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**COMPARATIVE ANALYSIS OF MEMBER
BENEFITS IN THE SPECIALTY COFFEE
COOPERATIVE AND THE CONVENTIONAL
COFFEE COOPERATIVE**

A Case Study in Shan State, Myanmar

**A thesis presented in partial fulfilment of the requirements
for the degree of**

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Abstract

Cooperatives play a significant role in enhancing smallholder farmers' access to markets, increasing their income, and mitigating rural poverty. In Myanmar, agricultural cooperatives are seen as key to improving the socio-economic conditions of smallholder farmers, particularly in rural areas where agriculture is the primary livelihood. Although Shan State, holds significant potential for quality coffee production, many coffee farmers in the region face challenges in producing high-quality coffee and accessing profitable markets. Thus, this study focuses on comparing the member benefits of the specialty coffee cooperative and the conventional coffee cooperative in Shan State, examining their impact on the livelihoods of smallholder coffee farmers.

A semi-structured questionnaire was designed, and data was collected through online Zoom interviews, using the convenience sampling method. The interviews were conducted with 18 cooperative members and 5 cooperative leaders and data were analyzed using qualitative methods. The study examined multiple dimensions of member benefits, including economic gains, social support, market access, quality control, and community development.

The results revealed that the specialty coffee cooperative, managed by a professional team, enables access to international markets, offering higher prices for higher quality specialty coffee. In contrast, the conventional coffee cooperative, with lack of professional team, primarily caters to neighboring markets with lower quality standards. While the specialty coffee cooperative provides significant marketing, financial, and environmental benefits, the conventional coffee cooperative focuses on meeting immediate needs, such as providing low-cost agricultural inputs and services, but struggles with long-term sustainability and significant economic gains for its members.

The results of this study are specific to the context of Shan State region and may not be generalizable to other areas. However, they may offer some important implications. While cooperatives themselves should aim for professional management and targeted training to the needs of members to maximize long-term sustainability and benefits for their members, policymakers should focus on creating a supportive environment for cooperatives by improving infrastructure and providing access to affordable credit and market information.

Key words: Coffee cooperatives, the specialty coffee cooperative, the conventional coffee cooperative, member benefits, Shan State, Myanmar.

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List of Abbreviations

ADB	Asian Development Bank
AGM	Annual General Meeting
AVSI	Association of Volunteers in International Service
BOD	Board of Directors
CCS	Central Cooperative Society
CQI	Coffee Quality Institute
CSO	Central Statistical Organization
CRIETC	Coffee Research, Information, Extension and Training Centre
Exim Bank	Export-Import Bank of Korea
FAO	Food and Agriculture Organization
FAOSTAT	Food and Agriculture Organization Statistics
FDA	Food and Drug Administration
GAP	Good Agricultural Practices
GDP	Gross Domestic Product
GMO	Genetically Modified Organism
ICA	International Cooperative Association
IFPRI	International Food Policy Research Institute
INGOs	International Non-governmental Organizations
ITC	International Trade Centre
ITA	International Trade Administration
MCA	Myanmar Coffee Association
MMK	Myanmar Kyat
MOALI	Ministry of Agriculture, Livestock and Irrigation
MUHEC	Massey University Human Ethics Committee
NZD	New Zealand Dollar
PP	Polypropylene
PRC	People' Republic of China
SCA	Specialty Coffee Association
SCAA	Specialty Coffee Association of America
SOPs	Standard Operating Procedures
SSIC	Shan State Investment Committee (SSIC)

UN	United Nations
UNODC	United Nations Office on Drugs and Crime
USA	United States of America
USAID	United States Aid for International Development
VFV	Vacant, Fallow and Virgin Land

- Exchange Rate: 1 New Zealand Dollar (NZD) is equivalent to 2000 Myanmar Kyat (MMK) in December 2023 according to RIA Money Transfer.

CHAPTER 1 INTRODUCTION

1.1 Introduction

Chapter one provides an overview of the thesis and is divided into five sections. Section Two outlines the research background following the introduction. Section Three discusses the problem statement, while Section Four details the research questions, aims, and objectives. Section Five concludes the chapter by outlining the structure of the thesis.

1.2 Research Background

Enhancing the productivity, profitability, and sustainability of smallholder agriculture is considered a key strategy for alleviating rural poverty in developing countries. Institutional innovations are seen as vital in this effort, as they can help farmers address market failures (Hazell et al., 2010). There is growing interest in producer organizations, such as cooperatives, as a means to improve smallholder farmers' market access, boost their incomes, and reduce rural poverty (Bernard & Spielman, 2009; Bernard & Taffesse, 2012; Fischer & Qaim, 2012a, 2012b; Markelova et al., 2009; Shiferaw et al., 2009). Cooperatives and farmer associations are essential in assisting farmers with transitioning their production methods and adhering to quality standards (Bacon, 2005; Varangis, 2003). Verhaegen & Van Huylenbroeck (2001) emphasize that organizations like cooperatives can significantly lower the costs associated with gathering information. Consequently, cooperatives are crucial in helping farmers gain access to specialized markets (Blackman et al., 2005).

The importance of agricultural cooperatives in fostering socio-economic development of smallholder farmers is widely acknowledged in many developing countries, including Myanmar. As an agricultural-based nation, around 70% of Myanmar's population resides in rural areas (Central Statistical Organization (CSO), 2021) and depends on agricultural activities for their livelihood (Okamoto, 2020). Moreover, small-scale farmers manage around 80 % of the farms in the country, cultivating more than half of its arable land (Boughton et al., 2020). Given that agriculture is the foundation of Myanmar's economy, enhancing rural development remains a key priority (Okamoto, 2020). Recognizing the importance of improving the socioeconomic status of rural communities, the Government is promoting the creation of cooperative associations among groups with shared interests to

enhance the socio-economic development of rural communities in Myanmar (ICA, 2020). Currently, 81% of all cooperatives in Myanmar are related to agriculture, livestock, and forestry (ICA, 2020). Cooperatives focused on agriculture, savings, thrift, and microfinance are actively encouraged to support poverty reduction, sustainable farming, and financial inclusion. In agricultural cooperatives in Myanmar, supplying high-quality crop varieties, essential agricultural inputs, and improving market access are among the primary objectives (ICA, 2020).

Shan State has significant potential for agricultural development in Myanmar (Shan State Investment Committee (SSIC), 2018). The state's economy heavily relies on the agricultural sector, which produces a wide variety of crops that are highly sought after by neighbouring countries (SSIC, 2018). The sub-tropical climate, marked by warm days, cool nights, and consistent rainfall in the higher altitudes of northern regions such as Shan State, is ideal for cultivating high-quality Arabica coffee (Schmid, 2015). Shan State currently leads in coffee production in Myanmar, with a significant concentration of coffee farming in Ywangan township, where 90 out of 125 villages are engaged in this activity. The majority of coffee produced in Shan State comes from small-scale farmers who grow it on plots of less than one hectare. Most of the coffee cooperatives are currently located in Shan State (MOALI, 2023) and coffee production is a vital economic activity for many smallholder farmers, who often organize into cooperatives to improve their market access and secure better prices (USAID, 2019).

1.3 Problem Statement

Shan State in Myanmar, is home to a burgeoning coffee industry which offers promising opportunities for economic development and poverty alleviation among smallholder farmers. The region's unique geography and ecosystems create favourable conditions for high-quality coffee production, opening doors to both domestic and international markets. However, while some coffee cooperatives in the region are producing high-quality specialty coffee to gain better market access and achieve higher incomes, others are still engaged in the production of lower-quality conventional coffee. Despite the importance of agriculture in Myanmar's economy and the Government's efforts to promote the rural development through cooperatives, farmers from some coffee cooperatives in Shan State are still encountering difficulties in producing high quality coffee. Consequently, most

smallholder coffee farmers in Shan State face challenges in accessing premium markets which offer higher prices for their coffee, thus limiting their potential for increased income and economic stability.

This research addresses a critical gap in the existing literature. While there is a growing body of research on coffee cooperatives and their role in sustainable agriculture, little or no attention has been devoted to the analysis of member benefits within the specialty coffee cooperative and the conventional coffee cooperative in the specific context of Shan State, Myanmar. As such, there is a lack of empirical evidence to guide policymakers, cooperative leaders, and stakeholders in making informed decisions to optimize the socio-economic benefits of coffee cooperatives in the region. Therefore, this study has aimed to address these pressing issues by conducting the analysis of member benefits within the specialty coffee cooperative and the conventional coffee cooperative in Shan State, Myanmar. Understanding the impacts of these two types of cooperatives can inform strategies for enhancing the well-being of smallholder coffee farmers and contributing to the sustainability of the coffee industry in the region.

1.4 Research question, aim and objectives

Research question

What are the benefits received by members from the specialty coffee cooperative and the conventional coffee cooperative in Shan State, Myanmar?

Research aim

- To study the benefits received by members of two types of cooperatives: the specialty coffee cooperative and conventional coffee cooperatives in Shan State of Myanmar

Research Objectives

To achieve this goal, there are three objectives in this study:

- 1) To review the literature to understand how cooperatives provide benefits to members

- 2) To study and analyze two types of coffee cooperatives: the specialty coffee cooperative and the conventional coffee cooperative in the study area
- 3) To analyze and compare member benefits between the specialty coffee cooperative and the conventional coffee cooperative

1.5 Structure of the thesis

This thesis is comprised of seven chapters. The first chapter provides an introductory overview of the study. It also outlines the research problem, research question, research objectives and it includes the research process.

Chapter Two presents a basic description of background information about Myanmar. It also provides specific background information on three important areas: the agricultural sector, the coffee industry and the evolution of cooperatives and its laws and legislations in Myanmar.

Chapter Three presents a review of the literature on cooperatives, including the evolution, definition and principles of cooperatives: why cooperatives are established and why members join cooperatives: member benefits of cooperatives: the emerging market trends in the agri-food sector and global coffee market and the role of farmers' organisations in participation in specialized markets.

Chapter Four describes the research methodology used in the study. This chapter discusses the research aim and objectives, research strategy, study area selection, sampling strategy and sampling size, data collection, data analysis and the ethical consideration of the research is also provided.

Chapter Five outlines the two cooperatives in terms of their background, governance and management, membership, and targeted markets. It also presents the analysis of member benefits identified in this study.

Chapter Six presents the discussion of the research. This chapter discusses the comparison of basic characteristics of two cooperatives and the comparison of members benefits provided by these cooperatives.

Chapter Seven describes the overall conclusion and it also provides the limitations, recommendations for cooperatives studied and policymakers and implications for future research.

CHAPTER 2 BACKGROUND OF MYANMAR

2.1 Introduction

This chapter presents the agricultural landscape in Myanmar, with a specific emphasis on the coffee sector and cooperatives in the country. After the Introductory Section, Section Two gives overview of Myanmar which focuses on an examination of geographical and climatic considerations which impact agriculture in the region. It is followed by an exploration of the diverse assortment of crops grown throughout Myanmar. Furthermore, Section Three provides insights into the agricultural sector of the country with an explanation of the dispersion of primary agricultural commodities across the various regions of the country, the export volume and value of the most produced commodities in the country. Subsequently, Section Four provides a comprehensive analysis of the coffee sector in Myanmar, encompassing critical facets such as coffee production and processing systems, the spectrum of coffee varieties cultivated by local farmers, and coffee exports. Finally, Section Five explains the cooperatives and its associated laws and legislations in the country.

2.2 An Overview of Myanmar

2.2.1. Geographic Situation

Myanmar, officially known as the Republic of the Union of Myanmar, is situated in the southeastern part of Asia, and is bounded by the Andaman Sea and the Bay of Bengal on its southern and southwestern sides (ITC, 2014). It shares its borders with China in the northern and northeastern directions, Laos in the east, and Thailand to the southeastern part, while also being adjacent to Bangladesh in the western part and India in the north-west (see Figure 2.1) (Steinberg, 2013). The country covers an area of 676,578 square kilometers and had a population of 51,486,253 in 2014, with projections suggesting that the population will rise to 59,399,039 by 2030 (DOP, 2017). Within its borders, there are eight primary ethnic groups along with various subgroups that collectively speak over 100 languages. The capital city is Nay Pyi Taw, and the largest city, as well as the central commercial hub, is Yangon.



Figure 2.1: Myanmar's Map

Source: FAOSTAT (2021)

Myanmar is divided into three primary agro-ecological regions: the delta and coastal area, the arid zone, and the hill regions (Haggblade & Boughton, 2013). In the delta and coastal zone, which hold the highest population density and benefit from abundant monsoonal rainfall and easy water access, the dominant agricultural activities revolve around rice and fish production. The dry zone is situated in a rain-shadow, leading to productive agriculture primarily occurring in river valleys, where a combination of rain-fed upland crops and rice is cultivated. The hill regions are characterized by a greater presence of tree and horticultural crops compared to other areas, making them suitable for less intensive farming practices.

2.2.2. Climate

Myanmar features a tropical to sub-tropical monsoon climate characterized by three distinct seasons. These seasons consist of i) the hot, arid inter-monsoonal period, spanning

from mid-February to mid-May, ii) the rainy southwest monsoon season, which occurs from mid-May to late October, and iii) the cool and relatively dry northeast monsoon season, extending from late October to mid-February.

The climate in Myanmar exhibits variation across its diverse ecological zones, primarily influenced by factors such as proximity to the coastline and altitude (World Bank, 2021). In the southern regions, including the Ayeyarwady Delta and the coastal areas of Rakhine, Mon, and Tanintharyi, the climate resembles that of typical Southeast Asia. Here, temperatures remain consistently high at around 26°C throughout the year, and annual precipitation levels range from 2,500 to 5,500 mm. These regions are also particularly susceptible to tropical cyclones. Moving towards Myanmar's central zone, the climate becomes drier, with an average annual rainfall of typically 500-1,000 mm. This area experiences more significant temperature fluctuations, although temperatures can still soar above 40°C (World Bank, 2021).

In the northern and eastern mountainous regions of Myanmar, the climate is generally cooler, with moderate rainfall ranging from 1,000 to 2,000 mm per year (World Bank, 2021). The topography, characterized by undulating hills, valleys, and mountain ranges, combined with warm days and cool nights, creates optimal conditions for coffee cultivation (Origin, 2023). This is especially true in the Shan Hills, which extend into the coffee-producing areas of Yunnan and Thailand.

2.3 Agricultural Sector in Myanmar

Myanmar is an agricultural-based country where about 70% of the total population live in rural areas (CSO, 2021) and rely on agriculture (Okamoto, 2020). As the agricultural sector is the backbone of Myanmar's economy, the development of rural areas is a primary focus for the country (Okamoto, 2020). Out of the 67.6 million hectares of land in Burma, approximately 12.8 million hectares are actively utilized for cultivation (ITA, 2022). The agricultural sector contributes 20% of GDP (World Bank, 2022) (see Figure 2.2), employs about 56% of the total workforce, and accounts for 21% of total exports (Tun, 2022). Therefore, it is evident that substantial progress in agriculture is indispensable for achieving economic growth and enhancing social well-being within Myanmar.

Myanmar possesses significant water resources, concentrated around four major rivers and their associated systems. Additionally, three out of Myanmar's four major river systems originate within its borders, granting the country exclusive control over them. As global water scarcity increasingly impacts agricultural production, especially in neighboring countries like the PRC, Myanmar's ample water resources present a significant competitive advantage in agriculture, although less than 10% of these resources have been effectively utilized (Raitzer et al., 2015).

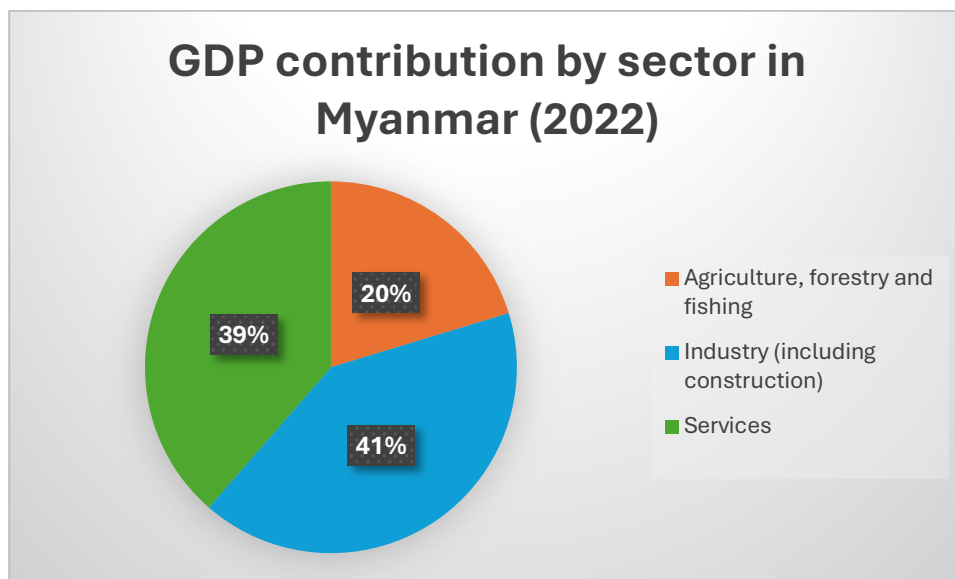


Figure 2.2: GDP contribution of different sectors in Myanmar

Source: World Bank Data Bank (2022)

The nation possesses four prominent strengths that give it a competitive edge in agriculture: ample land, water, and labor resources, coupled with its proximity to upcoming major food markets. With a vast expanse of 12.8 million hectares dedicated to cultivation and the possibility of expanding this area by almost 50% through untapped fallow regions, the agricultural prospects are extensive (Raitzer et al., 2015). Furthermore, the diverse landscape and ecosystems empower farmers to cultivate a wide variety of cereals, pulses, horticultural produce, fruits, as well as livestock and fishery products (Raitzer et al., 2015).

Rice stands as the primary agricultural commodity of Myanmar, contributing to approximately 43 percent of the overall agricultural production value (ITA, 2022) and the average tonnes produced from 2012 to 2021 were around 26 million tonnes (see Figure 2.3). Myanmar ranked seventh in rice production in the world in 2018 (FAO, 2022) and rice is cultivated all over the country with 41% of total sown areas in 2020 (see Figure 2.4). Other

important crops include sugarcane, beans, maize, and groundnuts. In fact, approximately 80% of Myanmar’s farmers engage in rice farming, often followed by the planting of beans and pulses after the rice cultivation season (World Bank, 2016).

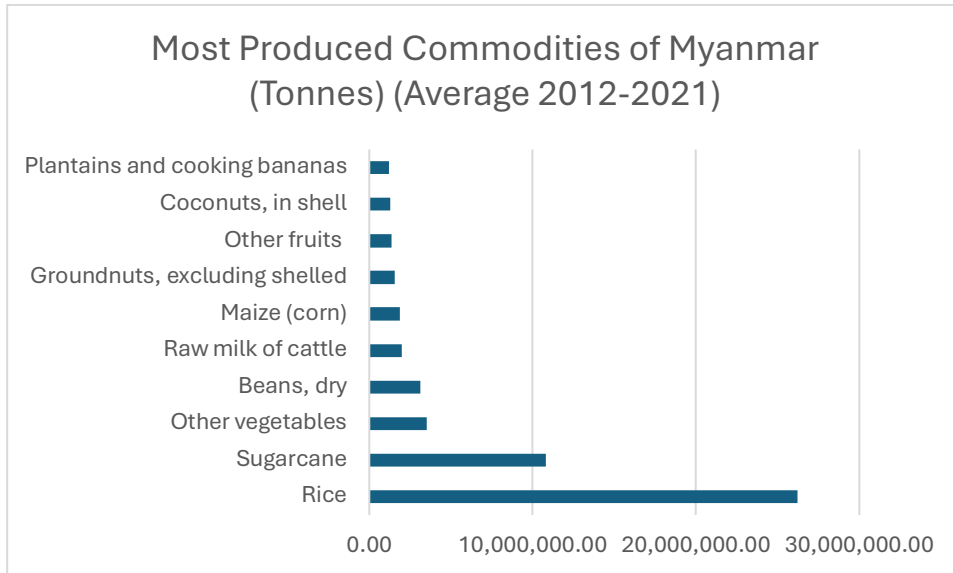
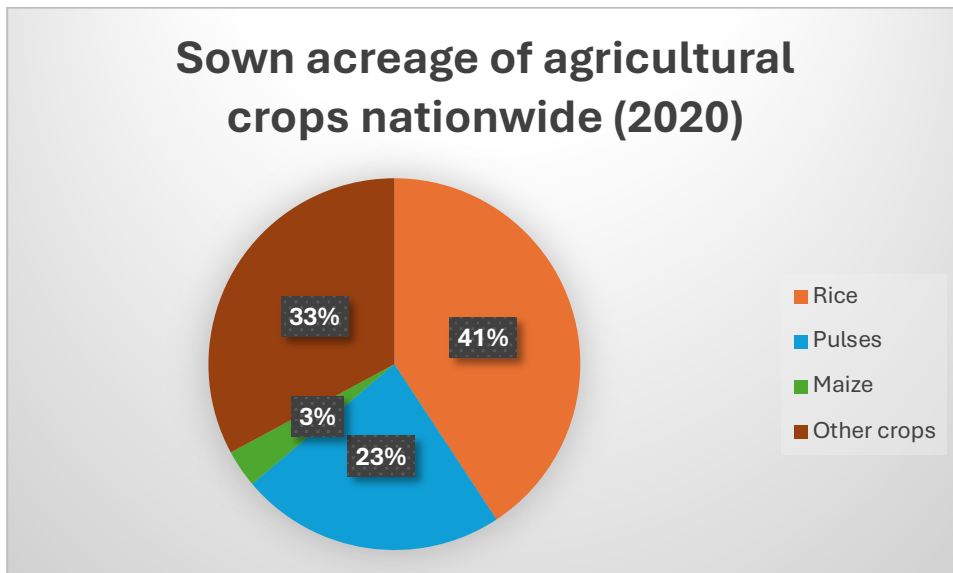


Figure 2.3: Most Produced Commodities in Myanmar (Average 2012-2021)

Source: FAOSTAT (2021)



Note: Others include wheat, oilseeds, spices, tobacco, beverage crops, vegetables and fruits, fiber and miscellaneous

Figure 2.4: Sown Acreage of Agricultural Crops Nationwide (2020)

Source: Central Statistical Organization (2023)

Myanmar does produce a variety of other crops, although their production levels and export volumes are notably lower compared to the top three crops which are rice, sugarcane, and beans. The Ayeyarwady Delta Region contributes the largest portion to rice production, whereas the central dry zone region predominantly contributes the highest share to beans and pulses' production (Eurocham, 2019). Pulses make up 23.13% of the sown area, reflecting their importance for both local consumption and export markets, while other crops, including oilseeds, spices, and vegetables, account for 32.88%, showing significant agricultural diversity. Maize, with 3.26% of the sown area, serves as a secondary crop mainly used for food and feed (CSO, 2023).

Table 2.1: Major crops grown in different areas of Myanmar

Area	Major Crops
Delta region (Ayeyarwady Region, Yangon Region, Bago Region, Mon State)	Rice (intensive rice production), and pulses
Central dry zone (Magway Region and Mandalay Region)	Rice (subsistence), oil crops, pulses, vegetables, tea, sesame, and groundnuts
Hilly and mountainous zone (Shan State, Chin State, Kachin State)	Rice, maize, wheat, sorghum, vegetables, sugarcane, coffee, and tea
Coastal zone (Mon State, Tanintharyi Region and Kayin State)	Rice, rubber, oil-palm, and fruits tree

Source: Eurocham Myanmar, 2019

With 56% of the workforce engaged in agriculture, labor remains abundant in comparison to other Asian nations. Labor costs are also low, as Myanmar's minimum wage ranks as the most affordable in Southeast Asia (the Philippines National Productivity Commission, 2014), and the adoption of mechanization remains limited. Given that labor plays a crucial role in agricultural production, this circumstance aids in keeping production expenses at a minimum. Given its strategic location between the extensive regional markets of India and the PRC, Myanmar's farmers and agribusinesses possess the potential to competently engage in both regional and global agricultural markets. However, this potential can be realized through appropriate investments in institutions and infrastructure.

Based on the latest Myanmar Agricultural Census, 80% of farms in Myanmar are managed by small-scale farmers who cultivate over half of the nation's arable land

(Boughton et al., 2020). Thus, the agricultural landscape in Myanmar is predominantly characterized by smallholder farmers ranging from one to five hectares (World Bank, 2016). Despite their limited size, these farms provide crucial employment opportunities for landless households, owing to the labor-intensive nature of Myanmar's agriculture. However, the majority of these smallholder families, along with the local workers they hire, remain impoverished (Boughton et al., 2020).

Myanmar's wage levels in the agricultural farming remain notably low when compared to global standards, with daily wages standing at just \$2 in the Delta and Dry Zones (World Bank, 2016). Wage rates tend to peak during the dry season. Owing to low profit and wages from agricultural farming, approximately 10 percent of the Myanmar population especially the young generation, which equates to around 5 million individuals, depart from their farms and possessions, relocating as migrant workers to foreign countries (FAO, 2023). Thus, most smallholder farmers who operate in farming are old people with a low level of education and are not able to practice the new technology in the farming system. Therefore, the development of the agricultural sector in Myanmar lags behind when compared to the neighboring nations.

2.4 Myanmar's Coffee Sector

Coffee was first brought to Myanmar by the British during their colonial rule. However, it was not widely cultivated. In the 1930s, Catholic missionaries introduced coffee to the Shan State which is the study area, and this is where most of Myanmar's coffee is grown today. After gaining independence in 1948, Myanmar did not pay much attention to coffee farming because many areas where coffee could grow were controlled by different ethnic guerrilla groups (Schmid, 2015). The military governments fought against these groups, causing further neglect. For many years, Myanmar remained isolated and did not attract foreign investment. However, things are changing now. In the past decade, Myanmar has started to explore its potential as a significant producer of arabica coffee. Additionally, a small coffee industry that grows robusta beans has emerged in the country's lowlands in the southwest and southeast (Schmid, 2015).

According to Schmid (2015), the cultivation of Myanmar's coffee, primarily arabica variety is concentrated in Shan State, Mandalay Region, Kayin State, and Chin State. Official

records indicate that coffee plantations cover an area of 27,000 acres in Shan State, 10,000 acres in Kayin State, around 5,000 acres in Mandalay (including the picturesque hill town of Pyin Oo Lwin), and 2,000 acres each in Kachin and Kayah States (Thant, 2017). Owing to its predominantly mountainous terrain, Myanmar primarily cultivates arabica coffee varieties. Robusta coffee is mostly cultivated in the lowlands, while arabica is grown at higher elevations. It can be estimated that approximately 80% of coffee beans grown in Myanmar are of the arabica variety mainly grown in Shan State and Mandalay Region, while the remaining 10% are Robusta varieties, mainly cultivated in the Than Taung region. Typical Arabica coffee varieties cultivated comprise Caturra, Catimor, Bourbon, Typica, S795, and SL34. In a cooperative effort funded by Nestlé, seven Robusta varieties have also been introduced in Kayin State (see Figure 2.5) (Origin, 2023).

The sub-tropical weather characterized by alternating warm days and cool nights, along with regular rainfall in the central regions such as Mandalay and Pyin Oo Lwin and northern elevated regions of Myanmar such as Shan State, was found to be optimal for cultivating the high-quality arabica coffee variety (Schmid, 2015). This particular region features elevated plateaus possessing suitable red soils, altitudes surpassing 3,300 feet, well-distributed rainfall ranging from 59 to 79 inches, and a noticeable dry season. These specific conditions are typically present within latitudes of approximately 20 to 24 degrees north (Basu et al., 2019).

