 years of age and people with medical problems are at high risk of getting infected by COVID-19. More than two third (67%) of the respondents know that the family members and contact of patients are at high risk of getting infected by the virus. Nearly half (43.8%) of them know that the people who have travelled to other countries in the last 14 days are also the victims of corona infection. No significant differences are observed among the respondents

irrespective of their Woreda. This finding shows that the sample respondents do have sound knowledge about the people who are at high risk of getting infected by COVID-19.

Figure 3: Adoption of protection measures by the respondents



A perusal of Figure 3 reveals that 71.5 percent of the respondents use mask, washing hand frequently (64.2%), using hand sanitizer (59.9%), avoid touching nose, eyes and mouth (58.4%), cover cough and sneezes (46.9%), and avoid close contact inside and outside home (45.1%). A very insignificant percentage of the respondents do clean and disinfect space and monitoring health on daily basis. There are no differences among the respondents with respect to their Woreda. This finding indicates that members of cooperatives have been adopting many of the protection measures as suggested by the Health Bureaus.

Table 7: Support from cooperatives

Received support from cooperatives	**HZW**	**YW**	**WGW**	**Total**
	n (%)	*n* (%)	*n* (%)	*n* (%)
Yes	91(65.5)	90(71.4)	93(70.5)	274(69.0)
No	48(34.5)	36(28.6)	39(29.5)	123(31.0)
Total	***139(100)***	***126(100)***	***132(100)***	***397(100)***

Source: *Field survey, 2020*

A cursory look at the Table 7 shows that more than two third (69.0%) of the respondents have received support from their cooperatives for the protection against the pandemic. Woreda wise analysis indicates that more than 70 percent of the members from Yirgalem and Wondo Genet Woredas have received support from their primary multipurpose cooperatives as compared to the members of Hawassa Zuria Woreda. This finding denotes that primary multipurpose cooperatives in

the selected Woredas have been supporting their members to protect them against the repercussions of the pandemic.

Table 8: Kinds of support received from cooperatives

Kinds of support received from cooperatives	HZW	YW	WGW	Total
	n (%)	*n* (%)	*n* (%)	*n* (%)
Mask	26(18.7)	34(27.0)	30(22.7)	90(67.2)
Sanitizer	15(10.8)	21(16.7)	19(14.4)	55(20.1)
Gloves	4(2.9)	7(5.6)	6(4.5)	17(6.2)
Awareness	86(61.9)	84(66.7)	88(66.7)	258(94.2)

Source: *Field survey, 2020* **Note:** ^ Multiple response questions

With regard to the kinds of support, as high as 94.2 percent of the respondents have got awareness about the ill effect of COVID-19 from their cooperatives. It is interesting to note that more than two third of the respondents have received mask at free of cost from their cooperatives. One fifth of the respondents have received hand sanitizer from their cooperatives. There are no significant differences found among members of cooperatives in terms of Woreda. This finding indicates that primary multipurpose cooperatives in the selected Woredas have extended its support to the members to a certain extent in the form of awareness creation, distribution of free mask and hand sanitizers.

FGD and KII results shows that all the primary multipurpose cooperatives with the support of Regional Cooperative Promotion Bureau had supplied essential protection materials such as mask and sanitizer at free of cost to the members and also created awareness programs.

Factors determine the Smooth Functioning of Cooperatives during COVID-19

Many research findings show that there are many factors responsible for the smooth functioning in different organizations especially cooperatives. Hence an assessment was made in this research to trace out the important influential factors responsible for the smooth functioning of sample cooperatives during the COVID-19 so as to forward suitable policy measures to address those factors to enhance the efficiency of cooperatives. For this purpose as discussed in the methodology, chi-square test and orderly regression analysis were carried out. Twelve variables were identified through literature and included in the analysis. As the first step, Chi-square test was carried out and the results are presented in Table 9.

Table 9: 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 21, 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. 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.

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

The 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. 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.

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 unit increase in accessibility of emergency fund will increase the smooth functioning of cooperatives by 13.72 units.

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. 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.

Making 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.

The 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 middleman (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 favourable condition the response variable smooth functioning of cooperatives will expect to change by 3.077 regardless of other independent variables in the model. KII & FGD results shows that all the primary multipurpose cooperatives have joined hands with Kebele Consumer Cooperatives to ensure smooth distribution of essential consumer items for consumption to not only members but also to the community amid pandemic situations.

Furthermore, KII with officials confirmed 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 found to be challenging but with the support of Regional Bureau they were able ensure smooth production, distribution and consumption.

4. Conclusion and recommendations

From the foregoing analysis, it can be concluded that members of primary multipurpose cooperative societies representing three selected Woredas found to have adequate knowledge on the origin of COVID-19, the time the first case recorded in Ethiopia, indicators of spread of the pandemic. In addition, they had sufficient knowledge about the source of pandemic infection, common symptoms of COVID-19, and people who at high risk of getting infected with the pandemic. Majority of the respondents adopt protection measures such as wearing mask, washing hands with sanitizer, cover cough and sneezes, avoid touching nose, eyes and mouth and avoid close contact inside and outside home.

Primary multipurpose cooperatives in the selected Woredas have been supporting their members to protect them against the repercussions of the pandemic. Primary multipurpose cooperatives in the selected Woredas have extended its support to the members to a certain extent in the form of awareness creation, distribution of free mask and hand sanitizers. The major factors that influence 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.

On the basis of the conclusions, certain workable recommendations are forwarded to ensure well-functioning of the primary multipurpose cooperative societies in the study Woredas.

1. 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.

2. It was found that development of 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.
3. 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.
4. 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.
5. 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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