Currently, Shan State accounted for the largest proportion in coffee production in Myanmar and, in one township called Ywangan in Shan State, a significant number of villages, 90 out of 125, are involved in coffee farming. Most of the coffee produced in Shan State comes from small-scale farmers who cultivate on plots of land covering less than one hectare. Most of these households typically maintain gardens with 10-20 coffee trees while also cultivating subsistence crops alongside them (Origin, 2023).

In Myanmar, dry natural processing and fully-washed coffee processing methods are widely used (Origin, 2023). The dry and warm conditions during the coffee harvesting season, which usually occurs in the dry months from December to March, are especially favourable for dry natural processing, although many coffees undergo the fully washed method. The harvesting process involves careful picking, processing, and sorting at the village level. Subsequently, the harvested coffee is either sent to a central mill for further processing or sun-dried on elevated beds.



Arabica varieties grown in Myanmar
(in descending order of popularity)

Rank	Variety	Rank	Variety	Rank	Variety
1	S-795	8	Blue Mtn.	15	H 420
2	Amarella	9	C 1669	16	H 528
3	Caturra (red/yellow)	10	LC 1662	17	SL 4
4	T 5175	11	P 86	18	SL 6
5	T 8667	12	P 88	19	SL 28
6	Catuai	13	P 90	20	SL 34
7	Catimor	14	H 306	21	San Ramon

Robusta is grown in Kayin state under a cooperative program with Nestlé.
Varieties include: FRT83, FRT65, SC10, PROTPO15, FRT79, PP08, SKE10 and some local varieties

Figure 2.5: Coffee-growing regions in Myanmar

Source: Coffee Research, Information, Extension & Training Centre (CRIETC)

To improve coffee production in Myanmar and meet international quality standards, the Myanmar Coffee Association (MCA) was established in 2014, headquartered in Pyin Oo Lwin, a major area for growing arabica coffee in the country. It is a privately funded organization with 115 members, including 25 larger estates, five coffee roasters, and five trading firms (Schmid, 2015). Their mission is to represent coffee businesses across the country and expand to cover more growing regions, like Chin Hill and Than Taung. Another group, the Mandalay Coffee Group, formed in 2014, consists mostly of larger coffee estates

in Pyin Oo Lwin. They have a total cultivation area of 2,500 acres among their 25 members and produced 200 metric tonnes of coffee in the recent harvest, valued at \$650,000. They also plan to involve local roasters and trading companies to promote domestic sales and exports (Schmid, 2015).

Winrock International, a US-based NGO with experience in agriculture technical assistance, also plays a significant role in developing Myanmar's coffee industry (Schmid, 2015). Through the "Value Chains for Rural Development" program, funded by USAID, they support small-scale farmers, including women and ethnic minorities, by offering technical training, assistance, and grants to stimulate private sector investment in value chains, including coffee. They partnered with CQI for training and support throughout the coffee value chain in Myanmar.

While Myanmar's Government is generally short of funds to support local farmers, there is an exception: the Coffee Research, Information, Extension & Training Centre (CRIETC). Established in 2003, this centre, under the Ministry of Agriculture and Irrigation, employs 16 full-time staff and focuses on various aspects of coffee cultivation, including selecting suitable coffee varieties, ensuring high-quality coffee, conserving coffee varieties, increasing production yields, problem-solving for expanding growing areas, and providing training programs for coffee production and processing (Schmid, 2015). They also conduct research into post-harvest technologies, green bean grading, and pest and disease control to keep Myanmar's coffee inventories healthy and productive.

Myanmar is a burgeoning coffee-producing nation, with the capacity to contribute high-quality beans to a global market that has a shortage of arabica and a rising demand for top-tier robusta varieties. While the annual coffee production output is currently modest, the Government is committed to significantly enlarging coffee cultivation areas in the coming years. According to Winrock International, the Value Chain for Rural Development (VCRD) project, funded by USAID, seeks to incorporate smallholders and impoverished rural households into competitive commercial value chains. Spanning a duration of five years from 2014 to 2019 of this project, the primary objective is to enhance the entire process of coffee cultivation, processing, and marketing. Therefore, coffee production has been increasing since 2015 and the production increased from 8300 tonnes in 2015 to about 8900 tonnes in 2021 (see Figure 2.6).

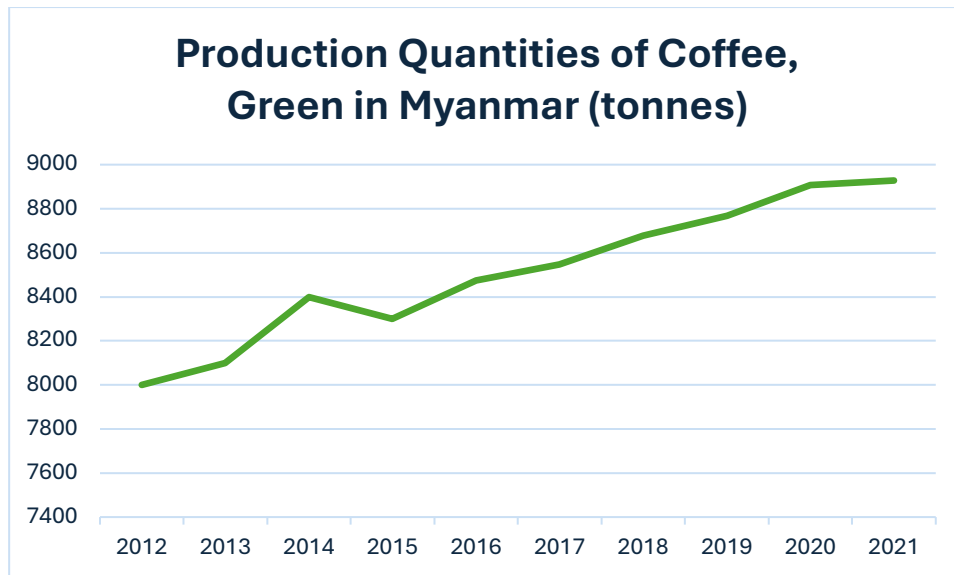


Figure 2.6: The Volume of Coffee Production (Green) in Myanmar, 2012-2021

Source: Representation by using data from FAOSTAT

Myanmar is still not widely recognized on the global stage as a notable origin for high-quality coffee beans. It tends to be overshadowed by neighbouring countries such as China, Vietnam, Thailand, and Indonesia (Schmid, 2015). Currently, most of the coffee produced is shipped to neighbouring countries such as China, Malaysia and Thailand through cross-border trade (see Figure 2.7). Although Myanmar could export to other markets outside of Asia, the volume is still low. Coffee production is distributed through three primary avenues: 1) domestic consumption, 2) exports to nearby nations referred to as “Border Trade”, and 3) exports facilitated through the principal Yangon port, commonly termed as “International exports” (Winston et.al, 2005).

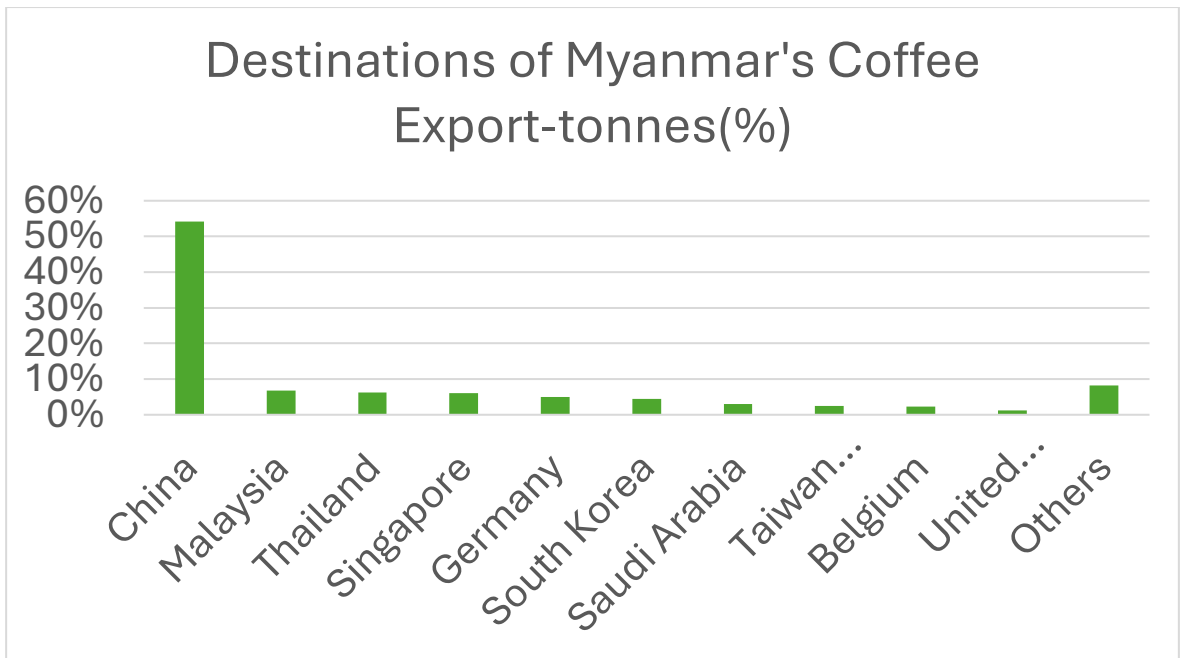


Figure 2.7: Destinations of Myanmar Coffee Exports (2022)

Source: Representation by using data from Department of Trade (Myanmar)

In 2021, the export of green coffee saw a notable increase, reaching 1365 tons, marking a positive upturn following two years of decline (see Figure 2.8). Since that period, coffee exports experienced substantial growth with 3721 tonnes in 2022 due to the collaborative effort of the Government, UNODC, Winrock International and coffee cooperatives.

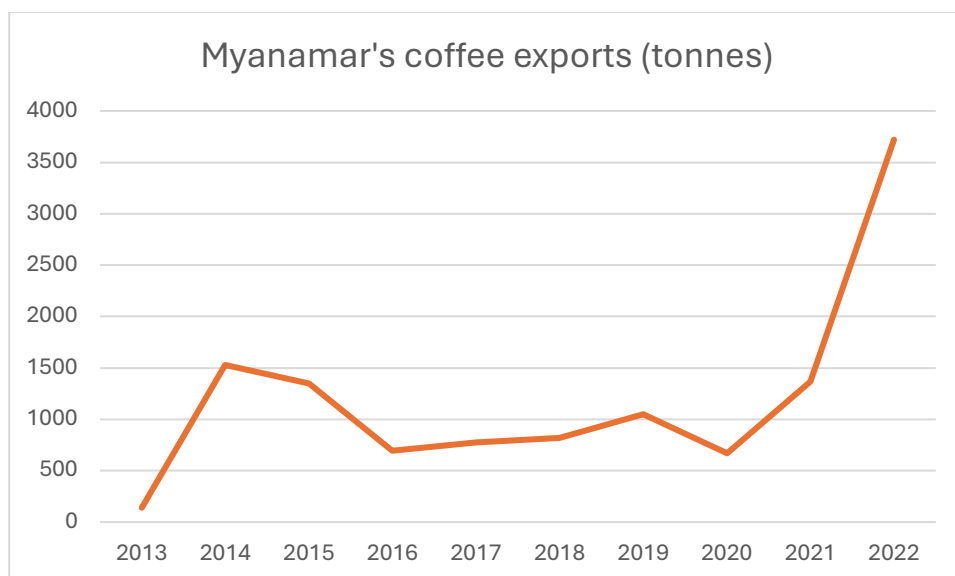


Figure 2.8: The Volume of Coffee Exports, 2013-2022

Source: Representation by using data from ITC Trade Map

2.5 Specialty Coffee Production in Myanmar

In 2014, with funding from USAID, Winrock International and the Coffee Quality Institute (CQI) collaborated on the VCRD project to assess the potential of assisting smallholder coffee farmers in Myanmar to transition to specialty coffee production. Myanmar holds a competitive edge over other specialty coffee-producing nations due to its ideal harvest conditions, characterized by dry and sunny weather, which are perfect for drying coffee. Following the initial pilot project involving four communities in Ywangan, which positioned Shan State as a source of some of the world’s most diverse and unique specialty coffees. The unique terroir results in “clean, sparkling” natural coffees that stand out globally. Additionally, the distinct flavor profiles of coffees from different communities attract micro-lot curators looking for unique taste experiences. There has been a consistent increase in the number of farmers and communities participating in specialty coffee production (USAID, 2019). Under the right conditions, producing high-value “specialty coffee” provides a practical option for enhancing the incomes of smallholder farmers.

2.5.1 What is specialty coffee?

The Specialty Coffee Association (SCA) played a pivotal role in setting global standards for specialty coffee, introducing a new benchmark for coffee quality through a trusted scoring system known as “Q grading”, (USAID, 2019). The term “Specialty coffee” denotes coffee that has received a grading of 80 points or higher on a 100-point scale (See Figure 2.9). This grading is conducted by either a certified coffee taster (SCAA) or a licensed Q Grader (CQI) as a result of sensory analysis called “cupping” (see Figure 2.11) (USAID, 2019). Specialty coffees represent the pinnacle of coffee quality and stand apart from other types of coffee. What distinguishes them is that specialty coffee is cultivated at optimal altitudes, during the ideal season, in the finest soil conditions, and is harvested at precisely the right moment.



Figure 2.9: The coffee quality pyramid

Source: USAID (2019)

Quality is akin to a pyramid (see Figure: 2.9); as quality increases, availability decreases, driving its value. Roughly 20% of global coffee production meets the criteria for specialty coffee, with only 1-2% of the coffee exhibiting exceptional quality and distinct flavour notes (see Figure 2.10) (USAID, 2019).

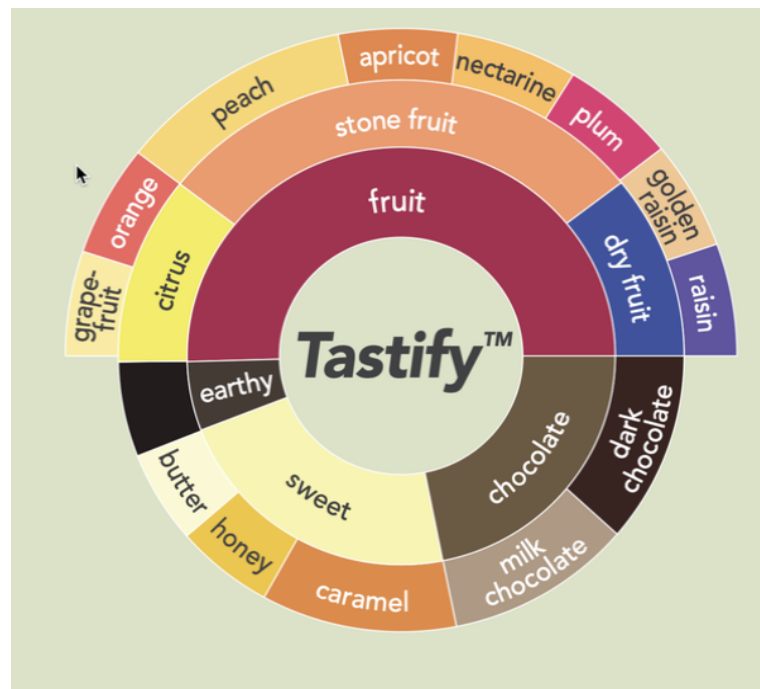


Figure 2.10: Flavour wheel of specialty coffee

Source: USAID, 2019



Figure 2.11: Cupping Score of specialty coffee

Source: USAID, 2019

Specialty coffee is any coffee whose price is determined based on its quality. In the specialty coffee market, the price is determined by the flavour characteristics of the cup, unlike commercial or commodity coffee, where there is no distinction between coffees from different origins such as Brazil, Ecuador, or Vietnam (USAID, 2019). The origin of the coffee holds no significance to buyers in the commercial or commodity coffee market. Those involved in the specialty coffee production are deeply passionate, while consumers appreciate its unique flavour profiles and connection to its origin. Their willingness to pay more reflects the value they place on the craftsmanship involved. Roasters and baristas play a crucial role in educating consumers about origins, flavour profiles, and brewing techniques. Additionally, specialty coffee satisfies people's desire for ritual, storytelling, and unique experiences.

The journey of creating specialty coffee can be likened to a relay race, with each participant playing a crucial role in ensuring its quality from farm to cup. It all starts with the unique growing conditions, such as planting Arabica coffee trees in favourable conditions. When the cherries are picked at the peak of ripeness and the terroir imparts desirable flavour notes, the farmer produces superior cherries. Proper sorting and processing by the processor result in high-quality green beans. The roaster then crafts a roasting profile that complements the unique flavour notes of the beans. Finally, the skilled barista brews the coffee to perfection, allowing the customer to enjoy an exceptional cup. Furthermore, sharing the story

of its origin and the farmers who cultivated it enhances the customer's overall experience, adding depth and meaning to their enjoyment of the coffee. Specialty coffee is often sourced from single origins, allowing consumers to experience the unique characteristics of a particular region or farm. Each step in this relay is essential, and any misstep can impact the final product's quality and the customer's satisfaction (USAID, 2019).

Production of specialty coffee requires extra care and good practices at every step of coffee production: plantation, harvesting, processing, storage and roasting. The techniques and practices applied to produce specialty coffee are selectively picking only fully ripe, red cherries, removal of lower-quality floating cherries, scattering cherries atop drying tables to ensure coffee dries uniformly, sorting out unripe cherries on drying tables, removing moldy cherries, turning cherries hourly atop the tables, continuously checking moisture content before storage, maintaining 12-13% or lower moisture content during storage, careful packing in clean bags during loading/ transport, hulling of cherries in dry mill equipment and final hand-sorting of defective beans (USAID, 2019). Ready-to-roast coffee green beans are achieved by following these practices.

2.6 Cooperatives in Myanmar

The cooperative movement in Myanmar began under British colonial rule in the early 20th century. After gaining independence in 1948, the promotion of cooperatives persisted. However, from 1962 to 1988, during the period of a centrally planned economy, cooperatives developed a negative reputation due to centralized control and inefficiencies. With democratic reforms introduced after 1988, the perception of cooperatives has improved significantly (ICA, 2020). Currently, cooperatives are actively contributing to the agricultural sector and advancing financial inclusion in the country.

2.6.1 Cooperatives between 1905 and 1947

Cooperatives were introduced in Myanmar with the enactment of the Indian Cooperative Societies Act in 1904, during its period as part of British India. The first cooperative, the Myanmar Agricultural Credit Cooperative Society in Myinmu Township of

the Sagaing region, was established in 1905. Credit cooperatives were also established in this region to combat exploitation by informal money lenders. By 1929, credit cooperatives had gained popularity in the rural agrarian environment of British India, and Myanmar boasted 4,000 credit cooperatives. The Great Depression of the 1930s had a significant impact on the prosperity of credit cooperatives, leading to a drastic reduction in their numbers from 4,000 in 1930 to 57 in 1935.

2.6.2 Cooperatives between 1948 and 1988

Following independence in 1948, the newly formed Government promoted cooperatives as the primary vehicle for advancing the socialist economy and departing from the reforms introduced during British administration (ICA, 2020). During the initial post-independence years, cooperatives were primarily state-controlled and active in the agricultural and financial sectors. However, in 1962, a military-socialist regime, led by Army Chief General Ne Win, overthrew the post-independence Government. During this period, cooperatives remained under state control, dominant in agriculture and finance, and were used to promote socialism. In 1975, the military-socialist regime established the Central Cooperative Society (CCS) to regulate and promote cooperatives. Under the socialist regime, Myanmar's economy faced a downturn, and state-controlled cooperatives failed to stimulate economic growth. Cooperatives became synonymous with the government and were characterized by forced participation, inadequate supervision and management, minimal emphasis on member education and training, and a lack of attention to cooperative values and principles (ICA, 2020). In the 1980s, as Myanmar grappled with economic challenges, Army Chief General Ne Win abandoned socialist policies and embraced a framework for a capitalist economy in the pursuit of nation-building. This marked the first phase of the post-socialist era in Myanmar (1988-2011).

2.6.3 Cooperatives between 1989 and 2011

With the opening of the economy, the focus on cooperatives waned as they were largely controlled by the state. However, new cooperative legislation passed in 1992 paved

the way for the incorporation of cooperative principles into law, the establishment of a four-tier cooperative structure, and the autonomy and independence of cooperatives from the government (ICA, 2020). To promote rural cooperatives, collaborations with international non-governmental organizations were forged, aiming to support local farm-based organizations. For instance, AVSI, an Italian-supported organization, directed its efforts toward the promotion of rural cooperatives in 2003. In 2008, it provided technical assistance to cooperatives in the Delta Region, which had been affected by Cyclone Nargis. Such initiatives contributed to improving the image of local cooperatives.

2.6.4 Cooperatives from 2012 to the present

In 2012, CCS underwent restructuring, enabling it to function as an autonomous and independent national apex federation responsible for business and the promotion of cooperatives. It also began working toward educating and training cooperative members. Post-2012, Myanmar placed a stronger emphasis on promoting higher education and training in cooperatives. Two former cooperative colleges in Thanlyin and Sagaing were transformed into universities offering post-graduate diploma and master's programs to educate young people about cooperatives and develop human resources for cooperatives (ICA, 2020).

In 2014, CCS and the Ministry of Agriculture, Livestock, and Irrigation (MOALI) formed collaborations with international organizations to promote cooperative development in the country. The second phase of the post-socialist era in Myanmar commenced in 2016, bringing a boost to industrialization, manufacturing, and tourism. However, the agricultural sector continues to dominate the economy. In 2019, agriculture, livestock, and forestry constituted 81% of all cooperatives in Myanmar. Agricultural, savings and thrift, and microfinance cooperatives are actively promoted to address poverty, encourage sustainable agriculture, and enhance financial inclusion (ICA, 2020). Currently, in Myanmar, there are a total of 39,929 cooperatives, with approximately 4.22 million members, which constitutes about 7.9% of the population. These cooperatives also provide employment to approximately 132,551 individuals (ICA, 2020).

Table 2.2: Number of cooperatives in different sectors of Myanmar

Sectors	Number of cooperatives
Production	
Agriculture	27655
Livestock	4576
Industrial	512
Forestry	13
Services	
Microfinance	3648
Transportation	116
Construction	57
Social	33
Others	179
Trade	
Trading	2572
General business	93
Government employee cooperatives	440
Store	34
Levels of operation	
Township cooperative federations**	-
Regional and state union cooperative federations**	-
CCS	1
Total	39929

Source: ICA (2020)

*Others include women, healthcare, and multipurpose cooperatives.

**Township cooperative federations, and regional and state union cooperative federations are engaged in production, trade, and service sectors.

Cooperatives play a significant role in Myanmar's production and service sectors. Over the past two decades (from 2000 to 2020), there has been a notable rise in collaborative

efforts between MOALI, CCS, and international organizations. These efforts aim to support micro-finance cooperatives, savings, and credit cooperatives, increase women's involvement in cooperatives, improve rural livelihoods, enhance cooperative members' education and capacity, secure cost-effective agricultural resources, and facilitate the export of agricultural products (ICA, 2020).

2.7 Laws on Cooperatives

Before independence, Myanmar was subject to three cooperative laws: the Indian Cooperative Act of 1904, the Government of India Act of 1919, and Burma Act VI, which was the Cooperative Society Act of 1927. While the 1904 law permitted the establishment of cooperatives in Myanmar, the 1927 law allowed for the dissolution of credit cooperatives during the Great Depression. Following its independence in 1948, Myanmar enacted three cooperative laws: the Cooperative Societies Act of 1956, the Cooperative Societies Act of 1970, and the Cooperative Society Law of 1992. The 1970 law received Government endorsement and allowed for the formation of cooperatives based on territorial considerations. The 1992 law granted cooperatives autonomy in the post-socialist era and remains in effect in Myanmar. In 1998, the initial Cooperative Society Rules were established, and in 2013, these rules were revised for a second time to oversee and regulate cooperatives (ICA, 2020).

A primary cooperative requires a minimum of five individuals with shared business objectives to complete its registration. Associate members can be admitted to a primary cooperative as long as they are aged 12 years or above. As stipulated by the Union of Myanmar Income Tax Law (Amended in 2011), cooperatives are obligated to pay taxes, similar to individuals and other organizations. Nonetheless, as outlined in the Cooperative Society Rules of 2013, expenses related to duties and taxes, the restoration of capital assets due to wear and tear, allowances for bad debts, and the general provident fund for staff members are considered part of the cooperative's expenditures. Any remaining balance in favor of the cooperative, after these deductions, constitutes its net profit. The sequence for the allocation of net profits is as follows: dividends, service bonuses for the executive committee, directors, and staff of the society, refund payments for the purchase or sale of goods, and investments (ICA, 2020).

CHAPTER 3 LITERATURE REVIEW

This chapter provides an overview of the relevant ideas that pertain to the research issue. Section One discusses evolution of cooperatives, the definitions of cooperatives, and the principles of cooperatives. Section two examines why cooperatives are established while Section Three describes why members join cooperatives. Section four discusses the benefits that cooperatives bring to their members while Section Five reviews the emerging market trends in agri-food sector and global coffee market. Section six discusses the role of farmers' organizations in enabling farmers' participation in specialty markets.

3.1. Evolution of cooperatives

The cooperative business model was first established in Rochdale, England, in the late 18th and early 19th centuries as a means for individuals with low-income to generate a livelihood (Sambuo, 2023). Over the past decades, various types of cooperatives have been formed, including consumer, housing, worker, credit, and agricultural cooperatives and towards 1970s, a new generation of hybrid cooperatives emerged, driven by social, economic, and political shifts. Most of the transformations in modern cooperatives took place in the early 19th century, when they shifted from their conventional structure to a more business-oriented one. This shift was prompted by the challenging economic circumstances brought about by the Industrial Revolution, leading people to establish cooperative businesses to address their needs (Brian, 1999). Like many other entities, the development of cooperatives was not a self-contained development, but rather a manifestation of larger shifts in social and economic dynamics over time (Ackers, 2000; Fairbairn, 2004; Wilkinson, 1996). Today, it remains a valuable approach for governments and businesses to support their employees in achieving greater success in their professional paths (Gray et al., 2014).

The first cooperative, a consumer cooperative, was established in 1844, providing members with essential food and other products. The Rochdale cooperative also developed the foundational cooperative principles, which were later adopted as a model for other cooperatives (Barton, 1989; Birchall, 1997; ICA, 2007). During the Great Depression, many consumer cooperatives emerged as people sought to collectively purchase goods at the lowest possible price (Cropp & Ingalsbe, 1989; Fairbairn, 2004; Zeuli et al., 2004). Housing cooperatives were first established in Norway and Sweden during the 1890s. In the USA,

housing cooperatives became popular among higher-income individuals and retirees and were particularly active in developed countries before World War I (Birchall, 1997). Credit cooperatives, which provided savings and credit to their members, gradually expanded in Europe during the post-war period of the 1860s. Agricultural cooperatives, formed in the 1860s, assisted farmers by organizing inputs for crop and livestock production and facilitating marketing and processing (Birchall, 1997; Ingals & Groves, 1989; McLeod, 2006; Zeuli & Cropp, 2004). Most cooperatives operated independently until 1895 when cooperative representatives, primarily from European countries like Britain, Germany, Belgium, Italy, and Russia, convened to form the International Cooperative Alliance (ICA). The ICA is an independent, non-governmental organization which unites, represents, and serves cooperatives worldwide by upholding three key objectives: providing information, defining and defending cooperative principles, and promoting international trade (Birchall, 1997).

The evolution of cooperatives has been shaped by a range of factors, encompassing political, societal, and economic influences (Birchall, 2013; Cook, 1995; Fulton, 2001; Zeuli, 2016). Cook (2018) discusses cooperative development as a complex metaphor with distinct phases of existence. The life cycles of cooperatives are contingent upon factors such as their establishment, operational planning, management, and market dynamics. Furthermore, their maturation and adaptation within evolving business landscapes, often influenced by new market entrants, can result in life cycle alterations (Novkovic, 2022).

Starting from the mid-19th century onward, cooperatives have been categorized into six fundamental developmental stages, beginning with a metamorphosis phase which holds significance for the economic well-being of cooperative members (Sambuo, 2023). At each of these stages, individual transactions function the establishment of cooperatives, even during the initial phase of development. The transformation of cooperatives commences with the initial phase of voluntary membership, primarily centered on economic rationale. This is followed by the second phase, which involves the establishment of membership and organizational design. The third phase encompasses governance and structural adjustments to facilitate sustained growth. The fourth phase revolves around planning and financial considerations, emphasizing analysis to enhance visibility and self-reflection. The fifth phase marks the initiation of business activities. The final, sixth phase is dedicated to sustainability, monitoring, and evaluations. In addition, the ultimate continuity, or dissolution of cooperatives during the sixth phase, hinges on a range of decision-making criteria. These include choices such as maintaining the current status, generating new ventures, either within

or outside the cooperative structure, complete withdrawal from operations, or reimagining and reinventing their business model to remain pertinent and competitive in a continually evolving market (Cook, 2018).

Additional factors leading to transformation of cooperatives can encompass alterations in government regulations or adjustments in costs, such as membership fees, which might dissuade members from maintaining their loyalty or result in increased dissatisfaction among them (Yacob et al., 2017). In Ethiopia, the evolution of cooperative organizations has been shaped by various forms of government and their political ideology over a 60-year period, as well as differences in ideologies among the members themselves (Tefera et al., 2017). In Tanzania, the primary reason for the varied life span of cooperatives was by government-imposed legislation (Mruma, 2014).

3.1.1. Definitions of Co-operatives

The fundamental definition of cooperatives, which applies to all cooperative entities, relies on three key relationships between a cooperative and its members (Barton, 1989). Initially, it is based on the user-ownership principle in which those who possess and fund the cooperative are the same individuals who utilize its services. Secondly, the user-governance principle is involved in which the cooperative is managed and overseen by those who actively use its services. Thirdly, the user-reward principle is applied in which the advantages and rewards generated by the cooperative are distributed to its members based on their level of usage (Barton, 1989).

Various definitions have been used in literature to describe a cooperative. Rhodes (1983, pg. 1090) defines a cooperative as “a business firm owned and operated for mutual benefit by the users, where management is conducted by paid professionals, and the members’ interests are represented by an elected board of directors.” Barton (1989, p.3), a notable author on cooperatives, describes it as “a legal form of business organization, emphasizing that it is a private entity controlled by its members, with the primary aim of achieving economic benefits for its members.” A report from the Australian Agricultural Council (1988, p.4) defines a cooperative as “an association of primary producers who unite to achieve common commercial objectives more effectively than they could individually.” Evans & Mead (2010, pg. 1) add that in New Zealand, a cooperative is defined as “an

organization in which those who transact with (i.e., “patronize”) the organization also own and formally control it, deriving significant benefits from those transactions beyond any financial returns from their investment in the organization.”

The United States Department of Agriculture (1994) provides a definition of a cooperative as “a business that is owned and controlled by its users, where benefits are obtained and distributed fairly based on usage, or as a business owned and controlled by the individuals who utilize its services.” Despite the numerous definitions found in various literature, the most widely accepted definition among cooperatives comes from the International Cooperative Alliance (2012), where the ICA defines a cooperative as “a group effort where every member works together to meet the basic needs of the group, devoid of any hierarchy structure.” In conclusion, cooperatives stand as unique entities where members collectively own, govern, and reap the rewards of their collaborative efforts, embodying a democratic and user-centered approach to fulfilling their collective needs.

3.1.2. The Principles of Co-operatives

The cooperative principles serve as guidelines for putting cooperative values into practice (Kumar et al., 2015). These principles bring forth the idea of cooperation, which shapes the framework and basic design of cooperatives. In addition, these principles serve to differentiate co-operatives from other types of businesses (Dunn, 1988; Groves; 1985; Hind, 1994). The Rochdale Society is recognized for popularizing and modernizing cooperative principles, which significantly influenced the International Cooperative Alliance (ICA). In 1995, the ICA adopted principles based on the Rochdale Principles, leading to the establishment of seven cooperative principles which have gained international recognition.

First Principle: Voluntary and Open Membership - without discrimination based on gender, social, racial, political, or religious factors, available to individuals capable of utilizing services and willing to undertake membership responsibilities.

Second Principle: Member-driven Democratic Control - with active participation in policy formulation and decision-making.

Third Principle: Member Financial Participation - ensuring that members contribute proportionally and have democratic control over the cooperative’s capital.

Fourth Principle: Independence and Autonomy - where cooperatives function as independent, self-help entities governed by their members.

Fifth Principle: Education, Training, and Information - Provision of education and training to members, elected representatives, managers, and employees, fostering effective contributions to cooperative development.

Sixth Principle: Collaboration among Cooperatives - Collaboration among cooperatives to serve members efficiently and strengthen the cooperative movement, achieved through cooperation at local, national, regional, and international levels.

Seventh Principle: Community Concern - dedication to the sustainable advancement of local areas by implementing policies endorsed by their members (ICA, 2007).

The principles of cooperatives are primarily based on the values of self-help, emphasizing that all members should take responsibility for shaping their own future. According to the ICA principles, every cooperative member must be treated equally, meaning that an individual's social and economic status should have no impact on the cooperative's operations. Furthermore, the benefits of the cooperative should be distributed fairly among members, reflecting their level of participation in the cooperative's activities. Solidarity is closely tied to the concepts of self-help and mutual help, which are regarded as the foundational pillars of the cooperative movement. Lastly, cooperative members are expected to uphold values of honesty, openness, social responsibility, and care for others (Birchall, 1997; ICA, 2007; Prakash, 2003).

3.2. Why are cooperatives formed?

Several elements play a role in motivating farmers to create and set up cooperatives. Cooperatives can be established through either top-down or bottom-up approaches. Top-down formation occurs when policy initiatives encourage or incentivize people to organize and join groups. In contrast, bottom-up formation happens when individuals come together voluntarily to achieve a shared goal (Olson, 2009). Helm (1968) notes that farmers organize and join cooperatives for a range of economic, social, and political reasons. Schrader (1989) expands on this by identifying several key motivations for farmers to form cooperatives, including the absence of certain services, the advantages of economies of scale, market power, acting as a competitive benchmark, and meeting social needs. In addition, the

formation of cooperatives is driven by the need to address market imbalances between supply and demand, which can be alleviated through the utilization of existing resources and collaborative efforts (Huybrechts & Mertens, 2014). Cooperatives are also established to uphold competitiveness and an effective framework for providing input and marketing services to farmers (Cotterill, 1984).

Agricultural cooperatives are established when the market fails to offer farmers essential goods and services at reasonable prices and adequate quality. They rely on various financial sources, including member contributions, bank loans, and government subsidies (Barmore, 2013; Ortmann & King, 2007). Farmers establish agricultural cooperatives to secure economic advantages, increase their influence in the market, and access services and facilities that might not be accessible otherwise (Centner, 1988a; Sargent, 1982). Another study identified several reasons why farmers form agricultural cooperatives, including their lack of market power, the absence of outlet facilities, the opportunity to receive government grants, access to improved market services, the ability to reduce price variability, and the pooling of resources (Klosler, 1992).

The presence of market failures is often considered a prevalent factor driving farmers towards cooperative formation (Centner, 1988a; Hansmann, 2000). Market failures can take various forms, with oligopoly being one of the most well-known. Oligopoly occurs when there are few buyers and many sellers, often leading to a lack of price control. To counteract the effects of oligopoly, producers may establish a cooperative, enabling them to exert collective control over pricing. This, in turn, can lead to farmers benefiting from a more equitable distribution of profits (Hansmann, 2000; Porter & Scully, 1987). Cooperatives are established to gain and leverage market power for the benefit of their members (Schrader, 1989). This market power is often focused on market negotiations rather than handling financial matters or the production process, which may be managed by another entity. The cooperative's primary role in this context is to act as a unified negotiator on behalf of producers, providing countervailing power for numerous small sellers who are up against either a monopoly or a few large firms operating as an oligopoly (Worley et al., 2000).

Cooperatives are also established to enhance competitiveness and efficiency in the import and marketing services available to farmers (Cotterill, 1983). When supported, cooperatives can influence the overall competitive landscape by prompting profit-driven firms to offer comparable services and prices (Harris et al., 1996). Additionally, when farmers collectively share their produce, they can achieve greater efficiency and enjoy higher net incomes compared to working individually at higher costs. The transaction costs

associated with providing services in rural areas, such as collecting raw produce and transporting it to processing sites, are often high when done independently, but these costs can be shared within a cooperative (Stigler, 1958). Another reason for forming a cooperative is to offer essential services in import or marketing, particularly when no alternative providers exist, such as in the case of absent buyer-providers or service outlets. This is especially crucial for part-time and small-scale farmers who face challenges in finding markets for their products (Schrader, 1989). The growth of cooperatives, particularly those focused on buyer-receiver groups like vegetables, fruits, and nut products in certain countries, emerged due to the lack of alternative market outlets. As a result, cooperatives were established to serve as the buyer-market outlet for producers looking to sell their goods (Centner, 1988b).

The formation of agricultural cooperatives is closely linked to government policies and support. Research in China, for instance, has shown that cooperatives often emerge in response to government-initiated changes, leading to rapid development in cooperative activities (Zhou, 2004). Similar findings have been observed in various African countries (Develtere et al., 2008) as well as in Vanuatu (McGregor, 2009), Fiji (Pathak & Kumar, 2008) and PNG (Mugambwa, 2005), where cooperatives have also formed as a reaction to government policies. Studies conducted in developing countries have identified common motivations driving farmers to establish cooperatives, including the pursuit of market influence, seeking government support, poverty alleviation, employment generation, and improving living standards (Lolojih, 2009; Nganwa et al., 2010; Oktaviani, 2004; Ortmann & King, 2007; Pollet, 2009).

3.3. Why members join cooperatives

There are several reasons why individuals choose to join cooperatives. According to Barton (1989) and Rhodes (1983), the primary motivation is often economic, although social factors also play a role. Four economic reasons that drive farmers to become members of cooperatives are the pursuit of economic gains, securing a market for their products, enhancing bargaining power, and maintaining or increasing the demand for their commodities (Rhodes, 1983). Among these motives, economic returns have been highlighted as the primary factor influencing farmers to participate in cooperatives (Foxall & McConnell-

Wood, 1976; Rhodes, 1983). An empirical study conducted in the United Kingdom further supports this, revealing that economic incentives are the most critical factors influencing members' decisions to join cooperatives (Foxall & McConnell-Wood, 1976).

Research has shown that farmers' decisions to join cooperatives are influenced by their beliefs and perceptions about the benefits these organizations offer. For instance, a study of North Dakota farmers in the United States revealed that they joined cooperatives because they believed that doing so would boost their farm income and productivity, reduce market risks, enhance market access, and expand their network and knowledge base (Olsen et al., 1998). Bhuyan (2000) observed similar motivations in his research on fruit and vegetable cooperatives in the United States. Farmers in these cooperatives primarily sought to reduce the market risks associated with operating independently and to gain access to value-added markets which would otherwise be out of reach. Additionally, Gasson (1977) found that farmers joined cooperatives with the expectation that these organizations would help control and influence better prices for their produce and secure outlets for their products. They also anticipated that cooperatives would offer convenient services, such as centralized packaging and grading, which would save them capital. These studies collectively highlight how farmers' perceptions of economic and operational benefits drive their decisions to join cooperatives.

Studies conducted in many developing countries, especially in Africa and the Asia-Pacific region, commonly highlight several reasons why farmers choose to join cooperatives. These include: (1) accessing farming inputs and services at lower costs or where such resources are otherwise unavailable; (2) overcoming market challenges that are difficult to address individually; (3) creating employment opportunities; and (4) enhancing their standard of living (Bernard & Spielman, 2009; Develtere et al., 2008; Pollet, 2009). An empirical study conducted on dairy farmers in America explained that the reason for joining was due to the economic situation of the members, and also the need to reduce the risks and costs of inputs (Misra et al., 1993). In addition, individuals become members of existing cooperatives due to psychological and emotional incentives. Bonus (1991) notes that cooperatives serve as a means to enhance participation. Conversely, cooperatives serve as a support system, enabling their members to exchange valuable knowledge and essential information among themselves (Christy, 1987).

3.4. Members' Benefits of Cooperatives

Benefits in cooperatives are determined by ownership and the extent of members' utilization of the cooperative's services (Dunn, 1988), which may include residual claims, improved prices, stable markets, training and education, extension services, and more (Alho, 2015; Grashuis & Su, 2019; Zhang & Kong, 2020; Zhong et al., 2018). Residual claims refer to the right to a share of a firm's net profits (Chaddad & Cook, 2004). In cooperatives, net profits are generally distributed as retained surpluses, dividends, and patronage refunds. The cooperative can distribute these profits in various ways, such as separating dividends and patronage refunds, linking them to capital investment proportional to patronage, distributing patronage refunds after paying fixed dividends, or paying dividends after a fixed price premium on products (Lin & Huang, 2007; Srinivasan & Phansalkar, 2003). Discounted input prices and premiums on output prices are considered alternative forms of patronage refunds by the ICA (2015) and Zhang and Wang (2018), practices observed in countries like New Zealand (Aini, 2019; Garnevska et al., 2020; Pringle, 1998). Regarding dividends and patronage refunds, the ICA (2015) suggests limiting compensation on subscribed capital as a membership requirement, a practice seen in some developed countries that cap dividend distribution (Zeuli & Radel, 2005). Besides financial benefits, members also value non-financial advantages, such as an outlet for product sales, market access, stable prices, reliable payments, and available processing facilities (Aini, 2019; Kurakin & Visser, 2017).

Smallholder farmers in developing nations encounter various intricate challenges in both production and marketing, impeding the enhancement of their livelihoods. These issues include market imperfections, leading to elevated transaction costs for accessing input and output markets, inadequate infrastructure, and the geographical dispersion of smallholders. Additionally, they face difficulties in obtaining credit services, lack technical proficiency to adapt to modern technologies, and struggle to meet changing consumer preferences, such as evolving food safety standards. Several studies propose that these obstacles could be surmounted if smallholders were organized into collective action groups like cooperatives (Bernard et al., 2010; Narrod et al., 2009; Wanyama et al., 2014).

Cooperative organizations aim to balance market orientation and community orientation as they strive to enhance member benefits while keeping costs to a minimum (Bolsinger, 2011; Draheim, 1952; Eschenburg, 1971; Henzler, 1962). The expenses associated with delivering services in numerous rural regions, such as collecting raw produce and transporting it to processing facilities, tend to be quite elevated when carried out

independently. However, when done through a cooperative, these costs can be distributed among members (Stigler, 1958). Agricultural cooperatives, in particular, operate autonomously, offering farmers the chance to transport their products to local markets and attain their desired prices (Torgerson et.al, 1997). However, it is important to note that the extent and nature of these benefits can vary based on individual and context-specific factors (Bernard & Spielman, 2009; Bernard et al., 2008; Calkins & Ngo, 2010; Chagwiza et al., 2016; Mojo et al., 2017; Verhofstadt & Maertens, 2015).

Many papers have described multiple advantages to members of cooperatives and other collective enterprises. Conventional practice has involved evaluating the advantages for farmer members by calculating the average absolute benefits received per household annually (Verhofstadt & Maertens, 2015). This presents certain challenges, as it cannot measure in assessing the services offered by cooperatives and does not capture the complete array of benefits that members derive from their cooperative involvement. In this research, rather than relying solely on absolute benefits, the distribution of several benefits among members is measured.

The advantages accruing to members of cooperatives and similar collective enterprises can be categorized into seven primary areas, as identified in the literature: 1) social benefits, 2) marketing benefits, 3) benefits in supplying inputs and services, 4) financial benefits, 5) training and education benefits, 6) community benefits, and 7) environmental benefits.

3.4.1. Social Benefits

The literature highlights human capital development as a social benefit of cooperatives, which includes education, training, and support for educational pursuits. As a result, society at large has gained valuable skills, knowledge, and experiences (Bacon et al., 2008; Fairbairn, 1991; Richardson, 2000; Torgerson, 1990). Furthermore, research by others (Bauwens & Defourny, 2017; Majee & Hoyt, 2009; Paldam & Svendsen, 2000) indicates that cooperatives and collective enterprises have played a role in fostering and sustaining social capital, leading to increased levels of trust, cooperation, and civic-minded behavior—a significant advantage for society. Social benefits extend beyond the specific community of members and have characteristics similar to public goods and services. In particular, cooperatives make contributions to society at large by promoting principles of democracy and

equality, empowering individuals, and holding them accountable for their actions (Fairbairn, 2006; Hoyt, 2016; Hussein, 2001; Merrett & Walzer, 2001; Nugussie, 2010). Additionally, cooperatives play a role in developing leadership skills, and society as a whole has benefited from the presence of capable leaders emerging from cooperative experiences (Richardson, 2000; Torgerson, 1990). In the agricultural sector, cooperatives have significantly improved the social welfare of local farmers (Baharuddin, 2012). Similarly, several studies state that cooperatives and collective enterprises have also created opportunities for livelihoods and employment, providing society with additional income-generating prospects (Ekepu et al., 2017; Hussein, 2001; King et al., 2013; Nugussie, 2010).

3.4.2. Marketing Benefits

Agricultural cooperatives and groups of producers can empower small-scale farmers who would otherwise lack influence in the market (Staatz, 1987). Collective enterprises have served as markets for members' products, enabling them to sell their produce to cooperatives (Bernard & Spielman, 2009; Shiferaw et al., 2016; Zeuli et al., 2004). Consequently, cooperatives are instrumental in helping farmers gain access to specialized markets (Blackman et al., 2005). Furthermore, within this group, there are additional dimensions of benefits, including services facilitating market entry, such as product and quality certifications (Costales et al., 2003; Narrod et al., 2009).

Collective ownership within cooperatives empowers their members by enhancing their negotiating power when dealing with larger and more influential businesses. By working collectively, smallholders have the opportunity to achieve economies of scale and enhance their bargaining power (Francesconi & Heerink, 2011; Markelova & Mwangi, 2010). This elevation of members' bargaining positions helps protect them from potential exploitation (Birchall, 2012; Fulton & Ketilson, 1992; Markelova et al., 2009). Studies, such as those by Chagwiza et al. (2016) and Mujawamariya et al. (2013), have demonstrated that the critical role of cooperatives in elevating local prices and providing essential protection for their members from market exploitation by brokers.

3.4.3. Benefits in supplying inputs and services

Members of cooperatives and other collective enterprises have witnessed significant benefits in terms of increased access to essential inputs. This includes access to inputs such as agrochemicals, fertilizers, technology, and seeds (Abebaw & Haile, 2013; Baviskar, 1988; Getnet & Anullo, 2012; Haque et al., 2009; Markelova et al., 2009). Similarly, these cooperatives and collective enterprises have made inputs, services, and information more affordable for their members. Members have been able to procure these items at prices lower than the market rates, whether through cash or credit (Baviskar, 1988; Getnet & Anullo, 2012; Markelova et al., 2009). Furthermore, members have benefited from increased access to a diverse range of services. These include financial services, transportation, healthcare, extension services, processing facilities, retail goods, and compliance services like production certificates (Barham & Chitemi, 2009; Baviskar, 1988; Bernard & Taffesse, 2012; Bratton, 1986; Holloway et al., 2000; Morton et al., 1999; Yadoo & Cruickshank, 2010). Additionally, members have gained from facilitation and coordination services provided by cooperatives and collective enterprises.

3.4.4. Financial Benefits

The most commonly observed aspects of benefits in this category encompass financial gains related to enhanced prices, income, and profits associated with production (Alho, 2015; Barton, 1989; Baviskar, 1988; Bernard et al., 2008; Fulton & Ketilson, 1992; Shumeta & D'Haese, 2016; Wollni & Zeller, 2007). Numerous studies demonstrate that joining cooperatives positively impacts farmers, leading to better pricing (Wollni & Zeller, 2007), increased incomes (Chagwiza et al., 2016), and reduced transaction costs for market participation (Holloway et al., 2000).

Another aspect of benefit within the financial sphere involves the growth of members' assets, including savings, properties, and other farm assets that contribute to improving their livelihoods (Bacon et al., 2008; Fischer & Qaim, 2012b; Getnet & Anullo, 2012). Moreover, access to credit has been the important benefit within the cooperative, which is then supported by multiple studies (Fernando, 2021; Fischer & Qaim, 2012b; Nugussie, 2010). They identify that access to credit services as a significant benefit for members in their studies. Additionally, Bernard and Spielman (2008) found that 71% of the respondents in their study reported benefiting from credit. Moreover, this supports the findings of Möllers,

Traikova, Bîrhală, and Wolz (2018), who report that smallholder members of Romanian agricultural cooperatives gained quick access to capital and various family support services and sponsorships.

3.4.5. Training and education benefits

Cooperatives and farmer associations are crucial in assisting farmers with transitioning their production methods and meeting quality standards (Bacon, 2005; Varangis, 2003; Verhaegen & Van Huylenbroeck, 2001). Numerous studies demonstrate that joining cooperatives positively impacts farmers, leading to increased adoption of technology (Abebaw & Haile, 2013), increased productivity (Francesconi & Ruben, 2012). Studies by (Baviskar, 1988, Haque et al., 2009, Markelova et al., 2009, Getnet & Anullo, 2012 and Abebaw & Haile, 2013) have demonstrated that members of cooperatives and other collective enterprises have witnessed significant benefits in terms of increased access to technology. Importantly, many technical services and information have been provided to members free of charge (Abebaw & Haile, 2013; Coulter et al., 1999).

3.4.6. Community Benefits

Cooperatives have served as gathering spaces for members and have acted as community hubs for sharing experiences (Fulton, 1999; Putnam, 2000; Tolbert et al., 2002; Wilkinson, 2023). Routine meetings within cooperatives and similar collective enterprises have facilitated regular interactions among members, fostering a sense of community (Fulton, 1999). Additionally, members have derived advantages from community health services provided by cooperatives, enhancing their access to healthcare and medical services (You & Kobayashi, 2009). Cooperatives also play a significant role in community development, often contributing to local infrastructure and public services. A study by Samantha, (2016) reports that coffee cooperatives in Costa Rica contributed to community infrastructure by partnering with neighborhood associations to develop facilities such as bus stops, aqueducts, waste management systems, trash collection services, parks, recreational areas, and bridges and roads. Cooperatives and similar collective enterprises have functioned as social safety nets, enabling members to provide mutual support during challenging periods and unforeseen

events like deaths, illnesses, and natural disasters. This support system has essentially served as community insurance (Tirivayi et al., 2018).

3.4.7. Environmental Benefits

Environmental benefits encompass ethical and environmentally responsible practices adopted by members, offering advantages to them while contributing to sustainability. For instance, efficient utilization of resources such as water and soil can boost productivity and mitigate resource depletion (Kumar et al., 2015; Uphoff & Wijayarathna, 2000). Members have also gained from access to information on environmental sustainability, including knowledge of sustainable harvesting techniques and increased ecological resilience (Galappaththi et al., 2016; Mojo et al., 2015; Ovando et al., 2013). Cooperatives and collective enterprises have played roles in curtailing soil and water degradation, enabling members to restore depleted soils, cleanse polluted water sources, and adopt sustainable chemical practices (Ma et al., 2018; Perthen-Palmisano & Jakl, 2005). Similarly, members have benefited from information sharing, innovation, and learning about sustainable production methods (Kroma, 2006; Mojo et al., 2015). A study by Blackman and Naranjo (2012), which examined certified coffee cooperatives in Costa Rica, found that coffee growers improved their environmental practices. Specifically, members of the cooperatives decreased their use of chemical inputs and enhanced their adoption of eco-friendly methods (Blackman & Naranjo, 2012).

3.5. The emerging market trends in agri-food sector

As the global economy transitions toward a “free market,” there is an increasing involvement of both international governmental bodies and the private sector in the establishment and enforcement of standards (Busch & Bain, 2004). Various participants in the agri-food system, including retailers, consumers, and social activists, are seeking products that stand out not only based on their physical characteristics, but also due to their production practices (Deaton et al., 2010). Process standards and labels increase producers’ motivation to produce and sell their goods and consumers’ interest in purchasing them. Both consumers and producers benefit from the information provided by standards and labels that link agricultural products to specific production practices. In this context, process standards serve as a

marketing tool for producers and a purchasing guide for consumers. Therefore, private standards, labels, and certification systems play a vital role in delivering information to stakeholders, enabling them to distinguish agri-food products based on attributes that are important to them, such as animal welfare, environmental sustainability, and worker welfare (Deaton et al., 2010).

3.5.1. Emerging Trends in the Global Coffee Market

The coffee crisis around the turn of the millennium was triggered by shifts in global coffee markets, primarily due to changes in market dynamics. The global crisis in the coffee sector stemmed from the liberalization of the coffee market, specifically the collapse of the International Coffee Agreement. This led to a surplus in global coffee supply and a concentration of power within the coffee roasting and trading industries (Bacon, 2005). Owing to a significant increase in the global supply of green coffee, international coffee prices reached their lowest point in 30 years in 2001 and this led to the most severe crisis ever faced by the coffee sector (Lewin et al., 2004; Ponte, 2002). In numerous countries, the cost of coffee dropped below the average production expenses, causing widespread financial and social difficulties for coffee producers (Flores de la Vega et al., 2002; Rivera et al., 2021; Varangis, 2003). The economic setbacks, coupled with the absence of viable income alternatives, compelled many farmers to abandon their coffee plantations and relocate to urban areas in search of employment. The crisis had profound implications, posing significant threats to the potential for sustainable rural development (Charveriat, 2001; Damiani, 2005; Osorio, 2004).

3.5.2. The competitive edge of specialty coffee

In an effort to address the crisis, many consider specialty coffee market niches as a promising alternative to conventional coffee channels (Bacon, 2005; Flores de la Vega et al., 2002). While sales in the traditional coffee sector have remained stagnant, the specialty coffee segment has experienced steady growth at an annual rate of 5–10% (Lewin et al., 2004). In 2012, specialty coffee accounted for 37% of sales by volume and 50% by value in

the United States (SCAA, 2012). Over recent years, an increasing number of marketing channels for specialty coffee have emerged to meet the growing and diverse demands of consumers (Giovannucci & Ponte, 2005; Ponte, 2002). The global specialty coffee market was valued at USD 21.9 billion in 2022 and is projected to expand at a compound annual growth rate (CAGR) of 11.3% between 2023 and 2030 (Grand View Research (GVR), 2021). This surge in demand is driven by shifting consumer preferences, particularly a growing emphasis on sustainability and the increasing influence of millennials, who show a strong inclination toward coffee culture. Key trends fueling this growth include the rise in specialty coffee shops, the popularity of Ready-To-Drink (RTD) options, and innovations like cold brew and nitro coffee. These trends present lucrative opportunities for market players to capitalize on the increasing demand for specialty coffee varieties (GVR, 2021).

In 1982, a group of small-scale coffee-roasting companies came together to establish the Specialty Coffee Association of America (SCAA), with a mission to promote high-quality gourmet coffee and sustainability (SCAA, 2002). The SCAA has over 2,600 members, mainly consisting of small-scale roasters, traders, and sellers of coffee-related accessories, and also includes larger companies like Starbucks and Folgers, farmer organizations, and representatives from coffee-producing countries (SCAA, 2002). Unlike commercial-grade coffees, which have less stringent quality standards, are typically sold in tin cans, and are priced at about half the cost, specialty coffee companies emphasize superior taste, the craftsmanship of roasting and preparation, employ more refined roasting methods, focus on product freshness, and use extensive marketing to distinguish their product from bulk commercial coffees. These specialty roasters rely on higher-quality coffee beans and are generally prepared to offer price premiums to producers for superior beans (Bacon, 2005).

Specialty coffee encompasses products distinguished from standard commodities by either high quality (e.g. gourmet and estate coffee) or unique production processes (e.g. organic, shade-grown, and fair-trade coffee) (Lewin et al., 2004). Shade-grown coffee is generally recognized as different from other production systems or certifications and is typically aligned with the specialty coffee market (Jezeer & Verweij, 2015). Consumers in these segments are willing to pay premium prices significantly higher than those for conventional coffee. Specialty coffee encompasses all coffees that are distinguished in some way, allowing them to command a premium price (ICO & WTO, 2000; Ponte, 2002). According to Daviron & Ponte (2005), differentiation can occur through three main avenues: in-person service, material attributes, and symbolic attributes. However, only material and symbolic differentiation impact producers, as in-person service value is generated at the point

of consumption through interactions between providers and consumers or among consumers themselves.

In the context of coffee, material attributes refer to its inherent quality, while symbolic attributes are associated with indicators such as geographical origin or sustainability certifications. Coffees differentiated through certifications or labels, often termed sustainable coffee, fall into this latter category (Kolk, 2013; Raynolds, 2009). These attributes are considered essential for the efficient oversight of food safety and quality across the global commodity chain (Fagan, 2003; Golan et al., 2001; Sanogo & Masters, 2002; Tanner, 2000). The willingness of consumers to pay premium prices for these distinctive attributes in both product and process serves as the economic incentive to maintain the identity of differentiated coffee throughout the entire marketing chain (Wollni & Brümmer, 2012). To participate in these markets, farmers are required to adhere to standards for both process and product, necessitating the adoption of sustainable and quality-enhancing production technologies (Muradian & Pelupessy, 2005).

3.6. The role of farmers' organizations in participation in specialized markets

Small-scale farmers are often quickly left out of emerging market opportunities (Wollni & Zeller, 2007). The role of cooperatives has been emphasized as a crucial link between consumers and producers, enabling farmers to participate in emerging market developments (Bacon, 2005; Varangis, 2003). Cooperatives have been pivotal in connecting smallholder farmers to markets, enabling them to sell their products more effectively (Ji et al., 2017; Mazzarol et al., 2013). Agricultural cooperatives play a crucial role in improving market access for smallholders by ensuring that their products meet higher standards (Kalogiannidis et al., 2024). Participation in specialty markets requires adhering to quality standards and implementing particular production methods. Agricultural cooperatives (ACs) serve as effective entry points for encouraging large groups of farmers to adopt specific standards that align with supermarket requirements and ensure product traceability (Giagnocavo et al., 2017).

Farmers' organizations play a crucial role in facilitating access to specialized markets by providing education that enhances farmers' ability to process information and adopt new

production standards (Zbinden & Lee, 2005). Numerous studies have identified factors such as education (D'souza et al., 1993; Lampkin & Padel, 1994), membership in farmers' organizations (D'souza et al., 1993) and access to extension services (Nowak, 1987) as influential in the adoption of innovative agricultural practices. Farmers' organizations are vital in helping members meet the quality standards required by specialty markets, which are often characterized by a demand for higher-quality products. Farmers' access to relevant information and marketing support is anticipated to positively impact marketing performance (Poole, 2000). Additional factors affecting marketing performance can be grouped into three categories: the farmer's access to price information and marketing support, the quality of the produce, and the conditions of the market environment. Studies by (Wollni & Zeller, 2007) indicate that participation in both specialty coffee marketing channels and in cooperatives lead to higher prices for producers.

3.7. Summary and Research Conceptual Framework

This chapter reviews the literature related to the benefits that smallholder farmers receive from the agricultural cooperatives. The first part discusses the concepts of cooperatives, their definitions and principles and why they are formed and why members join cooperatives. The second part which is the main part of this chapter describes the member benefits of cooperatives. The research approach advocates for a departure from assessing average absolute benefits, proposing instead a focus on the nuanced distribution of these benefits among cooperative members, recognizing the influence of individual and context-specific factors. The third part of the literature emphasizes the emerging market trends in the agri-food sector, the competitive edge of specialty coffee and how cooperatives play a role in participating emerging market developments.

This literature gives important insights into member benefits within the conventional and specialty coffee cooperatives. Within this framework, seven primary categories of benefits are identified, and these benefits are used as benefit indicators: social, marketing, supplying inputs and services, financial, training and education, community, and environmental benefits. Based on the summarized information, the conceptual framework for this study is presented in Figure 3.1:

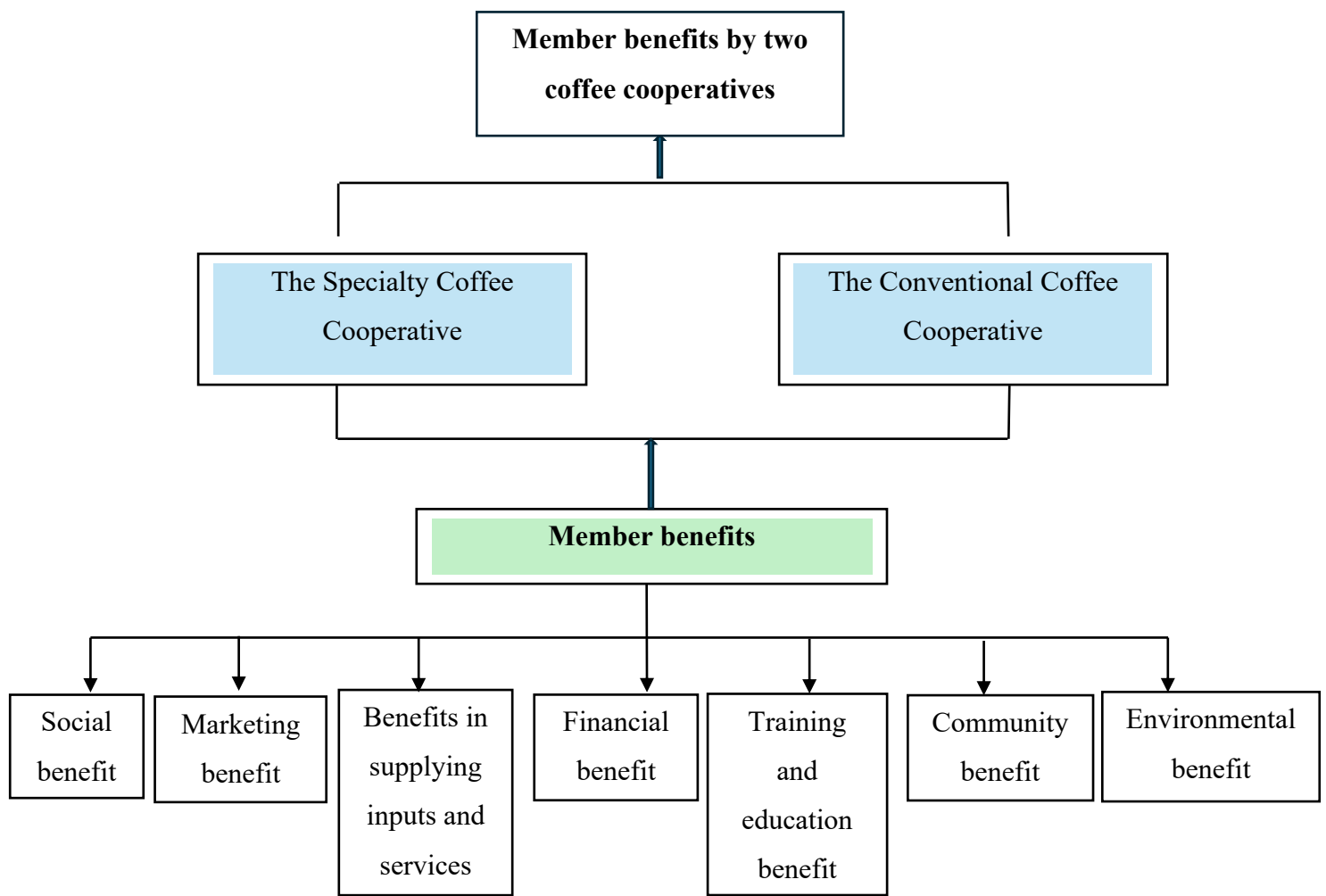


Figure 3.1: Theoretical Framework

CHAPTER 4 RESEARCH METHODOLOGY

This chapter outlines the methodology employed in this study. Section One describes the research aim and objectives. In Section Two, the research strategy employed to fulfill the research objectives is emphasized. The process of selecting the study area is discussed in Section Three. Section Four explains the sampling technique used for the selection of participants. The data collection methods are discussed in Section Five, while Section Six covers the method employed for data analysis. The final section, Section Seven explains about the ethical considerations in this study.

4.1. Research aim, and objectives

Research aim

- To study the benefits received by members of two types of cooperatives: the specialty coffee cooperative and conventional coffee cooperatives in Shan State of Myanmar

Research Objectives

To achieve this goal, there are three objectives in this study:

- 1) To review the literature to understand how cooperatives provide benefits to members
- 2) To study and analyze two types of coffee cooperatives: the specialty coffee cooperative and the conventional coffee cooperative in the study area
- 3) to analyze and compare the member benefits between the specialty coffee cooperative and conventional coffee cooperative

4.2. Research strategy

For this study, a qualitative research strategy was chosen, with a case study being identified as the most suitable approach. A case study was chosen for its effectiveness in gaining in-depth insights into specific situations, problems, groups, or populations (Gerring, 2006). The selection of a case study as the research approach is primarily guided by the research question's nature (Swanborn, 2010). Specifically, when the research aims to

describe or explain a broad social process, especially in situations where understanding of the phenomenon is limited, and there is a need to explore how various individuals and groups of stakeholders interact, interpret each other's behavior, and address challenges, a case study is deemed necessary (Swanborn, 2010). Thus, the case study strategy helps facilitate a thorough exploration and analysis of the member benefits of coffee cooperatives in the study area and it is deemed appropriate for investigating the analysis of member benefits in coffee cooperatives in Shan State, Myanmar.

4.3. Study area selection

Taunggyi District was selected in Shan State of Myanmar as the targeted study area for several reasons (see Figure 4.1). Shan State is the largest among Myanmar's 14 administrative divisions, which accounts for nearly a quarter of the entire country's land area (MIMU, 2021). Shan State holds a great potential for agricultural development in Myanmar and the agricultural industry is extremely important to the economy of the state, offering a diverse range of crops which are in high demand in neighboring countries (SSIC, 2018). Currently, 80% of coffee grown in Myanmar is arabica coffee where the majority of Myanmar's coffee cultivation takes place in Shan State and Mandalay region (Origin, 2023). With regard to the number of coffee cooperatives in Shan State, the majority of coffee cooperatives in Shan State are located in this district (MOALI, 2023).

Another reason for choosing Shan State is that the northern part of Myanmar, including Shan State, possess the capacity to yield substantial quantities of premium-grade arabica coffee (Winston et al., 2005). This area features plateaus characterized by fertile red soils, elevations exceeding 3,300 feet, evenly distributed rainfall ranging from 59 to 79 inches, and a well-defined dry season (Basu et al., 2019). The topography, featuring hills, valleys, and mountain ranges, combined with warm days and cool nights, creates favorable conditions for coffee cultivation in the Shan Hills. Currently, the majority of Myanmar's coffee cultivation takes place in Shan State (Origin, 2023). Moreover, in the township of Ywangan in Taunggyi District in Shan State, 90 out of 125 villages actively participate in coffee plantation activities.

There is a limited source of secondary data and little research done about coffee cooperatives in this area. However, according to the information that is received by personal

communication with cooperative leaders in Shan State, the collaborative efforts of the international non-governmental organizations (INGOs), local cooperatives, and government initiatives have enabled coffee producers in this area to cultivate specialty coffee, obtain certification, and facilitate international market distribution. Thus, this region exhibits promising potential for expanding both specialty and conventional coffee production, thereby enhancing member benefits within the area.

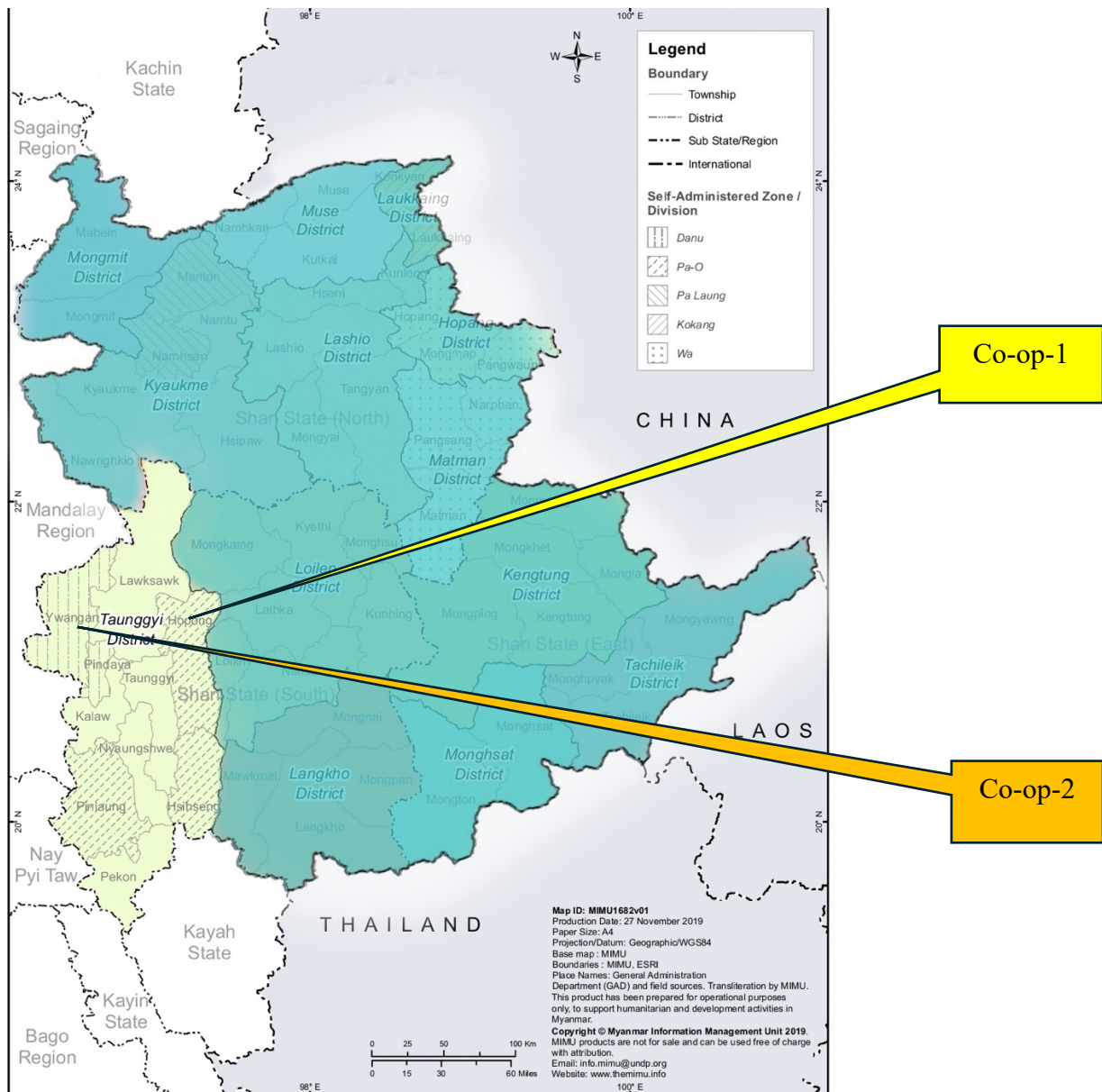


Figure 4.1: Map of the study location and the location of the study co-ops

Source: MIMU (2019)

4.4. Sampling strategy and sample size

In general, there are two main research sampling techniques: 1) probability sampling techniques and 2) non-probability sampling techniques (Abbott & Bordens, 2018; Taherdoost, 2016). The typical five methods of probability sampling include simple random sampling, systematic sampling, stratified random sampling, cluster sampling, and multi-stage sampling (Abbott & Bordens, 2018; Taherdoost, 2016). On the other hand, non-probability sampling encompasses quota sampling, snowball sampling, convenience sampling, and purposive or judgmental sampling (Taherdoost, 2016). Unlike probability sampling, non-probability sampling does not necessitate representative samples because its focus is on exploring experiences and perceptions rather than drawing statistical inferences (Sekaran & Bougie, 2016; Taherdoost, 2016).

For primary data collection, the convenience sampling method was used in this study. This study employed a convenience sampling technique for qualitative approach for various reasons. This technique constructs a sample by selecting respondents who are convenient or readily available (Ruane, 2005). One advantage of this approach is its relatively low time and cost requirements compared to probability sampling. However, it also has limitations, such as potential data biases and a non-representative sample frame (Brewer & Hunter, 1989). A significant consideration for using this sampling method was due to the conflict between armed groups and the military government in the area. Owing to the conflict, many people, including farmers, relocated to safer areas, making it difficult to contact them for interviews. As a result, the researcher had to wait until they were accessible.

With the convenience sampling method, interviews were conducted with two to three managers from each of the co-ops and 8-10 coffee producers from each of the selected co-ops.

Table 4.1: Total sample numbers of the study

Types of coffee cooperatives	Managers	Producers
Specialty coffee cooperative	2	8
Conventional coffee cooperative	3	10

4.5. Data collection

In this study, two primary categories of data sources were used: 1) the primary data, and 2) the secondary data (see Figure: 4.2). Primary data refers to the original information obtained directly from research participants (Kumar, 2018). Primary data was collected by using online face-to-face interviews via Zoom meeting for gathering qualitative data from managers and members of the specialty and conventional coffee cooperatives. Employing this interview technique has advantages, such as minimizing misunderstandings in questions, and encouraging respondents to provide more in-depth information (Brace, 2018). The online face-to-face interview approach is robust because it allows researchers to potentially gain insights into the situations and problems faced by participants (Cassell & Symon, 2004). Additionally, this method enables interviewers to establish trust with participants and respond effectively to their needs (Cassell & Symon, 2004). Thus, this method facilitates the collection of a diverse array of information, encompassing details about the two coffee cooperatives' members, as well as the services, products and benefits offered by the two cooperatives.

The primary data were collected from both the leaders of cooperatives and coffee farmers by using semi-structured questionnaires for qualitative data, dedicating approximately 30 to 40 minutes per session. Semi-structured interview guides offer a flexible and adaptable approach to data collection in case study research (Baxter & Jack, 2008). They are particularly beneficial as they can be customized to the unique characteristics of the case under investigation. This approach allowed for a detailed gathering of information from the respondents (Cassell & Symon, 2004). Additionally, semi-structured interviews enable researchers to pose open-ended questions, facilitating the exploration of additional details or seeking clarification (Baxter & Jack, 2008).

The secondary data is obtained by examining prior research findings and other accessible documents and this data offers valuable insights aligned with the research's goals and objectives (Bordens & Abbott, 2002; Walliman, 2021). Secondary data for this study were sourced from journals, articles, NGOs reports, websites, other publications, Myanmar Coffee Association (MCA) and Ministry of Cooperatives and Rural Development to identify coffee cooperatives and acquire annual reports from each cooperative operating within the study area.

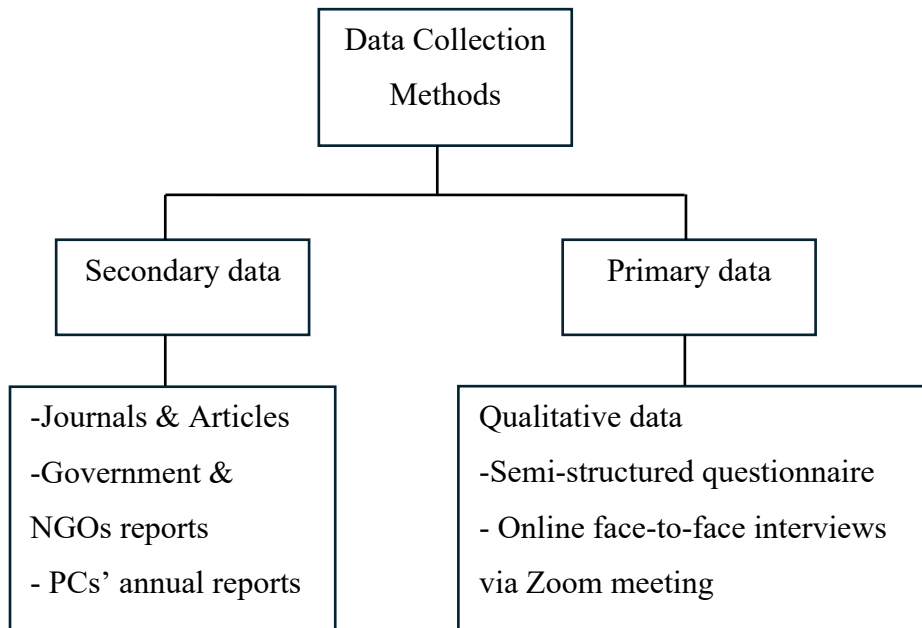


Figure 4.2. Data collection methods

4.6. Data analysis

Analyzing qualitative data can involve strategies such as examining transcripts, categorizing key aspects of associations, and creating summaries (Saunders et al., 2009). The qualitative data were analyzed by using the QDA process. This approach is chosen because it facilitates a systematic examination of the data, ensuring robust findings that align with the research objectives (Woolf & Silver, 2017). The essence of qualitative data analysis involves describing, classifying, and understanding the relationships among phenomena (see Figure 4.3) (Dey, 1993).

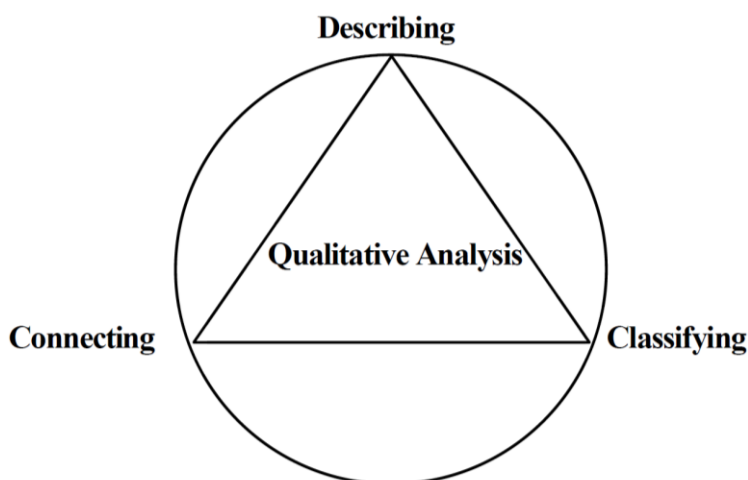


Figure 4.3: Qualitative Data Analysis (Source: Dey, 1993)

For this research, the data collected were analyzed qualitatively and done manually. First, the description process involves examining and outlining the raw data gathered in the study. In this step, key themes, ideas, and patterns were identified and documented by listening to the individual audio recordings of the 23 interviews. The researcher then reviewed the individual transcripts and highlighted the main points to facilitate comparisons between cooperatives and aligning findings with existing theories on cooperative benefits. Secondly, the classification stage involved identifying and defining categories related to the research focus. During this stage, the data were sorted and categorized based on similarities, forming higher-level themes that reflected the study's objectives: the unique benefits provided by two cooperatives. Similar codes or categories were then grouped together, and relevant data excerpts were assigned to create a comprehensive classification system highlighting similarities and differences in benefits across the two cooperative models. Finally, the connection process explored the relationships between the classified categories, themes, and concepts. For example, it examined how access to international markets and price premiums in the specialty cooperative contributed to members' economic stability compared to the conventional cooperative, where fixed pricing limited income growth. This process provided insights into how different cooperative models interact with and affect member benefits, thereby offering a clearer understanding of the specific member benefits received by members within two cooperatives.

4.7. Ethical Considerations

Prior to conducting the research, ethical approval was applied for the Human Ethics Committee at Massey University. The research adhered to the ethical principles and met the criteria set by this committee. In this process, the study took measures to guarantee the absence of any physical or psychological harm to the participants. Before interviews, the research objectives and advantages of being involved in the research were explained to the participants, and a consent form was provided to sign as evidence of the research. Additionally, they were educated about their rights during participation, including the voluntary nature of their involvement and the choice to refrain from responding to any sensitive questions. The data collection was done with a zoom meeting, and only adult respondents were selected for interviews. Interviews and audio recordings were undertaken

with the respondents' permission, and participants had the right to discontinue the interview at any time if they did not want to continue. Participants' rights were safeguarded by maintaining the confidentiality of their personal information, and responses were coded numerically. Finally, the findings will be published, and the participants will be transparently informed about the results.

CHAPTER 5 DESCRIPTIVE ANALYSIS

This chapter outlines the two cooperatives in this study in terms of their background, governance and management, membership, and the analysis of member benefits associated with cooperative operation identified during the study. The first section describes the specialty coffee cooperative, and the second section discusses the conventional coffee cooperative.

5.1. The Cooperative 1: The Specialty Coffee Cooperative

5.1.1. Background information

Co-operative 1 is located in Hopong township, situated 15 km east of Taunggyi City, the capital of Shan State, Myanmar (see Figure 4.1 in Chapter 4). Hopong Township is part of a self-governing region administered by the Pa-O ethnic community. Although coffee cultivation has been established in this region for numerous decades, production has been characterized by fluctuations. The prevailing low prices of coffee cherries have diminished interest among most farmers in coffee farming. Additionally, most farmers in this area have also grown cheroot leaf as an alternative cash crop. However, the profit received from cheroot leaf production remains unappealing to farmers.

Given the unprofitability of both coffee and cheroot leaf cultivation in this area, a significant portion of farmers have shifted their focus to poppy cultivation in 2003, despite its illegality in Myanmar. Poppy cultivation offers substantially higher profit margins along with considerable risks. Respondents from Co-operative 1 are exposed to various hazards, including exploitation and manipulation by influential drug lords and government-led eradication efforts targeting poppy farms. Confronted with a dilemma shaped by power dynamics and economic incentives, farmers opt to conceal their poppy harvests until suitable opportunities arise for clandestine transactions with brokers. This clandestine trade underscores the precarious position of farmers who navigate between the imperatives of financial gain and the risks associated with illegal activities and government enforcement measures. A respondent stated:

“We’re facing significant financial burdens due to the taxes imposed by armed conflicts for opium poppy cultivation. There is also a constant fear of Government intervention, with the possibility of our opium fields being destroyed. Additionally, we invest heavily in fertilizers for these fields, but if they're discovered and destroyed, it results in substantial financial losses due to the illegal nature of opium cultivation. Overall, the experience leaves us feeling deeply disappointed in growing opium poppy.”

Regarding these circumstances, the United Nations Office on Drugs and Crime (UNODC) initiated a project in 2014 in Southern Shan State, Myanmar, aiming to assist farmers in multiple villages to transition to sustainable legal farming practices, thereby improving community welfare, enhancing agricultural methods, and increasing income opportunities. Through an initiative of UNODC’s project which is designed to redirect farmers from drug cultivation by presenting the opportunity for sustainable crops and reliable income, UNODC has been providing inputs, technical assistance, and technology to a carefully selected group of pioneering farmers in the Southern Shan State of Myanmar. A respondent stated:

“As part of an initiative, UNODC assisted us in transitioning one acre of our poppy fields to cultivate coffee instead.”

The UNODC project has provided training on coffee production, covering topics such as seed selection, seedling bed preparation, and transplanting seedlings from nurseries to fields. They also provide farmers the agricultural inputs such as seeds, fertilizers, and watering cans. In the fields, farmers are educated on the proper spacing between coffee plants and how to care for them until they bear fruit, typically within three years.

The primary objective of the UNODC project in Shan State was to facilitate the transition of farmers from opium cultivation to coffee production. However, the project's scope did not include assistance in securing high prices or ensuring market stability for the coffee produced thereafter. Consequently, farmers in the Hopong area were constrained to selling their coffee at commercial prices and are primarily limited to domestic market outlets. Thus, the substitution of opium fields with coffee production in the Hopong area proved ineffective, as coffee farming did not offer a financially viable alternative for farmers. This was primarily due to farmers receiving only commercial prices for their coffee. The managing director of the co-op who worked as a coffee extensionist lead in this UNODC project stated that:

"Farmers faced challenges in finding markets for their products and often resorted to selling to local brokers at standard commercial rates. Consequently, they were hesitant to

transition from poppy to coffee cultivation, fearing similar market limitations for coffee. As a result, they were reluctant to embrace the shift of the remaining of their poppy fields towards coffee production."

In January 2017, farmers from the Hopong area became aware on social media platform, Facebook that farmers from Ywangan Township were receiving good prices for their coffee. Intrigued by this, they sought to understand the reasons behind their success and why they were unable to achieve similar prices. Upon visiting Ywangan Township, the Hopong farmers discovered that their counterparts had received specialized training for specialty coffee production provided by Winrock International. Thanks to Winrock International, a two-week, peer-to-peer training program was organized for Hopong farmers. They successfully produced their initial batch of sun-dried natural specialty coffee and sold to the international market at a good price. A respondent mentioned that:

"Our curiosity and enthusiasm helps us to produce specialty coffee and get the good price for our coffee."

5.1.2. Establishment of the co-op

Assisting farmers in transitioning from low-profit commercial coffee to high-value specialty coffee involves enabling them to receive significantly higher prices. Recognizing the potential of the specialty coffee production to empower local farmers, the managing director of the cooperative, who had been involved in providing training to Hopong farmers, decided to establish the cooperative in October 2017. He stated that:

"I realized that with proper guidance and collaborative efforts, farmers can consistently produce high-quality specialty coffee and secure stable markets, ultimately improving their livelihoods."

The main objectives of establishing the co-op are: 1) to gain access to international markets rather than domestic markets, 2) to explore more sustainable coffee markets for farmers, 3) to ensure regular and stable income for farmers, 4) to improve the livelihoods of members, 5) to provide quality extension to members for quality consistency of coffee, and 6) to alleviate opium production in the region.

Empowering the cooperative: assistance and collaborative efforts

In 2017, Winrock International encouraged the cooperative to apply for funds from Nespresso for its establishment. The cooperative received a funding of 53,000 USD from Nespresso, serving as one of its initial financial resources (see Table 5.1). This financial support provided a strong foundation for the cooperative's operations and allowed it to commence its activities. The managing director of the co-op expressed that:

“We presented a proposal to Nespresso requesting funding for the formation of the cooperative. Recognizing the potential risk of farmers reverting to opium production if the profitability of coffee cultivation did not significantly surpass that of opium poppy farming, we emphasized the critical need to establish a farmer organization to support vulnerable farmers in the Hopong area. Our proposal provided a comprehensive explanation of these concerns, leading to the successful acquisition of funding.”

In 2017, with the help of Winrock International, the co-op was able to attend Berlin Coffee Festival (see Table 5.1) and met with This Side Up which is a specialty coffee buyer from the Netherlands. The initial interaction between This Side Up and the co-op resulted in the purchase of the first 3.5 bags (60 kg per bag) of coffee from the co-op. Since then, the relationship between This Side Up from the Netherlands and the cooperative has grown stronger, with This Side Up purchasing the cooperative's coffee every year.

In 2018, Winrock International arranged further trainings for both the staff of the co-op and community representatives on various aspects, including constructing drying tables, implementing a traceability system, maintaining records, managing drying stations, and ensuring quality control at each stage of the process. The training sessions also covered topics such as drawing business plans, budget planning, financial management and indicators, marketing strategies, both local and international market pricing dynamics, and price-fixing strategies, long-term strategies and organizational development (see Table 5.1). The managing director of the co-op participated in these training sessions conducted by Winrock International. He reported that:

“With the knowledge and experience gained from these training sessions, I am capable of overseeing the entire cooperative and providing extension services to both members and non-members in the Hopong area.”

In 2018, Winrock International urged and supported cooperative members to participate in the coffee cupping competition (see Table 5.1). The competition is the part of the Value Chains for Rural Development initiative supported by USAID, led by Winrock International, and coordinated by the Myanmar Coffee Association (MCA) and the Coffee

Quality Institute (CQI). International judges and local Q cuppers evaluated the coffee samples following the Specialty Coffee Association (SCA) cupping standards and a competition format set by CQI. Two members from the cooperative won the second and third prizes for their coffee among participants from across the country. In 2019, the cooperative participated again in this Competition and secured the first, second, and fifth positions among all participants nationwide.

In 2019, Winrock International played a crucial role by providing essential infrastructure and equipment necessary for the cooperative's functioning. These included vital resources such as a generator to ensure uninterrupted power supply, a printer for documentation needs, a projector for presentations and training sessions, computers for administrative tasks, phones for communication purposes, and desks and tables for workspace organization as summarised in Table 5.1. To scale up the business operations of the cooperative, building their own mill requires an investment of approximately US\$300,000. Winrock International encouraged the cooperative to apply loans from the Rabobank Foundation, the Netherlands based NGO, which expressed willingness to provide loans for business expansion of the co-op. At their annual general meeting (AGM), a move to approve the decision about taking loans was denied by members due to the political situation in Myanmar. They thought that it risky to commit to repaying loans annually. Consequently, they made the difficult decision to forgo this opportunity. The managing director of the cooperative stated that:

“Members express concerns about entering contracts and fear they may struggle to fulfill obligations due to Myanmar's political climate. Additionally, while the Rabobank offers a low interest rate of 0.8%, domestic banks charge a much higher rate of 14% for similar loans, making it an unprofitable option for the cooperative. Consequently, members prefer to prioritize selling coffee at favorable prices rather than pursuing cooperative business expansion.”

In 2019, as a result of collaborative efforts between the cooperative and This Side Up, two farmer members from the cooperative were able to get the opportunity to travel to the Netherlands (see Table 5.1). This trip allowed them to gain valuable insights into the global coffee market, broadening their understanding of its dynamics. Subsequently, the cooperative successfully conveyed to its members the lucrative prospects offered by the global coffee market, igniting greater enthusiasm for coffee cultivation among them. Consequently, members have been striving to enhance the quality of their coffee produce to cater to international demand.

Table 5.1: Assistance to the co-operative

Year	Organization	Assistance	Description
2014 – current	UNODC	Inputs and technical support	<ul style="list-style-type: none"> ▪ Provide coffee seeds, fertilizers and watering cans to farmers who want to switch from opium poppy production ▪ Offer technical support for the entire coffee production process from seed germination to cherries harvesting
2017	Winrock International	Technical assistance	<ul style="list-style-type: none"> ▪ Deliver quality training on specialty coffee production, processing, drying and storage
2017	Winrock International	Training	<ul style="list-style-type: none"> ▪ Encourage to submit proposal to Nespresso in order to receive funds for the establishment of the co-op
2017	Nespresso	Funding	<ul style="list-style-type: none"> ▪ Provide USD 53000 to establish the co-op
2017	Winrock International	Marketing	<ul style="list-style-type: none"> ▪ Link the co-op to the international coffee markets
2018	Winrock International	Training	<ul style="list-style-type: none"> ▪ Offer training and support for capacity building, management of price-related risks, marketing strategies and long-term strategies
2018, 2019	Winrock International	Q Training	<ul style="list-style-type: none"> ▪ Encourage and support cooperative members to participate in coffee cupping competition
2019	Winrock International	Utilities	<ul style="list-style-type: none"> ▪ Provide necessary utilities such as generator, printer, projector, computers, phones, desks and tables
2019	Winrock International	Funding	<ul style="list-style-type: none"> ▪ Support to apply loans from Rabobank for business expansion of the cooperative
2019	This Side Up	Funding	<ul style="list-style-type: none"> ▪ Offer financial support to enable two farmers to travel to the Netherlands , enabling them to gain insights into the global coffee markets

In 2020, the co-op participated again in Myanmar cupping score and were placed in the first and second positions with the cupping scores of 89.08 and 88.33 respectively among many participants from nationwide (see Appendix 1).

Upon its establishment in 2017, the cooperative comprised 44 farmers from seven villages, yielding 0.18 Metric Tonnes (MT) for the 2016-2017 coffee season. Subsequently, production surged to 3.13 MT in 2017-18, followed by 15.36 MT in 2018-19, and 25 MT in 2019-20. By 2021, the co-op expanded to encompass 51 farmers from seven villages, collectively cultivating 75 hectares (ha) of coffee, resulting in a production of 27 MT in 2020-2021. In the 2021-2022 season, production rose to 29 MT from 55 farmers and further increased to 78.5 MT from 62 farmers in the 2022-2023 coffee season (see Table: 5.2). By looking at these data, it is obvious that the cooperative has demonstrated remarkable growth in the number of members, area plantation, and the volume of their coffee production.

Table 5.2: Specialty coffee-producing farming communities, area planted and production volume by the cooperative

Years	2016- 2017	2017- 2018	2018- 2019	2019- 2020	2020- 2021	2021- 2022	2022- 2023
Farmers	44	46	49	50	51	55	62
Area planted	14 ha	25 ha	32 ha	61 ha	75 ha	75 ha	95 ha
Production	0.18	3.13	15.36	25 MT	27 MT	29 MT	78.5 MT
Volume	MT	MT	MT				

Source: The co-op documents

The cooperative is strategizing to broaden its presence in the international market. Despite presently cultivating specialty coffee, they are endeavoring to obtain organic certification for their specialty coffee, aligning with the escalating demand for organic specialty coffee globally. In 2023, responding to the high demand in the global markets and the requests from international buyers, the cooperative has directed two out of its 62 members to shift towards growing organic specialty coffee, aiming to attain better prices for their coffee beans. To capitalize on additional opportunities in the international market, the co-op intends to initiate the cultivation of robusta coffee in other regions of Myanmar, in response to inquiries from international buyers regarding robusta coffee from the cooperative. The co-op's managing director expressed that:

“There is a growing demand for robusta coffee in the world market. In the world market, 60% of the total coffee is arabica while the remaining 40% is robusta. The retailers use robusta as a booster for arabica coffee. Thus, I would like to use our own robusta coffee as a booster to our arabica specialty coffee. I will take that opportunity to sell our own robusta coffee in the world market. Currently, we are just growing arabica specialty coffee and we are planning to grow robusta coffee according to the international buyers’ suggestion.”

Currently, the cooperative is functioning as a service provider to its members. Since the establishment, the cooperative has taken the responsibility of marketing, quality control, technical support and quality testing of members’ coffee. As the cooperative does not possess a centralized warehouse for storing coffee from all members, members have to store their own coffee in their respective warehouses. Once the sales agreement has been made with buyers, the cooperative finds the available coffee miller for members’ coffee. Members have to transport their coffee to the factory with their own transportation. After milling their coffee, the co-op collects members’ coffee in one place and transports to the external export service provider that takes care of packaging and shipping their coffee. Each member has a record book that includes the quantity of their coffee provided to the co-op, and their preferred payment method. After receiving the money from buyers, the cooperative takes 15% of members’ gross profits after deducting the packaging and shipping costs and transfers money back to its members based on the amount they provide.

5.1.3. Governance and Management

According to the cooperative constitution, the governance and management structure of the cooperative is shown in Figure 5.1.

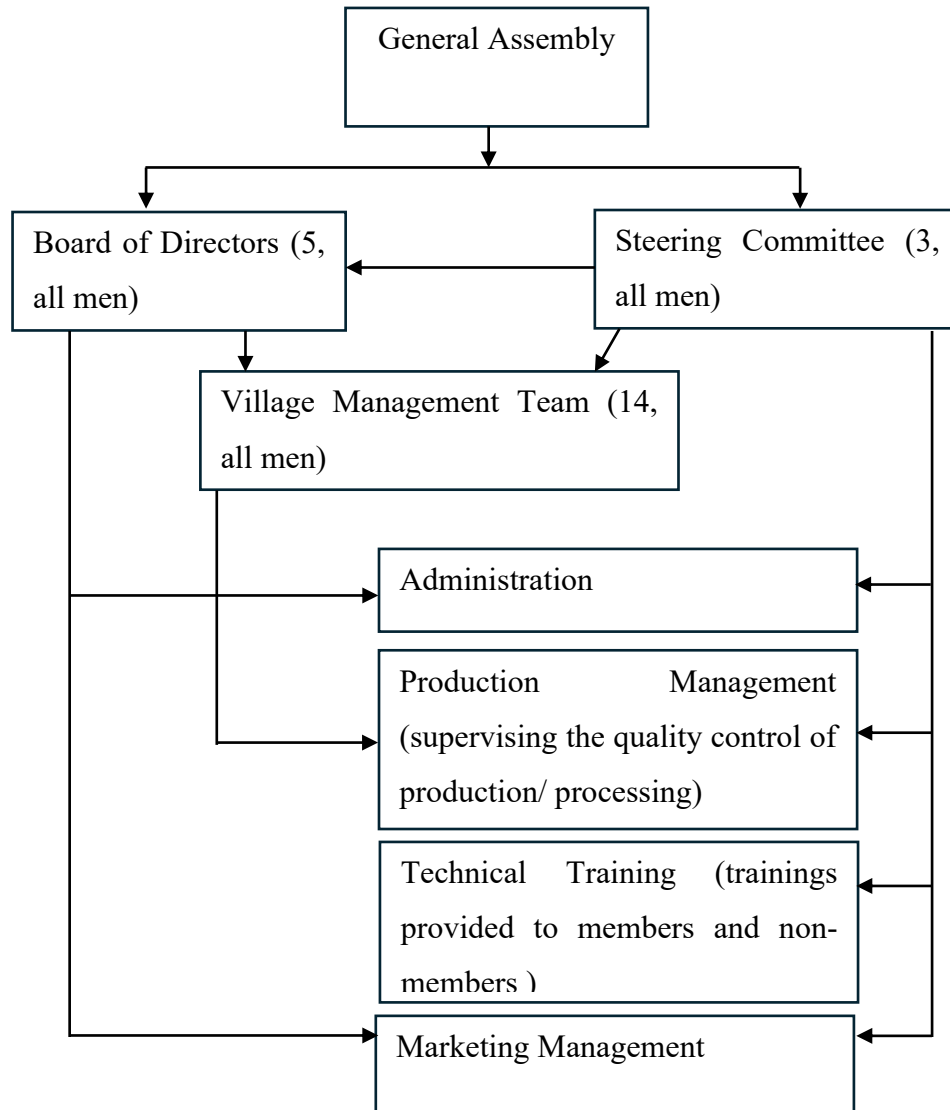


Figure 5.1: Governing structure of the cooperative

In this structure, the general assembly serves as the primary governing authority, central to all significant decisions and operations within the cooperative. The cooperative holds its general meeting on an annual basis. It adheres to a one-member, one-vote principle by ensuring equal right to vote regardless of the volume of coffee sales to the cooperative. The cooperative eliminates the requirement for all members to attend the meeting because of the current military coup in Myanmar. If 75% of the members participate in the voting process during the meeting, and half of them consent to proceed, the decision on any matter is officially confirmed.

During this meeting, the cooperative elects the board of directors to manage the organisation's affairs such as administration and business management. The board of

directors is the implementing body of the cooperative and consists of five individuals, each serving three-year terms. They are appointed during the annual general meeting and tasked with organizing all members' meetings and implementing resolutions adopted during these gatherings. They are responsible for proposing strategic plans, price risk management plans, and internal management bylaws, ensuring that these proposals are presented for discussion and approval during the meeting. Additionally, they oversee matters related to the acceptance and withdrawal of members and manage the organization's property and assets to safeguard its integrity.

The cooperative has established village management teams to oversee the production and processing activities of its members in each village. The selection of village team leaders also occurs during the AGM. As cooperative members are from 14 different villages, members from each village elect their leader who then becomes part of the village management team. The leaders in the village management team do not have term limits, but members have the right to vote for their replacement if any issues or disputes arise that conflict with their leadership role. Their responsibilities include documenting the quantity and quality of coffee supplied by members, recording members' preferred transaction methods, and supervising the quality control of coffee processing activities conducted by members. They are also responsible to separate each day's harvest so that all deliveries from members are meticulously traceable.

In Figure 5.1, it is shown that the steering committee serves as the supervisory body of the cooperative and it consists of three members. It is appointed during the AGM and tasked with supervising the performance of the board of directors and village management team, as well as their respective management tasks. The functions of this committee include supervising the implementation of decisions made during all members' meetings, overseeing the organization's management activities and business operations, assessing the quality of work conducted by board members and village management teams, and providing recommendations for enhancement. They are also responsible for technical support to both members and non-members in the region in order to improve the quality of coffee within the community.

5.1.4. Membership

The cooperative practices an open membership policy. In the membership in the cooperative, members are not required to pay membership fees or to buy shares. Instead, if an interested applicant wants to be a member of the co-op, he/she has to agree to pay 15% of their gross profits from coffee sales. This contribution covers various expenses incurred by the cooperative, such as packaging and export costs. It is applicable annually following the coffee season and serves as operational funds for managing the cooperative's administration.

There are two types of members in the cooperative: 1) members who have land and coffee plants, and 2) members who do not have land and coffee plants. The cooperative exclusively purchases coffee from its members, of whom 62 are currently enrolled. Out of 62, only 44 possess both land and coffee plants, leaving 18 without ownership of either (explain in the next section in 5.1.5). However, for all members, the membership is based on the quality criteria set by the co-op.

There are some rules and regulations to adhere by those who would like to be a part of the cooperative. The interested applicants who have land and coffee plants are now required to possess a more comprehensive understanding and experience within the coffee industry. Specifically, they must demonstrate a minimum of three years of practical involvement in coffee cultivation. Additionally, they are expected to possess at least three acres of land for coffee cultivation and a minimum of 3000 coffee plants. This includes a one-year period dedicated to monitoring coffee quality by the co-op. If the coffee plants and the quality of coffee produced by the interested applicants meet the acceptable standards, the cooperative allows them to become a member.

In terms of quality for these members, there has been mutual agreement and understanding between the cooperative and members about producing the specialty coffee before starting the coffee season. Ensuring a consistent quantity and quality of specialty coffee production is vital for maintaining stable relationships with buyers, particularly international buyers. Before starting the next coffee season, these members need to undertake rejuvenation efforts for their coffee plants to ensure that the plants bear a good quality coffee in the next coffee season. However, if the cooperative finds out that members do not practice rejuvenation process after coffee season, the cooperative give its members a first-time warning. If members do not follow this process more than two times, members will be eliminated without any more warning. The managing director of the co-op advised that:

“We do not have many rules and regulations to follow but we are strict on the existing rules we have established in order to have a consistent quality and quantity. Although there are some interested applicants, they are reluctant to join the cooperative due to perceived stringency in our rules.”

Owing to the high demand that exceeds supply, the co-op accepts the members who do not own land and coffee plants. To ensure consistency in quantity, the cooperative allows this practice. Nevertheless, the cooperative mandates that the coffee cherries obtained by these 18 members must meet stringent quality standards. These 18 members procure good quality coffee cherries from non-member farmers within the region, do processing by themselves and subsequently sell it to the cooperative. Thus, in order to maintain the consistency in quality of their specialty coffee, the cooperative has established Standard Operating Procedures (SOPs) specifically for these 18 members. Under these SOPs, these members are required to buy good quality coffee cherries which should be 95% ripe and prohibited from blending coffee cherries sourced from different villages. For instance, coffee cherries originating from one village must be kept separate from those of another, and in the processing area, each batch must be placed on distinct raised beds.

A significant proportion of members' families have migrated abroad, leaving behind predominantly elderly individuals and children who lack the capacity to oversee the entire coffee production process. Consequently, some farmers express a willingness to sign off their involvement. The time-consuming nature of the coffee production process results in an inability for certain members to maintain consistent annual production levels. Thus, the co-op allows some members a temporary rest.

During periods when a farmer is not actively engaged as a member, he/she opts to sell their entire plantation to brokers. However, disparities exist between the coffee-picking methods employed by brokers and those adhered to by the cooperative. Whereas the cooperative practices patience, they wait for the coffee cherries to ripen before picking them in which the coffee-picking times can be at least four or five times. However, brokers harvest indiscriminately, irrespective of the cherries' ripeness or condition, thereby leading to potential damage to the plants. Broker-led picking processes are typically completed within one or two days, whereas the cooperative's method spans three to four months to ensure careful picking.

Because of the above situations, if the old member wants to re-join the cooperative, the co-op conducts thorough quality assessments, evaluating not only the current year's produce, but also comparing it with previous years. Additionally, the cooperative assesses the

overall condition of the farm, recommending rejuvenation efforts if necessary, and may defer re-entry for a subsequent year. In this case, only when the old members could generate the products that measure up to the standards within a year of monitoring, they will be allowed again to become a member of the co-op.

5.1.5. Coffee processing methods by members

Members have to take responsibility for the processing of their coffee. Dry natural, fully washed and honey processing methods are exclusively employed by the members. Out of 62 members, 44 members who have land and coffee plants exclusively utilize dry natural processing, while the remaining 18 members who have no ownership of land and coffee plants, utilize a combination of dry natural, fully washed, and honey processing methods. The volume of the coffee produced by the fully washed and honey processing methods depends on the preferences and demands of the buyers. If buyers do not specify their preference for coffee processed using these methods, all the cooperative members solely utilize the dry natural processing method. This approach is favored due to its simplicity and minimal requirement for facilities. The managing director of the co-op stated that:

“Although the fully washed processing method is the most popular method in the world, it is challenging to follow the technology and facilities at the farmers’ level because of the factors such as the model of the machine used, the amount of water used, fermentation level, drying rate and moisture consistency, etc.. Importantly, the price of the coffee offered by buyers is determined by the quality produced, not the processing method used. Thus, farmers members (44 members) who produce small scale in the co-op use dry natural processing method which require fewer facilities and simpler steps, making it easier to improve the quality. Meanwhile, the other 18 members who purchase large quantities of coffee cherries from non-members have access to the necessary machinery and capacity for the fully washed process. These members are capable of utilizing all three processing methods. If buyers request coffee produced from the fully washed and honey process, these 18 members take the responsibility of coffee produced from these two methods.”

Sun dried natural processing method used by members

The cooperative members handpick coffee cherries during the early morning hours of the day. After collection, the cherries are transported to the dry stations, where they undergo screening and handpicking to ensure approximately 95% cherry ripeness (see Figure 5.2). The coffee cherries are then washed in the water so that members are able to remove lower-quality floating cherries which are not good for producing the specialty coffee. Standard moisture level is between 10% to 12% and, thus, fully ripe cherries are then carefully arranged on raised beds which is three metres long for slow drying under the sun. In this process, coffee cherries are turned hourly throughout the day to ensure the even drying in which the co-op practices the drying process of 12 kg cherries per metre for uniformity.



Figure 5.2: Cooperative members hand-sorting freshly harvested coffee cherries

Depending on weather conditions, the time for sun drying varies from 14 to 25 days (see Figure 5.3). In the raised beds, the coffee cherries harvesting date, the date when it is placed on raised beds, is clearly labelled for traceability and quality control (see Figure 5.4). Upon completion of the final phase by farmers, random samples undergo cupping testing by the Q-cupper from the co-op. After passing inspection, fully dried coffee cherries are stored in warehouses for approximately one month before milling (see Figure 5.5).



Figure 5.3: Drying process of coffee cherries on raised beds under natural sunlight



Figure 5.4: Labeling coffee cherries on drying beds for traceability



Figure 5.5: Fully dried coffee cherries stored in warehouse before milling

Fully-washed processing method employed by members

First of all, the co-op members handpick coffee cherries during the early morning hours of the day. The hand picked coffee cherries are then subjected to a preliminary cleaning process and floated to facilitate further selection. Subsequently, the cherries undergo pulping using a Penagos machine, which minimizes water usage. Following pulping, the pulped coffee is transferred to fermentation tanks to undergo the fermentation process. Once fermentation is complete, the fermented pulped coffee beans are meticulously washed in a washing channel, where they are sorted by grade. Finally, the washed pulped coffee is carefully spread out on raised beds for drying until it obtains the optimal moisture level which is 10-12% (see Figure 5.6).



Figure 5.6: Sun drying process of pulped coffee beans on raised beds

Honey processing method applied by members

In the initial stage, the cooperative members handpick the coffee cherries in the early morning hours and transport them to the processing area within a day. The coffee cherries are then subjected to initial cleaning and floating for further sorting. The cherries are subsequently pulped using a Penagos machine which is good for the water-efficient operation. The freshly pulped coffee is then stacked on raised beds (see Figure 5.7) until it reaches the preferred pH level specified by the buyers, typically ranging from 3.4 to 4.0.

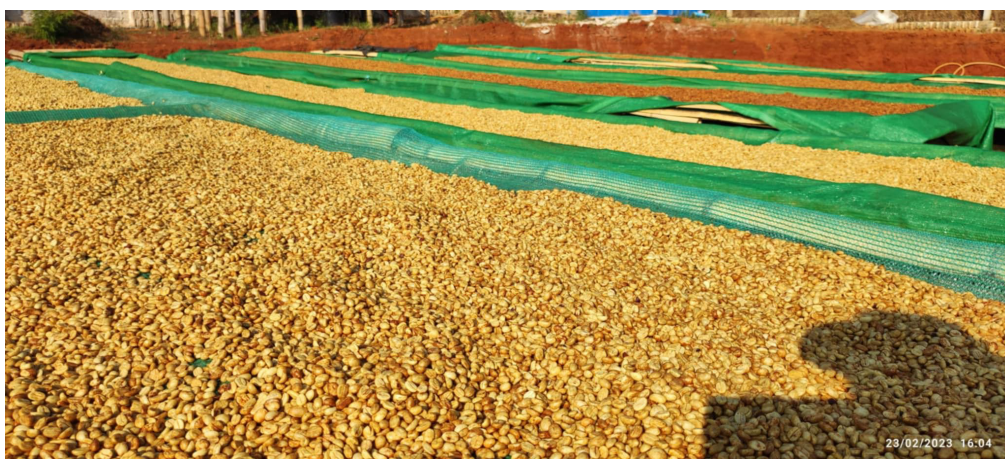


Figure 5.7: Drying pulped coffee beans on raised beds during the honey processing method

5.1.6. Markets

The cooperative has the capacity to export its specialty coffee to both international and domestic markets, with a primary focus on international markets. International buyers for specialty coffee are from various countries including Thailand, the Netherlands, USA, France, Japan and Singapore (see Table: 5.3). In the 2022-2023 coffee season, the cooperative sold more than half of their specialty coffee to Thailand with 40 MT. For buyers from the Netherlands, sales started from 0.18 MT in 2016-2017 coffee season and gradually increased over time, reaching 20 MT in the 2022-2023 coffee season. Similarly, specialty coffee sales to the USA, France, Japan, and Singapore also showed a gradual increase over time, indicating a growing presence in these markets.

Table 5.3: Specialty coffee (green beans) sales to the international markets (metric tonnes)

Years	2016- 2017	2017- 2018	2018- 2019	2019- 2020	2020- 2021	2021- 2022	2022- 2023
Sales							
International buyers							
Thailand	N/A	N/A	N/A	N/A	N/A	N/A	40
The Netherlands	0.18	3	12.06	17	17	18	20
USA	N/A	N/A	3	2	2	2	5
France	N/A	N/A	N/A	2	2	2	3
Japan	N/A	N/A	N/A	3	3	1	2
Singapore	N/A	N/A	N/A	N/A	0.3	0.4	0.5

Source: The co-op documents

The cooperative also supplies its specialty coffee to domestic buyers such as Goffee Coffee and Sawbwa Coffee (see Table: 5.4). The sales with Sawbwa Coffee showed a consistent volume over time, while sales with Goffee Coffee and Coffee Cycle started with 5 MT and 1 MT respectively in the 2022-2023 coffee season. Overall, these sales figures suggest that the cooperative is actively engaging with both international and domestic buyers to market its specialty coffee products.

Table 5.4: Specialty coffee (green beans) sales to the domestic markets

Years	2016- 2017	2017- 2018	2018- 2019	2019- 2020	2020- 2021	2021- 2022	2022- 2023
Sales							
Domestic Buyers							
Sawbwa	N/A	N/A	N/A	N/A	2 MT	5 MT	2 MT
Goffee Coffee	N/A	N/A	N/A	N/A	N/A	N/A	5 MT
Coffee Cycle	N/A	N/A	N/A	N/A	N/A	N/A	1 MT

Source: The co-op documents

Why specialty coffee matters?

Specialty coffee refers to coffee whose price is determined by its exceptional quality. Additionally, it underscores the significance of sharing the coffee's origin story and sourcing from single origins to enhance the customer's experience. In the specialty coffee market, prices are influenced by the flavour attributes of the cup, unlike commercial or commodity coffee where origin distinctions hold little or no significance to buyers. To determine whether it is the specialty coffee or not, cupping holds significant importance within the specialty coffee sector, serving as a fundamental practice. During cupping sessions, certified coffee experts evaluate various aspects of the coffee, including its flavour profile, aroma, and overall quality, ensuring that only the most exceptional beans receive the specialty designation. The specialty coffee beans are the ones that are awarded high cupping scores (more than 80 points) by certified professionals known as Q-Graders/ Q-Cuppers. As a result, coffee buyers are willing to pay higher prices for specialty beans that deliver exceptional and memorable taste experiences. Essentially, in the specialty coffee market, the more distinct and desirable the flavours, the greater the potential for commanding premium prices.

Thus, the co-op's specialty coffee is sold based on the world coffee price and the quality of the coffee and, thus, there is no fixed price for their specialty coffee (see Table 5.5). While the world commodity price of coffee stands at approximately 2 USD per pound, the cooperative commands a differentiated pricing structure for its specialty coffee. There are four aspects of value addition to the price of their specialty coffee beans and these include: 1) the cupping score, 2) the coffee produced from farmers' association, 3) waste water reduction and, 4) deforestation mitigation.

Specifically, the cooperative receives an additional 0.50 USD per pound for coffee scoring 86 points or above on the cupping scale. Similarly, they earn an extra 0.50 USD per pound for coffee produced through the farmers' association which has transitioned from opium poppy to coffee production. Additionally, they receive another 0.50 USD per pound for using a dry natural processing method which minimizes water usage. Moreover, an additional 0.50 USD per pound is granted for cultivating shade-grown coffee, contributing to deforestation mitigation efforts. Consequently, the cumulative price for their specialty coffee amounts to approximately 4.50 USD per pound, exceeding the prevailing commodity price.

Table 5.5: Price differences according to grade (based on global market price and quality)

Cupping score determined by Q-cupper	Price (US \$/ lb)
80-83	US\$ 3/lb
84-86	US\$ 3.8-4/lb
87-89	US\$ 4.5/lb

Source: The co-op documents

Relationship with buyers

When engaging with international and domestic buyers, the cooperative does not make contracts with them. In instances where contracts are necessary, buyers typically offer a fixed price for the coffee. However, due to uncertainties regarding the quality of the cooperative's specialty coffee, buyers are often hesitant to agree to higher prices. As a result, they typically propose a rate of around 3 USD per pound for the cooperative's coffee if contracts must be made. Conversely, the cooperative is reluctant to accept contracts at this price point, as it may not accurately reflect the high quality of their coffee. Accepting such agreements could lead to significant profit loss if the quality of their coffee exceeds the price offered by the buyers. The managing director of the cooperative stated that:

“We aim to produce the high quality specialty coffee to command premium prices. There is no reason to fear selling it if our specialty coffee has top-tier quality. We take risks to make more profits.”

When the cooperative is prepared to sell their coffee, they send samples of it along with the quantity available to potential buyers, requesting a price based on the quality of their

specialty coffee. If the buyers are satisfied with the coffee samples provided by the cooperative and agree to the proposed price, a purchasing agreement is made. However, if there is a discrepancy between the quality of the samples and the asking price, negotiations ensue regarding the price. The buyers give their trust if their scores and that of the co-op have few differences. The managing director of the co-op mentioned that:

“Trust is important in the coffee production and distribution. Traceability plays a vital role in building trust with buyers. Our specialty specialty coffee can provide traceability for the buyers. They always look not only at the quality of coffee but also the history how coffees are produced (for example; Which farm? Which species? Who distributes? Which region? What kind of resources are used? What processing method?). If something goes wrong with our coffee, the buyers always check the history of our coffee and evaluate which factors have impacts on the quality of coffee.”

It is customary for buyers to inform the cooperative in advance of the quantity they intend to purchase prior to the coffee season, allowing the cooperative to determine the amount they can sell accordingly. If the cooperative exceeds the quantity desired by the buyers, they inform the buyers accordingly, prompting the buyers to seek additional markets for the surplus coffee. Buyers purchasing small quantities of coffee are referred to the cooperative's loyal customer, This Side Up, whereas those requiring larger quantities are handled directly by the cooperative. This division is based on the logistics involved in transporting coffee, including packaging and shipping, which can be time-consuming and costly for smaller volumes.

While the cooperative sell their specialty coffee to both international and domestic buyers, coffee produced from floating cherries is sold to only domestic buyers who specialize in producing ready-made coffee powder. Since the cooperative primarily targets international markets, domestic buyers must place pre-orders. However, it is important to note that the price quoted by the cooperative for their specialty coffee does not include export costs such as shipping. These costs are subtracted, and the coffee is then sold to domestic buyers.

5.1.7. Analysis of member benefits by the specialty cooperative

The increasing number of members in the co-op shows that the co-op offers substantial benefits to attract new members. The benefits identified from this study associated with the co-op include social, marketing, financial, training and education, environmental as

well as supplying inputs and services and community benefits. Owing to the above advantages, the majority of members express a willingness to remain affiliated with the co-op and intend to expand their coffee cultivation in the future. These benefits are ranked in the order of importance according to the results from the interviews with the cooperative's leaders and members (see Table 5.6).

Table 5.6: Key member benefits in the specialty coffee cooperative according to the rank of importance

Rank	Member Benefits	Description
1	<ul style="list-style-type: none"> ▪ Social benefit 	<ul style="list-style-type: none"> ▪ Offer a secure and legal livelihood by helping members to shift from poppy to coffee cultivation ▪ Creation of price transparency within the co-op
2	<ul style="list-style-type: none"> ▪ Marketing benefit 	<ul style="list-style-type: none"> ▪ International market access
3	<ul style="list-style-type: none"> ▪ Financial benefit 	<ul style="list-style-type: none"> ▪ Access to low-interest loans ▪ Unique pricing structure implementation ▪ Funds for organic certification
4	<ul style="list-style-type: none"> ▪ Training and education benefit 	<ul style="list-style-type: none"> ▪ Training sessions and technical support to members, either independently or in partnership with external organizations
5	<ul style="list-style-type: none"> ▪ Environmental benefit 	<ul style="list-style-type: none"> ▪ Utilize environmentally friendly coffee processing method ▪ Engage in shade-grown cultivation to prevent deforestation
6	<ul style="list-style-type: none"> ▪ Benefits in supplying inputs and services 	<ul style="list-style-type: none"> ▪ Provide moisture meters in the processing area ▪ Provide information on the availability of coffee-milling facilities in the area
7	<ul style="list-style-type: none"> ▪ Community Benefit 	<ul style="list-style-type: none"> ▪ Support community development in an indirect manner

Social benefits

Within this examined cooperative, the reason why they grow specialty coffee is a chance for them to stop growing poppies. Cultivating this controversial flower leads to a tough and risky way of life. A respondent reported that:

“Alongside facing ongoing threats, extortion, and the stress of hiding harvests, there’s the constant fear of losing a year’s work to the police or thieves.”

This is because poppies need to be replanted annually, securing a stable future for the family and community becomes uncertain. As a result of the cooperative's efforts, 90% to 100% of opium cultivation among members in the Hopong area has been replaced by coffee farming. A respondent stated that:

“I’m proud to be a specialty coffee farmer and I completely replaced my poppy opium fields with coffee. I do not need to hide my crops anymore because coffee farming is both legal and profitable.”

Another respondent expressed that:

“I still grow poppy opium for extra income but 90% of my opium poppy fields has been replaced by coffee farming.”

The cooperative also creates transparency so that members want to stay with the group. The cooperative builds the trust with its members by making a way for farmers to meet up directly with buyers, thereby creating the price transparency among them. In this case, members can hire the translator from outside to negotiate the price with the international buyers or they can use the translator from the co-op. The cooperative lets them know about everything in the contract and gives them a chance to negotiate the price that they want from the buyers.

Through this way, the cooperative promotes transparency by facilitating direct meetings between members and buyers. During these encounters, all aspects of the contract between the cooperative and buyers are thoroughly explained, ensuring clarity and understanding for all involved parties. Thus, the contract has been made based on the mutual agreement between the members, the co-op and the buyers. A respondent who is an original member of the cooperative said that:

“The cooperative provides detailed explanations about pricing and contracts, covering everything from our coffee sales income to the expenses incurred during export. During profit allocation, they present receipts, which enhances trust and makes me feel respected by the cooperative.”

Another respondent who is a new member of the co-op stated that:

“In my previous cooperative, I was unaware of the pricing details during the transactions with buyers, and the previous cooperative never engaged its members in discussions about the selling prices to the buyers. However, in this cooperative, they are transparent about pricing, explaining everything clearly, which creates transparency and trust among us.”

Marketing benefits

One of the key advantages provided by the cooperative to its members is marketing support, which includes: 1) market access (particularly international markets), 2) maintaining strong relationships with buyers, and 3) actively seeking opportunities to expand its presence in global markets.

Before the establishment of the cooperative, farmers in the Hopong area faced challenges with selling their coffee. They primarily sold their coffee to domestic markets through brokers, resulting in low prices that made coffee farming unprofitable. The main issue was limited market access, which constrained their ability to sell their coffee at higher prices. However, with the establishment of the cooperative, farmers now have the opportunity to access more markets for their coffee and sell it at better prices. This increased market access is a key incentive for farmers to join the cooperative because it enables them to increase their income by fetching higher prices for their coffee. A respondent who was also an original member advised that:

“I became a member of the co-op in order to gain more markets for our coffee and sell with a favourable price.”

Moreover, the cooperative is proactively engaged in securing more markets for its members, particularly focusing on international markets. One significant step towards this goal occurred in 2017 when the cooperative participated in international coffee festivals, effectively introducing Hopong coffee to potential buyers and establishing agreements for coffee sales. These festivals served as platforms to showcase their coffee and initiated partnerships with international buyers. From the coffee festivals around the world, they have got many buyers and invited them to visit their place so that the buyers are able to see their coffee production and processing. In this way, they could build and gain the trust of their buyers. As a result, their coffee network with the international buyers becomes stronger than before.

Although the cooperative exclusively exports its specialty coffee to international markets, it sells both its specialty coffee and the coffee made from floating cherries to domestic markets. However, when engaging with both markets, the cooperative prioritizes maintaining consistent quality and quantity of its specialty coffee in order to maintain strong relationships with its buyers. This commitment to consistency incentivizes buyers to place advance orders with the cooperative. Owing to the cooperative's efforts, their specialty coffees are gaining access to international markets and witnessing a surge in popularity in both local and global markets.

As an additional initiative, the cooperative is proactively seeking to expand its presence in international markets. To stay informed about market trends, the managing director of the co-op regularly seeks the updated information and global market trends. Combined with his knowledge and the expressed interest of international buyers, he has realized that there is a notable demand for organic specialty coffee in global markets. International buyers have also demonstrated willingness to offer premium prices for their organic specialty coffee. Thus, the co-op is urging its members to cultivate organic specialty coffee in response to the increasing global demand for organic specialty coffee products. By doing so, members can, not only cater to the rising demand for their coffee, but also position themselves to secure higher prices in the market.

Financial benefits

The cooperative has provided financial advantages to its members by 1) facilitating loan connections, 2) implementing a differentiated pricing system, and 3) securing funds for organic specialty coffee production.

As the cooperative cannot immediately distribute profits from coffee sales to its members, members receive payment only after the cooperative receives payment from the buyers. Owing to this situation, the majority of members take loans from the local money lenders with a high interest rate as they need money to cover their coffee production costs. Thus, the cooperative facilitates the connections between members and external organisations such as domestic buyers and banks in order to obtain low-interest loans for its members. One of the cooperative's efforts in loan connections, the co-op has made an agreement with a domestic coffee buyer named Goffee Coffee and this buyer has agreed to extend loans to members. However, members are required to agree to sell their specialty coffee at the rate set by Goffee Coffee in order to access these loans. The finance manager of the co-op stated that:

“If the specialty coffee’s market price stands at approximately US\$4.5 per pound, Goffee Coffee has negotiated to pay only US\$4.2 per pound, resulting in a loss of approximately US\$0.3 per pound for every coffee we sell to this buyer. Consequently, members stand to lose a portion of their profits under this agreement.”

Owing to the above conditions, some members tend to favor loans from microfinance institutions with low interest rates over deals with domestic coffee buyers. Members who are unable to secure loans from these institutions, often because their villages are not covered by their projects, resort to borrowing from local money lenders, who charge a high interest rate. A respondent who is under a microfinance project mentioned that:

“My village is part of a microfinance project facilitated by Pact Myanmar which is a microfinance institution. This arrangement allows me to secure loans for my coffee production costs at a monthly interest rate of 1-1.5%, which I find quite affordable.”

A respondent who is not under the microfinance project stated that:

“In my area, there are no microfinance initiative, and, consequently, I resort to borrowing from local money lenders with the high interest rates (3%-10% monthly interest rate). However, I have the flexibility to borrow money whenever necessary and can access the amount I need.”

Owing to these situations, the cooperative has made agreement with one of the domestic banks called “A bank” in order to take loans with very low interest rate. This rate is more favorable compared to that offered by Goffee Coffee and local money lenders, enabling members to repay the loans once they receive payments from buyers. However, members have to provide collateral to this bank and the managing director of the co-op stated that:

“Members are hesitant about offering collateral even though the bank interest rate is 14% annual interest rate (only 1.16% monthly interest rate). Despite low interest rate, members still prefer to secure loans from local moneylenders or microfinance institutions, where collateral is not required.”

Secondly, the cooperative’s differentiated pricing structure commands high prices for their specialty coffee and brings financial benefits to its members. Their pricing structure is based on various factors such as cupping score, production methods, and sustainability practices. As a result, the co-op earns approximately US\$4.50 per pound for its specialty coffee, notably higher than the standard commodity price of around US\$2 per pound.

A respondent who was a member since the establishment of the co-op stated that:

“I joined the co-op because I want to sell my coffee with a good price and increase my income.”

When talking with new members of the co-op, a respondent stated that:

"I decided to switch from my previous cooperative to this one because I heard that I can get a better price for my coffee here. In the previous cooperative, our coffee was sold at a lower price compared to what is offered here."

This income and market stability from specialty coffee selling provides a sense of security for the farmers and their families, contributing to overall socio-economic well-being. Based on interviews with farmers, most members have been able to buy motorcycles and cars for better transportation, and they can also afford to send their children to schools for a better education. They attribute these improvements in their living standards to selling their coffee to specialty markets. A respondent mentioned that:

"I can purchase vehicles for transporting my coffee or for personal use using the earnings from selling specialty coffee."

One of the respondents also stated that:

"I can afford to enroll my children in private schools using the income generated from selling specialty coffee."

Thirdly, the co-op also helps its members in securing funds for organic specialty coffee production. Thanks to the co-op's effort, two members have received funds for their organic production to use for organic inspection and production fees. The buyers already made an agreement with the cooperative to buy their organic specialty coffee at a higher price. This represents a significant financial benefit for members as organic specialty coffee typically can get higher prices compared to their original specialty coffee. A respondent stated that:

"When I chose to transition to organic specialty coffee, the cooperative assisted me in securing funds for organic production expenses and inspection fees from buyers."

Another respondent who has also transitioned to growing organic specialty coffee mentioned that:

"Yes, I believe this will boost my income from coffee sales, as I have heard that buyers are willing to pay premium prices for our organic specialty coffee."

Training and education benefits

The cooperative has offered training sessions and technical assistance to its members either through partnerships with international non-governmental organizations (INGOs) or independently. First of all, in 2018, the cooperative facilitated partnerships with Winrock

International, providing members with access to specialized training programs and Winrock International provided four key aspects of trainings to the co-op's members and staff: 1) the specialty coffee production and processing techniques, 2) financial management, 3) marketing management and, 4) organizational development.

With respect to the specialty coffee production, Winrock trained the cooperative's staff and community representatives about preparing seedling beds, maintaining coffee plants, and improving coffee yields. For the coffee processing technology, Winrock taught three processing methods to them: dry natural processing, fully washed processing and honey processing methods. In this case, Winrock shared the knowledge about building drying tables, running drying station, food safety awareness in processing, establishing a traceability system for each batch of coffee cherries, record-keeping (taking notes in quality and quantity of coffee cherries before and after processing and coffee beans after milling) and quality control at every step. A respondent stated that:

"I underwent specialized training in specialty coffee production provided by Winrock, which has equipped me with the skills and confidence to independently engage in this field."

In regard to financial management, the trainings provided by Winrock included maintaining production costs such as labor costs, input costs (raised beds costs, plastic bags costs, etc), and budget planning for coffee production. For the marketing management trainings, price risk management trainings, local and global market pricing trends, strategies for setting prices and linking to the international markets (finding buyers and how to do export process) were provided. In terms of the organizational development of the cooperative, Winrock gave training on drawing business plans, drawing short-term and long-term strategies and capacity-building.

As the co-op's technical support to its members, after the coffee-picking season in March, the cooperative encourages members to undertake rejuvenation efforts for their coffee plants to ensure that the coffee plants bear the good quality coffee in the next coffee season. The cooperative clearly explains to its members about the rejuvenation of the coffee plants: the number of branches they should keep on coffee plants based on the coffee varieties; the number of nodes they should leave on each branch and the number of coffee cherries will bear on each node. Thus, members know how many coffee cherries they can get from each coffee plant and they can predict their total yield for the next coffee season.

During the rejuvenation process, the cooperative encourages members to do pruning coffee plants, aiming to retain 25-30 strong and promising branches per plant. This ensures that branches receive adequate nutrition evenly, resulting in the production of high-quality

coffee cherries. Excessive branches can compete for nutrients, potentially compromising coffee quality. Rejuvenation process involves removing dried or weak branches, while ensuring that the lowest branches are positioned about one foot from the ground. The remaining cherries on the coffee plants from the previous coffee season also need to be removed. Additionally, members need to perform tipping, maintaining coffee plant height at approximately five to six feet for convenient coffee cherry picking and to prevent branch drying. Picking cherries from unreachable heights can strain branches, leading to their desiccation.

In order to make sure that members do well in their specialty coffee production and follow the rules set by the co-op, the cooperative has also implemented a robust quality monitoring system. It conducts regular assessments of members' coffee farms on a monthly basis, with increased frequency to weekly inspections when necessary. This proactive approach ensures timely identification of issues and allows for prompt intervention to maintain optimal farm productivity and consistent coffee quality. A respondent stated that:

"I can ask any time to seek assistance whenever I encounter challenges in producing and processing specialty coffee. Whenever issues arise, they readily visit my farms and provide support to resolve them."

Beyond its membership base, the cooperative extends technical support to non-members in the Hopong area by providing assistance to production and processing technology. By sharing expertise, the cooperative aims to disseminate best practices widely within the local coffee farming community, fostering overall improvement in coffee production standards and benefiting the broader community. This is one of the reasons why the number of members has increased in the co-op. A respondent who is a new member mentioned that:

"I joined as a member in 2022 because I received technical support as a non-member before a member of the co-op. In this co-op, there's a structured process to follow in the specialty coffee production. I find it flexible and it offers more freedom to operate."

Recognizing the growing demand for organic specialty coffee in the international markets, the cooperative is actively supporting members interested in transitioning to organic specialty coffee production methods. This includes sharing knowledge about organic production technology, such as selecting suitable seeds and organic composting techniques. Members embarking on organic specialty coffee production receive ongoing support and guidance from the cooperative, ensuring a smooth transition and addressing any challenges they may encounter along the way. A respondent stated that:

“Initially, I had 3 acres of land dedicated to specialty coffee production. Now, thanks to the cooperative’s assistance, I’ve expanded to 4.1 acres for growing organic specialty coffee, bringing my total coffee land to 7.1 acres. The cooperative is always there, offering me the technical support and guidance I need for producing organic specialty coffee. Whenever I face challenges, I can easily reach out to them for assistance. Working with them feels incredibly flexible and accommodating.”

Environmental benefits

The majority of cooperative members primarily employ the dry natural processing method, which requires minimal water usage compared to other coffee processing methods. This approach contributes to water conservation efforts, reducing the environmental impact of coffee processing. Fully washed and honey processing methods are utilized only upon buyer request. Typically, the wastewater generated from coffee processing, especially in the fully washed method, can pose environmental hazards. Disposing of such wastewater near plants can lead to plant death and render the soil unsuitable for cultivation. Limited use of these methods minimizes the generation of wastewater, mitigating environmental hazards associated with wastewater disposal.

The cooperative practices shade-grown coffee cultivation, strategically planting trees to provide shade for coffee plants. The shade provided by trees in the coffee plantation protects coffee plants from direct sunlight, which can negatively affect coffee quality, resulting in higher-quality coffee product. This method helps prevent deforestation by preserving existing tree cover and promotes biodiversity in coffee-growing regions.

Benefits in supplying inputs and services

The cooperative provides moisture meters at the processing area, allowing farmers to measure and maintain optimal moisture levels, which is crucial for preserving the quality of the coffee beans. The cooperative managing director advised that:

“We supply moisture meters to each processing area to help members maintain the optimal moisture levels during processing and storage. However, if members decide to leave the cooperative, they are not permitted to take the moisture meters with them.”

The cooperative offers valuable information on the availability and location of coffee milling facilities in the area, helping farmers to access necessary services efficiently and

reduce transportation challenges as farmers can choose the closest or most convenient milling facility, saving time and effort. The managing director of the co-op stated that:

“We provide members with up-to-date information about the availability of coffee-milling facilities in the area, particularly during the coffee harvest season when these facilities are often very busy. This ensures that members can process their coffee promptly, allowing us to meet export deadlines and maintain our market commitments.”

Community benefits

While the cooperative may not provide direct benefits to community development, it has a positive impact in an indirect way. The cooperative members actively contribute to community progress by: 1) pooling funds to repair the road; 2) donating printers and books to local schools; and 3) supporting the local monastery with donations.

The coffee is produced on hilly terrain, making it challenging for farmers to deliver their harvest to the processing areas due to the poor road conditions. The roads are narrow, uneven, and difficult to navigate, especially during the rainy season, which complicates transportation and increases delivery times. If farmers are unable to deliver their coffee in a timely manner due to the poor road conditions, the quality of the coffee can deteriorate. As a result, the members of the specialty coffee cooperative pool funds from each member and take it upon themselves to repair the road. One of the respondents mentioned that:

“We benefit from our specialty coffee sales, and we use that money to repair the road to make transporting our coffee easier.”

Another respondent also mentioned that:

“Members are united, and when we decide to use our own funds to repair the road, everyone is eager to participate.”

Additionally, as part of their efforts to develop the community, members donate printers and books to local schools to enhance the quality of education in the area. One respondent stated that:

“We ask the local schools what they need, and we donate whatever we can.”

Furthermore, the cooperative members make financial contributions to local monasteries and participate in donation ceremonies each year to help foster and sustain religious practices and traditions within the community.

5.2. The Cooperative 2: The Conventional Coffee Cooperative

5.2.1. Background information

Co-op 2 is located in Myaing Village in Ywangan Township in Southern Shan State, Myanmar (see Figure 4.1 in Chapter 4). Ywangan Township is a part of a self-governing region administered by the Danu ethnic community. Ywangan is the primary coffee-growing region in Myanmar and the coffee production operates predominantly at the village level. In Ywangan, coffee predominantly originates from small-scale farmers, typically owning farms of two to three hectares at most. Farmers in this area also grow various crops such as avocados, oranges, vegetables, and tea leaves for an alternative source of income.

5.2.2. Establishment of the cooperative

In 1970, co-op 2 was initially established as the Township Cooperative Association, in compliance with Myanmar's cooperative laws. However, due to changes mandated by the Government's cooperative restructuring laws in 1992, it was dissolved and reformed as the General Business Cooperative Association in 1995. Following this reformation, the cooperative consisted of eight different cooperative societies with a total of 84 members. In 2019, it underwent another restructuring, this time becoming the Township Cooperative Society. Currently, co-op 2 is formed with 83 different cooperative societies, which include 64 agriculture and farm production associations and 19 credit unions. Out of 83, 41 of these societies are engaged in coffee production.

Business departments and their main operations of the co-op

To ensure smooth and efficient operations, the co-op has organized itself into five primary business departments. These departments include: 1) production management, 2) marketing, 3) credit and machinery service, 4) trading service, and 5) administration department. The cooperative's business operations are summarized in Table 5.7.

Table 5.7: Business Departments and their main operations

Departments	Main Business Operations
Administration department	Administration of human and financial resources, along with other logistical functions
Credit and Machinery service	Providing loans for agricultural and other activities and offering agricultural machinery with installment plan
Trading service	Buying rice and cooking oil and selling these items to members with installment plan
Production Management **	Managing coffee buying and processing activities
Marketing **	Do marketing activities for their coffee products

** Business departments that only focus on coffee production and marketing activities.

Administration department

The Administration department is responsible for managing the cooperative's human and financial resources, as well as overseeing its logistical functions. This includes handling internal management and administrative duties such as financial oversight, human resources, managing the disbursement of salaries to employees in the co-op and ensuring adherence to relevant laws and regulations. As the central hub of control within the cooperative, other departments need to obtain its approval before proceeding with their activities, based on the department's decisions.

Credit and Machinery service

As part of its business operations, the cooperative offers loans to members for agricultural purposes and other needs, such as health expenses. Utilizing loans obtained from Exim Bank, the cooperative acquires agricultural machinery and other vehicles tailored to the needs of its members. These items are then sold to members under an installment plan, facilitating easier access to essential equipment.

Trading Service

This department oversees the sale of essential commodities such as rice and cooking oil, offering these goods to cooperative members on a one-month installment plan. It is vital in meeting members' basic needs by ensuring access to necessary items at reasonable prices. The establishment of this department was driven by member requests and needs. Members advocated for the ability to purchase essential commodities on installment plans during times of financial difficulty. The cooperative created this department in response to these expressed needs, highlighting its commitment to addressing and supporting the specific challenges faced by its members.

Production Management Department

Currently, co-op 2 is mainly focusing on the coffee production management activities such as buying coffee cherries from farmers in Ywangan Township and the processing of coffee cherries in their own processing area. The objectives of focusing mainly on the co-op's coffee production management are: 1) to produce high-quality coffee, 2) to enhance the role of the co-op through the coffee exports to the neighbouring markets, 3) to link with more international markets, 4) to help cooperative members secure higher prices for their coffee, 5) to create employment opportunities for members, 6) to educate members on the benefits of collective selling, 7) to expand coffee plantations by securing stable markets, 8) to acquire advanced coffee production technologies, and 10) to foster their cooperative association.

As part of their coffee production activities, co-op 2 purchases coffee from both members and non-members. To facilitate this, co-op 2 operates in two different zones within Ywangan Township: the North Zone (Ywangan Zone) and the South Zone (Myaing Zone). Farmers deliver their coffee cherries on a daily basis to central collection points in these zones. In these zones, the cherries undergo inspection, grading, and sorting before being bought. For farmers located far from these zones and who have difficulty in transporting their coffee to these zones, co-op 2 dispatches representatives to individual villages to purchase directly from these farmers. All coffee cherries purchased are then transported to the Myaing Zone, where co-op 2's coffee-milling operations are based.

Since the cooperative has started its coffee production in 2016, it primarily focused on purchasing coffee cherries, with volumes increasing from 65.30 MT in 2016-2017 to a peak of 298.22 MT in 2018-2019 (see Table 5.8). The purchasing volume of coffee cherries by the co-op decreased to 76.65 MT in the 2020-2021 coffee season due to the Covid-19 pandemic.

Starting in the 2021-2022 period, with the financial support of Shan State Cooperative Department, even though it focused mainly on buying of coffee cherries with 239.77 MT, the cooperative expanded its purchasing to include other forms of coffee such as dried cherries, parchment coffee, and green beans. This included a modest amount of dried cherries with 3.03 MT and parchment coffee with 3.13 MT, with a significant increase in parchment coffee purchases the following year with 59.24 metric tonnes. The chairman of the co-op stated that:

“We could get the necessary funds for buying of coffee cherries in 2021-2022 and 2022-2023 coffee season, Shan State Cooperative Department offered a short-term loan of 400 millions MMK (around 200,000 NZD) which we need to pay back after coffee sales.”

As shown in Table 5.9, the cooperative’s purchasing power of the coffee declined significantly to 144 MT in the 2023-2024 coffee season. In this season, the cooperative did not receive enough funding support and working shares from members and outsiders for coffee buying and production activities. The manager of the co-op stated that:

“We required additional funding for our coffee purchasing and production activities since the Shan State Cooperative Department allocated only 100 million MMK for the 2023-2024 coffee season. Consequently, we were only able to purchase 144 metric tonnes of coffee this year, which is around half the amount compared to previous years.”

Table 5.8: The purchasing volume of coffee from farmers (Metric tonnes)

Years	2016- 2017	2017- 2018	2018- 2019	2019- 2020	2020- 2021	2021- 2022	2022- 2023	2023- 2024
Purchasing volume								
Coffee cherries	65.30	181	298.22	216.38	76.63	239.77	330	144
Dried cherries	N/A	N/A	N/A	N/A	N/A	3.03	N/A	N/A
Parchment coffee	N/A	N/A	N/A	N/A	N/A	3.13	59.24	0.37
Green beans	N/A	N/A	N/A	N/A	N/A	0.22	0.52	N/A

Source: The co-op documents

When the cooperative buy coffee cherries from farmers, including both members and non-members, the co-op records the name of farmers, the volume and the price. Farmers

receive immediate cash payment and the coffee cherry prices are normally according to the market price. The cooperative pays farmers the same price as other buyers and sometimes a little bit higher price than them. Following the purchase of coffee cherries from farmers, the co-op do coffee processing activities in their own area by using the coffee millers provided by Shan State Cooperative Department.

Marketing

The Marketing Management team is tasked with promoting the cooperative's coffee products. Their duties involve creating marketing strategies, linking with both neighboring markets and domestic markets, negotiating the prices and making contracts with buyers and implementing the production of value-added coffee products to enhance the visibility and sales of the cooperative's coffee in various markets.

Empowering the cooperative: assistance and collaborative efforts

In 2013, the Export-Import Bank of Korea (Exim Bank) partnered with Myanmar's Department of Cooperative to offer loans to cooperative associations throughout Myanmar. The cooperative was among the recipients of these loans from Exim Bank, which were intended to support and enhance their operational capabilities. Since 2013, Exim Bank has played a pivotal role in enhancing the cooperative's financial infrastructure through funding (see Table 5.9). This support has primarily focused on providing loans which enable the cooperative to bolster its credit offerings and machinery services. These loans have facilitated the acquisition and provision of essential agricultural machinery to cooperative members, enhancing their productivity and operational efficiency.

Since 2015, the cooperative has been receiving loans from Shan State Cooperative Department specifically targeted at supporting the cooperative's activities related to coffee procurement and production. These loans are primarily used to purchase coffee from both members and non-members in the region. By facilitating more effective management and allowing for an increase in coffee production capabilities, this support has played a vital role in the cooperative's growth and its ability to handle buying and production of larger volumes of coffee efficiently. In 2015, Winrock International provided comprehensive training to farmers about specialty coffee production and processing in Shan State. The cooperative collaborated with Winrock to facilitate members' participation in these training sessions.

Additionally, in 2016, Shan State Cooperative Department equipped the cooperative with two coffee milling machines, enabling efficient processing of their coffee and ensuring

timely exportation to buyers. This enhancement ensures that the cooperative can export coffee more swiftly, reducing delays and thereby bolstering its ability to meet buyer demands promptly. Thus, this support has been crucial in enabling prompt coffee processing and ensuring timely exports to buyers. The chairman of the co-op mentioned that:

“Prior to acquiring coffee millers, we had to wait for access to other milling facilities, which often delayed our export processes. With the addition of two coffee millers to our cooperative, we are now able to process coffee promptly and ensure timely exports to neighboring markets.”

In 2018, the Coffee Research, Information, Extension and Training Centre (CRIETC) offered technical support to farmers in Ywanagn Township, aiming to do initiatives Good Agricultural Practices (GAP) for their coffee production. As part of its initiative, CRIETC delivered training on how to make Bokashi Fertilizer which can easily be made from the waste. In 2020, GIZ provided technical support by offering trainings focused on financial literacy specifically tailored to the needs of farmers involved in coffee production in Shan State.

Table 5.9: Assistance to the co-op

Year	Organization	Assistance	Description
2013- current	Exim bank	Funding	▪ Provide loans to facilitate the co-op’s credit and machinery service
2015- current	Shan State Cooperative Department	Funding	▪ Facilitate coffee buying and production activities
2015	Winrock International	Technical support	▪ Provide trainings on specialty coffee production, processing, drying and storage
2016	Shan State Cooperative Department	Facilities	▪ Provide coffee millers for facilitation of the coffee production activities by the co-op
2018	CRIETC	Technical support	▪ Deliver trainings on making Bokashi Fertilizer, enabling members to practice GAP for their agricultural production

2020	GIZ	Technical support	▪ Offer trainings on financial literacy for members' coffee production activities
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5.2.3. Governance and Management Structure

According to the cooperative's constitution, the governance and management structure of the cooperative is shown in Figure 5.8.

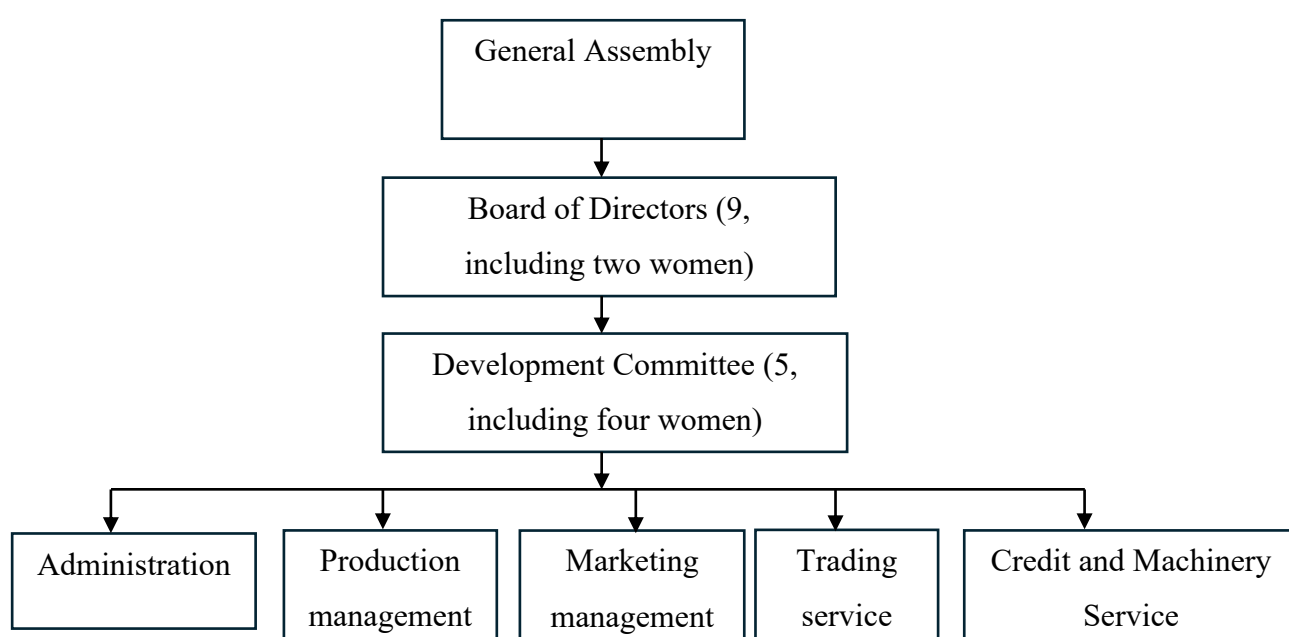


Figure 5.8: Governance and management structure of the co-op

The general assembly acts as the primary governing body overseeing all major decisions and functions of the cooperative and it convenes annually. However, the chairman or members of the cooperative have the authority to convene the special meetings at any time during the year if they have to provide important updates on the progress and developments within the cooperative. It operates under the principle of one-member, one-vote, ensuring equal voting rights for all members. As it has large membership, the cooperative notifies members five days in advance of meetings, giving them time to arrange their schedules and ensure their attendance. To accommodate the large membership, the cooperative does not mandate full attendance at meetings. Instead, decisions are officially confirmed if at least half

of the members attend and the majority of members consent to proceed with any proposed actions.

Figure 5.8 reveals that there are nine board of directors in the co-op serving five-year terms each and they are appointed during AGM. To be a part of BOD, all members are eligible to apply and at least two-thirds of members have to agree at the AGM. The BOD comprises of chairman, deputy chairman, secretary, joint secretary, three executives and two treasurers. The BOD also have their own board meetings which convene monthly to discuss matters relating to the operations and development of the cooperative. The chairman is the only full-time worker for the cooperative, while the other eight members of the Board of Directors work part-time and visit the cooperative once a month. Their responsibilities include establishing the cooperative's vision and developing strategies for its five primary business departments. The cooperative's development plans require agreement from over half of the Board of Directors, who then propose the course of actions to members at AGM.

The cooperative has also established the development committee to manage day-to-day operations of the co-op. They are members of the cooperative, and the BOD appoint them to participate in this committee. The cooperative's development committee is comprised of five members and they are manager, three treasurers, and one member who documents the cooperative's financial records and performance in the computer. There are no term limits for these five members. They are responsible for the daily management of the cooperative's activities and report to the BOD once a month. The manager is tasked with signing off on financial documents, including those for issuing loans to members, accepting loans from members, transactions related to selling rice and cooking oil and handling the total transactions and costs associated with purchasing coffee cherries from farmers. Additionally, the manager oversees the marketing efforts for their coffee products. Along with approval from the manager, three treasurers take charge of handling transactions about loans, machinery services, and basic necessities like rice and cooking oil, with members, as well as overseeing the purchasing activities for coffee from both members and non-members. In this case, according to the co-op's rules, the treasurer responsible for managing cash is not permitted to handle financial documents. Conversely, the treasurer in charge of financial documents does not manage cash. A third treasurer is tasked with maintaining and recording the cooperative's financial and performance data on the computer.

5.2.4. Membership

Membership is open for everyone to join. To become a member of the cooperative, applicants must meet specific eligibility criteria: 1) they must be at least 18 years old, 2) they need to be citizens of Myanmar, 3) applicants must be mentally competent and 4) they should not be monks or nuns. To apply for membership of the cooperative, the individuals have to fill out the application form and submit it to the BOD. The BOD has to approve the application before the membership is granted. According to the cooperative's rules, members must pay a registration fee of 5000 MMK (2.5 NZD\$). The membership registration is a one-off payment, and the fees are used as an operational fund to manage the administration of the cooperative.

Since its restructure in 1995, the cooperative's membership has expanded over time from an initial 84 members, and it currently has a total of 5,445 members from 125 villages in Ywangan Township. Out of 125 villages, members from 104 villages grow coffee and the total number of members who grows coffee from these villages are 4776 members.

5.2.5. Coffee processing methods

The co-op takes the responsibility for the processing of coffee cherries bought from farmers. The co-op use the fully washed processing, dry natural and honey processing methods (see Figure 5.). The volume of the coffee produced by the dry natural and honey processing methods depends on the preferences and demands of the buyers. If buyers do not specify their preference for coffee processed using these methods, co-op 2 solely utilizes the fully washed processing method. The manager of the co-op mentioned that:

“The price that buyers are willing to pay for coffee is influenced by its quality, rather than the method used to process it. Nonetheless, because there is a strong preference among buyers for coffee processed using the fully washed method, the cooperative mainly employs this technique to meet the high demand.”

Fully-washed processing method employed by the co-op

In the co-op's processing area, the coffee cherries bought from local farmers are graded, and select only the good quality ones. The selected cherries are then subjected to a preliminary cleaning process and are floated in water, which helps further distinguish the quality cherries. The high-quality cherries are then pulped using a coffee pulper (see Figure

5.9). Following pulping, the pulped coffee is moved to fermentation tanks where it undergoes the fermentation process for 24 hours.



Figure 5.9: Pulping high-quality coffee cherries using a coffee pulper

Once fermentation is complete, the fermented pulped coffee is thoroughly washed in a washing channel. Finally, the washed pulped coffee is evenly laid out on raised beds for drying. During this drying phase, it is rotated hourly to ensure uniform drying (see Figure 5.10). In the raised beds, the coffee pulping date, the date when it is placed on raised beds, is clearly labelled.



Figure 5.10: Drying of pulped coffee on raised beds

Depending on weather conditions, the time for drying varies from 10 to 11 days and the dried coffee is stored when it reaches the optimal moisture level which is 10-12%. In this case, it is stored using polypropylene (PP) woven bags over airtight bags to maintain freshness and prevent external contamination. Each bag is standardized to weigh 50 kg and critical information such as the pulping date, storage date, and moisture content are clearly labeled on each bag.

Sun dried natural processing method used by the co-op

In the co-op's processing area, coffee cherries purchased from farmers undergo a rigorous selection process where only high-quality cherries (95% ripeness) are chosen. Following selection, the selected cherries undergo a washing process where they are immersed in water. This helps in removing any cherries of lower quality which tend to float. The high-quality coffee cherries are then evenly spread on raised beds to dry slowly under the sun. During this drying phase, the cherries are rotated hourly to ensure uniform drying.

The drying period can last between 20 to 25 days, depending on the prevailing weather conditions. The goal during this phase is to reduce the moisture content of the cherries to an optimal level of 10-12%. Once this moisture level is attained, the cherries are considered fully dried and are ready for storage. At this point, the cherries are packed in PP woven bags that are lined with airtight bags to preserve freshness and prevent any external contamination. These bags are then stored in the cooperative's warehouses for approximately two months before they proceed to the milling stage.

Honey processing method applied by the co-op

In the processing area owned by the co-op, the coffee cherries are subjected to initial cleaning. This initial step involves floating the cherries in water to aid in sorting, as this method helps separate the cherries based on quality—lower quality cherries float due to their lesser density and are removed. The cherries are then pulped, then evenly spread out on raised beds for drying. To ensure that the drying is consistent and uniform, the pulped coffee is turned hourly throughout the drying phase.

The duration of the drying process can range from 15 to 17 days, depending on the weather conditions. Achieving a uniform moisture content of 10-12% is essential for the next phase of storage. Once this moisture level is reached, the fully dried coffee is packed into PP woven bags lined with airtight bags. These packaging measures are designed to maintain the freshness and quality of the coffee while preventing any external contamination. The bags are

then stored in the cooperative's warehouses for approximately two months before they are sent for milling. In this case, the cooperative meticulously records the key dates on the storage bags, including the date the coffee was pulped, the date it was placed on the raised beds for drying, the storage date, and the moisture content of the coffee.

5.2.6. Markets

The cooperative has the capacity to sell its coffee in both domestic and neighboring markets, with a primary focus on the neighboring markets. It engages in border trade with neighboring countries, including Thailand, China, and Malaysia (see Table 5.10). While the cooperative is capable of exporting coffee to neighboring markets, it is important to highlight that it does not have direct interactions with buyers in these countries and solely depends on brokers from these countries for its coffee exports. The cooperative's first coffee export was to Malaysia and the first export of green bean coffee was 4.2 metric tons, but this ceased after the 2019-2020 coffee season. The manager of the co-op advised that:

“Our coffee exports to Malaysia were discontinued due to the Rohingya crisis in Myanmar's Rakhine State, which led to Malaysia boycotting our coffee.”

Owing to the cessation of exports to Malaysia, the cooperative has established a new border-trade relationship with Thailand, beginning in the 2020-2021 coffee season and it exported 12.56 metric tonnes of green bean coffee to Thailand. However, in the following 2021-2022 season, the cooperative shifted its export focus from green beans to parchment coffee, initiating exports of 33.3 metric tonnes of parchment coffee. Although the volume of coffee exports to Thailand showed a fluctuation, the cooperative has maintained a steady border trade with Thailand up to the present. The cooperative began its border-trade relationship with China in the 2021-2022 coffee season, initially exporting 33.8 metric tonnes. In the following 2022-2023 season, exports to China amounted to 19.55 metric tonnes. However, for the 2023-2024 coffee season, the cooperative was unable to export to China as the buyer from China did not visit the cooperative to purchase coffee during this period. The chairman of the cooperative stated that:

“Since we rely too much on brokers from these countries, our coffee export is a kind of illegal cross-border trade process. If these brokers fail to visit our cooperative, it could result in a shortage of buyers for our coffee. This year, the brokers from China did not visit, so we directed our coffee exports to Thailand and the domestic markets instead.”

Table 5.10: Coffee sales volumes to the neighboring markets (Metric tonnes)

Years	2016- 2017	2017- 2018	2018- 2019	2019- 2020	2020- 2021	2021- 2022	2022- 2023	2023- 2024
Sales								
Neighboring markets								
Malaysia (Green beans)	4.2	N/A	20	16.86	N/A	N/A	N/A	N/A
Thailand (Both green beans and parchment coffee)								
Green beans	N/A	N/A	N/A	N/A	12.56	N/A	N/A	N/A
Parchment coffee	N/A	N/A	N/A	N/A	N/A	33.3	19.28	25
China (Parchment coffee)	N/A	N/A	N/A	N/A	N/A	33.8	19.55	N/A

Source: The co-op documents

The cooperative also caters to domestic buyers, offering various forms of coffee such as green beans, parchment coffee, and dried cherries (see Table 5.11). The cooperative exclusively markets coffee made from floating cherries to domestic buyers, and all the coffee forms they sell to domestic markets are derived from these floating cherries. While it sold 13 MT of green beans in the 2016-2017 coffee season, sales peaked at 29.35 MT during the 2019-2020 coffee season. However, the sales of its green beans in the domestic markets have since shown fluctuation. While parchment coffee is primarily sold to neighboring markets, any surplus is sold domestically. As for dried cherries, the cooperative exclusively sells these to the domestic market, and only when they are available from farmers.

Table 5.11: Coffee sales volumes to the domestic markets (Metric tonnes)

Years	2016- 2017	2017- 2018	2018- 2019	2019- 2020	2020- 2021	2021- 2022	2022- 2023	2023- 2024
Sales								
Domestic markets								

Green beans	13	N/A	4.26	29.35	21.69	3.72	0.52	3.93
Parchment coffee	N/A	N/A	7.039	3.31	N/A	N/A	N/A	7.69
Dried cherries	N/A	N/A	N/A	N/A	N/A	0.53	N/A	N/A

Source: The co-op documents

Relationship with buyers

Owing to its dependency on brokers from neighboring markets such as Thailand and China, the co-op ensures the sale of its coffee through contracts. These contracts specify the quantity of coffee required by the buyers, who are expected to pay a half deposit upfront and the remaining balance upon delivery of the coffee. Additionally, the cooperative is required to indicate the timeline for delivery and the quality of the coffee, including key details like a moisture content of 10-12%, which is the standard level and no impurities in the coffee. The cooperative's manager stated that:

“If they want to buy 15 metric tons, we cannot deliver it all at once. We outline in the contract how much coffee we'll deliver each time; for example, 7 metric tons in January and 8 metric tons in March. However, if unforeseen circumstances like adverse weather conditions affect our coffee production, we can notify the buyers to inform them about potential delays in our exports. The buyers do not usually have many requirements regarding the quality, but we need to be vigilant about the moisture content and ensure there are no impurities like stones or dust. If the moisture content of the coffee falls below 10% or exceeds 12%, the buyers do not purchase our coffee.”

When dealing with domestic buyers, the cooperative enters into contracts with new customers while longstanding, loyal customers simply place pre-orders without needing a formal contract. For new buyers, they are required to pay a half deposit upfront. For the quality of coffee for domestic buyers, the cooperative is also obligated to deliver coffee that meets specific quality standards like the neighboring markets, including a moisture content of 10-12%, which is the standard level, and ensuring the coffee is free from impurities.

5.2.7. Analysis of member benefits in conventional cooperative

The increasing number of members in the co-op indicates that the co-op shows substantial benefits to attract new members. The benefits identified from this study associated with the co-op include benefits in supplying inputs and services, social benefits, financial benefits, marketing benefits, community benefits and training and education benefits. Owing to the above benefits, most farmers express a willingness to remain affiliated with the co-op and intend to expand their coffee cultivation in the future. These benefits are ranked in the order of importance according to the results from the interviews with the cooperative's leaders and members (see Table 5.12). The results were analyzed by interviewing ten cooperative members and three cooperative leaders.

Table 5.12: Key member benefits of the conventional coffee cooperative according to the rank of importance

Rank of importance	Member benefits	Description
1	Benefit in supplying inputs and services	<ul style="list-style-type: none"> ▪ Supply the agricultural inputs either on an installment plan or at a reduced price ▪ Provide farm equipment with installment plan ▪ Sell coffee seeds and plants at half-price
2	Social benefit	<ul style="list-style-type: none"> ▪ Create employment opportunities for members ▪ Offer rice and cooking oil with installment plan ▪ Provide educational funding support ▪ Offer loans for healthcare expenses
3	Financial benefit	<ul style="list-style-type: none"> ▪ Facilitate loans for agricultural production
4	Marketing benefit	<ul style="list-style-type: none"> ▪ Protect farmers from market exploitation ▪ Link with coffee buyers from neighboring countries ▪ Expand market reach through the production of value-added coffee products

5	Community benefit	<ul style="list-style-type: none"> ▪ Provide funds for road construction in the community ▪ Donate to local monasteries ▪ Provide funds to the local cooperative training school
6	Training and education benefit	<ul style="list-style-type: none"> ▪ Provide technical support by collaborating with the government and the external organizations

Benefits in supplying inputs and services

The cooperative offers significant support in supplying agricultural inputs and services to its members, aiming to enhance their agricultural productivity: 1) supplying agricultural inputs either on an installment basis or at a reduced price, 2) providing farm equipment with installment plan, and 3) selling coffee seeds or coffee plants at half-price. This support is tailored to meet the diverse needs of its members, who are primarily engaged in agricultural activities.

One of the key areas of support involves the provision of agricultural inputs. The cooperative supplies fertilizers for coffee and other crops, offering flexible payment options such as a six-month payment plan. In this case, as its efforts to cater specifically to the needs of its members, the cooperative organizes a meeting with its members to discuss their specific fertilizer requirements. This ensures that the cooperative fully understands the types of fertilizers that its members need for their agricultural activities. Once the fertilizers are procured, the cooperative offers them to its members through a six-month installment plan. For members who prefer to, or are capable of paying immediately, the cooperative offers a discount, selling the fertilizers at a price lower than the current market rate. A respondent stated that:

“With the cooperative's option to purchase fertilizers on a six-month installment plan, I'm able to make payments after I've earned revenue from selling my crops. This arrangement is very convenient for me and alleviates my concerns about upfront costs for essential inputs like fertilizers.”

Another respondent mentioned that:

“When I purchase fertilizers and pay immediately at the cooperative, they sell them at a lower price compared to external market rates. For instance, if a bag typically costs 160,000 MMK (about 80 NZD) on the market, I only pay 145,000 MMK (72.5 NZD) at the cooperative, saving me 15,000 MMK (7.5 NZD).”

As part of its efforts to support its members effectively, the cooperative has utilized loans from the Exim Bank to enhance its agricultural support services. This strategic financial move enabled the cooperative to purchase essential agricultural equipment tailored to the specific needs of its members. Understanding the diverse requirements of its members, the cooperative consults with them to ascertain exactly which types of equipment would best support their agricultural activities. The types of equipment acquired include tractors, three wheel vehicles and water pumps, which are critical for efficient farming operations. Once the equipment is procured, the cooperative offers the equipment to its members under a six-month installment plan.

“Thanks to the cooperative, I now have access to a small tractor for my farming needs. Without the cooperative's support, I wouldn't have been able to afford this essential farming equipment on my own.”

Currently, the cooperative is intensifying its focus on coffee production and its distribution to neighboring markets. In alignment with this focus, the cooperative is actively encouraging members who are interested in either expanding their existing coffee cultivation or initiating coffee farming. To facilitate the expansion of coffee cultivation, the cooperative sells high quality coffee seeds at a reduced price and has also established its own nursery fields dedicated to growing coffee plants. The cooperative offers high-quality coffee seeds and plants to its members at half-price compared to typical market prices. A respondent stated that:

“We can purchase high-quality coffee seeds and plants from the cooperative at a lower cost. For instance, if the market rate for coffee plants is approximately 300 MMK (0.15 NZD), the cooperative offers them to us for just 150 MMK (0.075 NZD).”

The manager of the co-op mentioned that:

“Occasionally, when members in need purchase coffee plants from the cooperative, we provide them with a small quantity for free.”

Social benefits

One of the key advantages offered by the cooperative to its members is in the form of social benefits. These include: 1) offering rice and cooking oil on a one-month installment plan, 2) creating employment opportunities for members, 3) providing educational funding support, and 4) offering loans for healthcare expenses.

Committed to addressing its members' needs and enhancing their well-being, the cooperative continually seeks ways to fulfill their requests. When commodity prices are getting higher, some members struggle to meet buying their basic needs and have approached the cooperative for assistance. Understanding the importance of supporting its members, especially during challenging economic times, the cooperative has proactively developed and implemented a plan to provide essential commodities like rice and cooking oil available on installment plans. A respondent mentioned that:

“The co-op helps us in providing rice and cooking oil with a one-month payment plan. Even though their offered price is similar to the market price, the real benefit comes during financial hardships when we don't have to pay immediately and have time to pay back. This offer by the co-op also prevents us from having to take high-interest loans from local moneylenders to purchase these essentials.”

During the coffee season, the cooperative faces a significant increase in labor demands due to the intensification of coffee-processing activities. To meet this surge in labor requirements, the cooperative strategically hires from within its own membership base. This approach not only efficiently addresses the cooperative's need for additional workers, but also provides substantial benefits to its members. By prioritizing the employment of its members during the coffee season, the cooperative creates valuable job opportunities for its members and enables them to earn additional income by working in the cooperative. This strategy also offers members the chance to gain deeper insights into coffee-processing technology and acquire valuable practical experience. A respondent stated that:

“I usually engage in part-time work at the cooperative's processing area, where I earn 6000 MMK a day (around 3 NZD). This role provides me with a vital source of additional income during the summer, which aligns with the coffee season.”

Another respondent advised that:

“I have been working part-time in the cooperative's processing area for three years. This experience has enabled me to learn about coffee-processing technology and has significantly expanded my knowledge in this field.”

As an additional initiative, the cooperative also offers an educational funding program specifically designed to support the educational needs of students whose parents are members. This fund is aimed at helping those students who are in genuine need of financial support to continue their education. To qualify for this assistance, it is essential that the children demonstrate a real need for financial help and must be the children of members of the co-op. The cooperative carefully assesses each case to ensure that funds are allocated to those who are most in need. The chairman of the co-op stated that:

“We maintain detailed records of all members in the cooperative. Even if a member has passed away, we continue to regard them as part of the cooperative, and their generations are eligible to apply for educational funding.”

Recognizing the importance of health and well-being, the cooperative has also set up a loan system where members can borrow money when they face health-related expenses that they cannot afford on their own. This could include costs for medical treatments, hospital stays, medications, or any other health-related needs. The cooperative is committed to ensuring that these health loans are reserved for members who genuinely require this support. This means that the cooperative carefully assesses each loan application to confirm the actual need for financial assistance, aiming to allocate resources to those in the most critical situations. The chairman of the co-op expressed that:

“When some members face financial difficulties with their medical expenses, they approach us for help. If we determine that they truly need assistance, we provide them with interest-free loans to cover their medical costs. However, we do not cover all the expenses, providing up to a maximum of 200,000 MMK (100 NZD).”

Financial benefits

The cooperative has provided financial advantages to its members by 1) facilitating loans for agricultural production, and 2) profit distribution after coffee sales.

The cooperative offers its members loans specifically designed for agricultural production, which come with a low-interest rate to make them more accessible. Members interested in applying for these loans must submit a detailed proposal to the cooperative. This proposal should include information such as the total acreage they plan to cultivate and the types of crops they intend to grow, among other relevant details. The purpose of these loans is to provide financial support that helps members manage the initial costs associated with agricultural production. It is important to note that these loans are not intended to cover the

entire cost of production. Instead, they are designed to alleviate a significant portion of the financial pressure that members face at the outset of the planting season. The chairman of the co-op stated that:

“We do not provide loans for every acre owned by members, instead, we limit loans to three acres per member. We also restrict the loan amount to 400,000 MMK (200 NZD) per acre.”

The manager of the co-op mentioned that:

“We provide agricultural loans at a very competitive interest rate of 1-1.5% per month, which is significantly lower than the local money lenders' rates, which can be as high as 10% per month. By offering these lower rates, the cooperative slightly reduces the financial burden on its members.”

Marketing benefits

One of the primary benefits offered by the cooperative to its members is marketing support, which encompasses: 1) protecting farmers from market exploitation, 2) linking with coffee buyers from neighboring countries, and 3) expanding market reach through the production of value-added coffee products.

The reason why farmers from that co-op grow coffee is primarily influenced by the practices of their older generations who traditionally engaged in coffee cultivation. However, historically, these farmers faced significant financial challenges, particularly due to the inability to secure fair prices for their coffee. The absence of competitive market options in Ywangan Township forced them to rely on brokers, who frequently offered them prices well below the market value for their coffee. This lack of fair pricing opportunities made coffee cultivation economically unviable, leading farmers in this area to show little interest in expanding their coffee production. The minimal profits from coffee sales did not justify the costs and efforts involved, making it an unprofitable investment for them. As a result, the potential for growth in coffee production was severely limited, as the economic incentives necessary to encourage expansion and enhancement of coffee-farming practices were simply not present.

Currently, some brokers are negatively impacting the market by purchasing coffee at unfairly low prices and using inaccurate measurements. The cooperative has protected both its members and non-member coffee farmers from market exploitation by brokers. When the co-op buys coffee cherries from farmers, the cooperative ensures fair trading practices by

using precise measurements and by offering prices that are higher than those offered by brokers. This approach not only protects farmers, but also promotes fairness and transparency in the local coffee market. A respondent stated that:

“When I sell my coffee cherries to the cooperative, they pay me more than the brokers do. Last year, while brokers were paying 3600 MMK (1.80 NZD) per viss for our coffee cherries, the cooperative offered a higher rate of 3650 MMK (around 1.83 NZD per viss). Thus, I choose to sell all my coffee to the cooperative, thereby earning more income from my coffee sales.”

Currently, the cooperative is actively seeking to establish connections with buyers from neighboring countries, such as Thailand and China. This strategic move is motivated by the higher prices that can be secured in these neighboring markets compared to domestic ones. By tapping into these more lucrative markets, the cooperative is able to offer more competitive and fair prices to its local coffee farmers for their coffee cherries. The ability to sell coffee at higher prices to neighboring buyers enables the cooperative to support its members more effectively. This includes paying them better prices for their produce which, in turn, incentivizes members to increase and improve their coffee production. As a result of the cooperative's efforts to reach out to these markets, local coffee farmers are encouraged to expand their production capabilities. With the assurance of fair compensation and the potential for higher earnings, members are motivated to enhance the quantity of their coffee crops. A respondent stated that:

“Previously, I was uncertain about where to sell my coffee and often had to resort to selling it to brokers at low prices that didn't even cover my production costs. This situation left me with little motivation to continue growing coffee. Now, I have a reliable option as I can sell my coffee to the cooperative every year at a fair price.”

Another respondent stated that:

“Currently, with increased market opportunities and a high demand for our coffee, I have expanded my coffee plantation. Initially, I cultivated coffee on just two acres, but now I have doubled my planting area to four acres.”

As part of its strategic expansion, the cooperative is trying to get into the production of value-added coffee products to broaden its market reach. This initiative involves creating and marketing their own coffee powder under the brand name, known as “Thin Pyant Hmwae,” which they have successfully introduced into domestic markets. This move is aimed at enhancing the cooperative's product offerings and increasing its visibility and appeal among local consumers. Building on the success of their branded coffee powder, the

cooperative is also planning to diversify into ready-made coffee products. This expansion is strategically designed to tap into different segments of the coffee market, catering to the growing demand for convenient, ready-to-use coffee options. The manager of the co-op advised that:

“We are working to secure stable markets for our coffee products by creating value-added offerings. This strategy aims to increase our profitability and establish our organization as a dependable entity for our members.”

Community benefits

The cooperative has made substantial contributions to the community's growth and welfare through a series of focused and impactful initiatives by 1) donations to local monasteries, 2) funding for road construction in the community, and 3) providing funds to Shan State Cooperative Training School.

One of the key areas of the cooperative's community involvement includes financial donations to local monasteries. These donations are made publicly in the cooperative's name, reinforcing its commitment to supporting religious and community activities. A respondent stated that:

“I'm proud of being a member of the cooperative, especially because it donates money to monasteries in our community under the cooperative's name. Being part of this organization, I feel a deep sense of satisfaction and involvement in these charitable acts.”

Recognizing the critical role of physical infrastructure in community development, the cooperative also allocates funds for road construction projects. In addition to its other initiatives, the cooperative has set up a fund to support the State Cooperative Training School. This educational institution offers comprehensive training programs lasting either six to 12 months, designed for individuals interested in learning about cooperative laws, accounting practices specific to cooperatives, management training, and computer skills. Upon completion of these courses, participants receive a certificate, marking their proficiency and readiness to apply these skills.

The cooperative training school is open to both members and non-members of the cooperative, with a tailored fee structure to encourage participation. Members of the cooperative are entitled to attend these training sessions free of charge, which underscores the cooperative's commitment to enhancing the capabilities of its members and strengthening the cooperative movement. Non-members, on the other hand, are required to pay a fee to access

these trainings. This strategic investment in state cooperative training school enables ongoing professional development and ensures that both members and non-members have access to essential knowledge and skills that can contribute to the success of cooperative enterprises.

Training and education benefits

The cooperative has actively provided training sessions and technical support to its members by collaborating with international non-governmental organizations (INGOs) such as Winrock and GIZ, local organisation such as Myanmar Coffee Association (MCA) and local government organizations such as CRIETC.

In 2015, Winrock International conducted training sessions and offered technical support focused on specialty coffee production for farmers in Ywangan Township. The cooperative collaborated with this organization and facilitated the participation of its members in these training sessions. In the realm of specialty coffee production, Winrock International provided comprehensive training to the cooperative's staff and community representatives. The focus was on essential practices such as preparing seedling beds, maintaining coffee plants, and techniques to improve coffee yields. Furthermore, Winrock introduced advanced coffee processing technologies, covering three primary methods: dry natural processing, fully washed processing, and honey processing. Each method is tailored to produce distinct flavor profiles and quality characteristics in the final product.

Beyond the introduction of these methods, the training also delved into the operational aspects necessary for maintaining high standards in coffee processing. This included building and maintaining drying tables essential for the drying processes, effectively managing a drying station to ensure uniform and efficient drying of coffee beans, and implementing food safety measures to prevent contamination during processing. Additionally, Winrock emphasized the importance of establishing a traceability system for tracking each batch of coffee cherries from harvest through processing, which is critical for quality assurance.

The trainings by Winrock also covered thorough record-keeping practices, instructing participants on how to meticulously document the quality and quantity of coffee cherries at various stages—before and after processing, and of the coffee beans post-milling. This detailed approach to documentation and quality control ensures that every step of the coffee production process is monitored, helping to maintain consistency and high standards throughout. Through these educational initiatives, Winrock International has significantly

bolstered the cooperative's capabilities, enhancing both the quality of their coffee production and their operational efficiencies.

In 2018, CRIETC initiated a program to encourage coffee-growing organizations and farms to adopt Good Agricultural Practices (GAP) and obtain GAP certifications. As a key component of this initiative, the center conducted trainings on how to produce Bokashi fertilizer, an organic fertilizer, through a detailed, step-by-step process. By promoting the use of Bokashi fertilizer, CRIETC helped integrate sustainable practices into daily farming routines, thereby improving the overall quality of the coffee produced while maintaining ecological balance. The cooperative facilitated its members to involve in this training. This educational initiative provided the cooperative's members with the skills needed to enhance crop yields through eco-friendly practices and also helped them lower their expenses by reducing the need to purchase costly organic or inorganic fertilizers for their agricultural activities. A respondent stated that:

“Through the training provided by CRIETC, I learned how to make Bokashi, which has proven highly effective in increasing yields for not only coffee but also other crops. Now, I no longer need to purchase expensive inorganic fertilizers.”

In July 2020, a significant training initiative was undertaken by GIZ and MCA to enhance financial literacy among farmers in Ywangan Township, Southern Shan State. The cooperative played a crucial role in this educational endeavor by reaching out to these organizations and ensuring that its members could participate in the training sessions. These sessions focused primarily on financial management, specifically teaching participants how to calculate coffee production costs and monthly profits and losses. The objective was to empower the farmers to manage their finances more effectively and make informed financial decisions. The training was structured to guide participants through the financial management process step by step, providing them with the skills and knowledge necessary to oversee their economic activities efficiently.

Despite having received training from Winrock on specialty coffee production techniques, members of the cooperative continue to rely on conventional methods. This situation arises even though the members are equipped with the knowledge required to maintain their coffee plants properly and utilize advanced coffee-picking techniques. According to interviews with members, there is a gap between the knowledge they have acquired and its practical application. They often do not maintain their coffee plants as well as they could. The manager of the co-op stated that:

“When members initially received training from Winrock, they produced high-quality coffee for up to two years following the sessions. However, after this period, there has been a noticeable decline in the quality of the coffee produced. We struggle with quality control of members’ coffee production, largely due to the large number of members and a scarcity of skilled labor resource.”

Table 5.13: Summary of key member benefits from two cooperatives

Member benefits	The Specialty Coffee Cooperative	The Conventional Coffee Cooperative
Social benefits	<ul style="list-style-type: none"> ▪ Replace opium with coffee ▪ Price transparency 	<ul style="list-style-type: none"> ▪ Installment of sales essentials ▪ Employment creation ▪ Education and healthcare funding
Benefits in supplying inputs and services	<ul style="list-style-type: none"> ▪ Provision of moisture meters ▪ Provision of information on availability of coffee milling facilities 	<ul style="list-style-type: none"> ▪ Agricultural inputs and equipment on installment
Marketing benefits	<ul style="list-style-type: none"> ▪ International market access 	<ul style="list-style-type: none"> ▪ Regional and neighboring market access
Financial benefits	<ul style="list-style-type: none"> ▪ Low-interest loans ▪ Unique pricing system ▪ Funds for organic certification 	<ul style="list-style-type: none"> ▪ Low-interest loans
Training and education benefits	<ul style="list-style-type: none"> ▪ Training and technical assistance by the co-op 	<ul style="list-style-type: none"> ▪ Training and technical support by collaborating with other organizations
Environmental benefits	<ul style="list-style-type: none"> ▪ Water-efficient processing ▪ Deforestation-prevention cultivation 	<ul style="list-style-type: none"> ▪ N/A
Community benefits	<ul style="list-style-type: none"> ▪ Indirect community development 	<ul style="list-style-type: none"> ▪ Infrastructure improvement such as road in the community ▪ Donations to monasteries ▪ Cooperative training school

CHAPTER 6 DISCUSSION

This chapter provides the overall discussion of this study. Section One discusses the findings of two types of coffee cooperatives and Section Two provides a comparison of member benefits given by these cooperatives.

6.1. Overall Study Discussion

Objective 1: To review the literature to develop the framework used in this study

The purpose of this objective is to conduct a comprehensive review of existing literature to establish a framework for analyzing member benefits in two types of coffee cooperatives: the specialty coffee cooperative and the conventional coffee cooperative. This framework incorporates theories on cooperatives, member benefits of cooperatives, the emerging market developments in the agri-food sector and the coffee sector and the role of cooperatives in participation in specialized markets. The literature review identifies gaps in the current understanding of how these cooperatives impact their members. While cooperatives are generally recognized for their role in providing economic and social benefits to their members, there is limited knowledge regarding how these benefits vary depending on the type of cooperative and the specific market conditions they operate in. In particular, there is a lack of understanding of how the types of benefits differ between specialty and conventional coffee cooperatives in developing countries like Myanmar. Furthermore, the literature does not adequately address how these cooperatives contribute to social and community development beyond economic gains. This gap hinders the ability to evaluate the true impact of cooperatives on member welfare and the broader community.

This study addresses this gap by developing a framework that systematically analyzes and compares the benefits provided by the specialty coffee cooperative and the conventional coffee cooperative. In this study, the research framework consists of two important components (see Figure 3.1). First, the framework includes two coffee cooperatives: the specialty coffee cooperative and the conventional coffee cooperative. This component examines the characteristics of the specialty and conventional coffee cooperatives, focusing on how they are structured, governed, and operate within the market. The second important

component is member benefits. This component analyzes specific benefits such as social, supplying inputs and services, marketing, financial, training and education, environmental and community benefits. The member benefits of two cooperatives are measured by analyzing the results from the interviews with the cooperative members and leaders.

6.1.1 Comparison of the characteristics of two cooperatives

Objective 2: To study and analyze two types of coffee cooperatives: the specialty coffee cooperative and the conventional coffee cooperative in the study area

The findings revealed both similarities and differences in member benefits between the two types of cooperatives, providing valuable insights into the varying approaches and their impact on member welfare. Cooperatives can be established through either top-down or bottom-up approaches (Olson, 2009). Top-down approaches arise from policy initiatives that encourage people to form and join groups. Conversely, bottom-up formation happens when individuals independently organize into groups to achieve a shared objective (Olson, 2009). The findings showed that the reasons for farmers establishing the specialty coffee cooperative is formed through a bottom-up approach where the individual members of the specialty coffee cooperative self-organize to achieve a collective goal which is to access better markets for their high-quality coffee. This aligns with existing research suggesting that cooperatives play a crucial role in connecting smallholder farmers to markets, providing them with opportunities to sell their produce more effectively (Ji et al., 2017; Mazzarol et al., 2013). In contrast, the conventional coffee cooperative is formed through a top-down mechanism where the main reason is the result of the government's cooperative restructuring laws in Myanmar in order to address poverty, encourage sustainable agriculture, and enhance financial inclusion. This finding is consistent with the results of the studies conducted in other countries which found that cooperatives have been formed in response to government policies in various nations, including China (Zhou, 2004), Africa (Develtere, 2008), and Vanuatu (McGregor et al., 2009).

Table 6.1: Comparison of the basic characteristics of the two coffee cooperatives

Content	The Specialty Coffee Cooperative	The Conventional Coffee Cooperative
Formation	▪ Bottom-up approach	▪ Top-down approach
The purpose of establishment	▪ Government policies	▪ To get access to better markets for their coffee
The year of establishment	▪ 2017	▪ 1995 (restructured in 2019)
Founding membership	▪ 44	▪ 84
Current membership	▪ 62	▪ 5445 (4776 coffee farmers)
Type of farming	▪ Smallholder farming	▪ Smallholder farming
Type of coffee	▪ High quality specialty coffee	▪ Conventional coffee
Key Services offered to members	▪ Quality control on coffee production and processing, traceability, technical assistance, coffee purchase, marketing and certification support	▪ Provision of low-cost agricultural inputs, coffee purchase, processing, marketing and access to government resources
Governance & Management	▪ Run by the professional management team which often monitors quality control and traceability	▪ Lack of professional management team
Target Market	▪ Focus mainly on international markets	▪ Focus mainly on neighboring markets through informal border trade

The data from the two cooperatives examined in this study showed that both cooperatives are situated in rural regions and predominantly consist of smallholder farmers. This is reflective of Myanmar's demographic, where approximately 70% of the total population lives in rural areas and is involved in agriculture. This study found that the type of farming of these two cooperatives is primarily based on smallholder farming (ranging from 2 to 3 ha), a prevalent practice in many developing countries (Morton, 2007). The smallholder farming systems employed by both cooperatives indicate that they share a similar foundation in terms of member composition and scale of operations. However, results revealed that despite these similarities, the nature of their production systems and the type of coffee they produce are markedly different. The results of the study found that the specialty coffee cooperative focuses on producing high-quality, niche products that meet international specialty coffee market standards, while the conventional cooperative primarily produces coffee for the mass market without strict adherence to quality standards.

Results revealed significant differences in the establishment history and membership dynamics of the two cooperatives. The specialty coffee cooperative was founded in 2017 with 44 members and has grown modestly to 62 members. In contrast, the conventional coffee cooperative, established in 1995 and restructured in 2019, began with 84 founding members and has expanded substantially to a current membership of 5,445, including 4,776 coffee farmers. Despite its earlier founding and greater experience, the results showed that the conventional cooperative relies heavily on government support and lacks clear business plans for both short-term and long-term strategies, often adhering to traditional practices. Results indicated that this reliance may limit its flexibility and adaptability especially in responding to market changes. On the other hand, the specialty cooperative, although smaller and newer, has established clear goals and targets from the outset and adheres closely to its objectives. Results indicated that this focus enables it to align effectively with emerging market trends, providing targeted support to its members to help them maximize benefits in line with these trends. This study suggested that the specialty cooperative's strategic approach allows it to be more flexible and responsive, positioning its members to take advantage of new opportunities in the global coffee market.

Results also reveal that both cooperatives play a vital role in supporting their members. However, the scope and nature of services vary considerably. It was found that the specialty coffee cooperative offers a wide range of services, including technical training, quality monitoring, traceability, and certification support, all aimed at ensuring that their coffee meets the exacting standards required by specialty coffee markets. This emphasis on

quality and market requirements necessitates a more extensive service provision compared to the conventional cooperative, which offers more basic support services. This finding aligns with those of Beuchelt & Zeller (2012), who found that more professional cooperatives (the organic and organic fairtrade-certified coffee cooperatives) provide more extensive services like extension and technical support compared to conventional coffee cooperatives.

Moreover, results revealed that differences emerge in how the two cooperatives are managed. In this study, it was found that the specialty coffee cooperative is run by a professional management team that frequently monitors quality control and the traceability of coffee products. The findings of this study are in line with previous literature which highlights cooperative success is greatly influenced by managers' technical skills, the number and quality of training programs, and managers' interpersonal abilities (Amini & Ramezani, 2008). The specialty coffee cooperative's ability to leverage professional management to maintain quality standards and access high-value international markets reflects the strategic importance of effective management, as emphasized in the literature that agricultural cooperatives require proper knowledge and skills for high-quality administrative and professional operations (Zakić et al., 2013). Conversely, the results of the study revealed that the conventional approach, characterized by the absence of professional management, reflects the challenges faced by many traditional cooperatives in developing countries where a study on agricultural cooperatives in Rwanda emphasized that cooperatives relying on traditional management approaches often fail to sustain growth or adapt to market demands without external support and professional oversight (Moon & Lee, 2020).

The target markets for these cooperatives further highlight their strategic orientations. It was found that the specialty coffee cooperative aims at international markets, which are more lucrative and demand higher standards of coffee quality and sustainable production. As noted in the literature, cooperatives in Greece have significantly improved the quality of agricultural products through collective resource sharing and technological integration, leading to higher prices and better market opportunities for their members (Kalogiannidis et al., 2024). Conversely, the results of the study revealed that the conventional coffee cooperative primarily focuses on neighboring markets, engaging in informal border trade. This strategy is driven by the logistical ease of accessing nearby markets and the reduced regulatory and transport costs associated with cross-border trade. This study suggests that the conventional coffee cooperative's focus on neighboring markets through informal channels aligns with the practical aspects of cooperatives in addressing market failures and providing immediate economic benefits. This aligns with the study on coffee cooperatives in Mexico

which demonstrates how these cooperatives support smallholder farmers by offering access to shared resources, collective bargaining, reducing transaction costs and enhancing member benefits through collective action (Trejo-Pech et al., 2023).

6.1.2. Comparison of member benefits between two types of coffee cooperatives

Objective 3: To analyze and compare the member benefits between the specialty coffee cooperative and the conventional coffee cooperative

The results of this study revealed the seven key areas of member benefits in the specialty coffee cooperative: social benefit, marketing benefit, financial benefit, training and education benefit, environmental benefit, benefits in supplying inputs and services and community benefit. In contrast, it was found six key member benefits in the conventional coffee cooperative: benefits in supplying inputs and services, social benefits, financial benefit, marketing benefit, community benefit and the training and education benefit. Table 6.2 provides a comparative summary of key member benefits between the specialty coffee cooperative and the conventional coffee cooperative, ranked by their importance. The findings of this study revealed the significant differences in the benefits provided by the specialty and conventional coffee cooperatives.

Table 6.2: Comparison of key member benefits between two cooperatives

Member benefits	The Specialty Coffee Cooperative	The Conventional Coffee Cooperative
Social benefits	+++	++
Benefits in supplying inputs and services	+	+++
Marketing benefits	++	+
Financial benefits	++	+
Training and education benefits	++	+

Environmental benefits	++	N/A
Community benefits	+	+

+++ = Indicates the highest priority or most significant benefit provided by the cooperative.

++ = Reflects a benefit that is highly important but secondary to the top priority.

+ = Represents a benefit that is beneficial but less critical than the first two.

N/A = Not applicable: the benefit is not provided or relevant in the context of the specific cooperative.

First of all, the comparison of the social benefits provided by the specialty and conventional coffee cooperatives highlights significant differences in their impact on members' lives. The study found that social benefits are the most crucial aspect of member benefits in the specialty coffee cooperative, whereas they rank as the second most important in the conventional cooperative. Results revealed that the specialty coffee cooperative excels in offering transformative social benefits that address systemic issues. These include helping members transition from growing opium poppy to coffee, thereby fostering more sustainable and legal agricultural practices. The results of the study found that the specialty cooperative offers transformative social benefits that go beyond the usual objectives found in most literature, which often focus on creating job opportunities, reducing transaction costs, improving bargaining power, expanding market access, achieving financial gains, and pooling resources.

Unlike the common purposes of cooperatives discussed in the literature, the specialty coffee cooperative in this study reduces the risk of doing business faced by its members. It was founded specifically to provide market access and increase incomes for its members, with the unique goal of preventing them from reverting to opium production—a crop associated with unstable and insecure income, as well as significant personal and legal risks. This study found that this focus on providing a secure and sustainable livelihood has created a profound shift in the community, encouraging members to transition from illicit activities to legal, market-driven agricultural practices. Even though the political situation in Myanmar remains uncertain, the specialty cooperative has planted seeds for the sustainable future development of cooperatives in the country. These findings are unique, as there are no

comparable examples in the existing literature of a cooperative established under such challenging circumstances and for such distinct purpose.

On the other hand, this key area of members' benefit in the conventional coffee cooperative includes creating job opportunities for members, providing basic needs and educational support. This supports the findings of Ekepu et al., (2017), Hussein, (2001), King et al., (2013) and Nugussie, (2010). They report that cooperatives and collective enterprises have created opportunities for livelihoods and employment, providing society with additional income-generating prospects. Results revealed that these benefits provided by the conventional coffee cooperative are crucial for daily living, although may not address the long-term systemic challenges faced by the members as effectively as the specialty cooperative. The results suggest that the cooperative (the specialty cooperative) with clear vision and strategic objectives are better positioned to deliver sustainable, long-term social benefits compared to the conventional coffee cooperative that focuses mainly on the immediate needs of members.

Benefits in supplying inputs and services was considered the most important member benefit in the conventional coffee cooperative and the sixth most important member benefit in the specialty coffee cooperative. This group of benefits in the specialty coffee cooperative includes the provision of moisture meters in the processing area and information on the availability of coffee millers in the area. This group of benefits in the conventional coffee cooperative emphasizes on providing the agricultural inputs at the reduced prices or with an installment plan and supplying farm equipment with an installment plan. This aligns with the findings of Stewart (1984), Baviskar (1988), Tanrivermis and Bayaner (2006), Markelova et al., (2009) and Getnet & Anullo, 2012). They note that the important benefit for members was the ability to obtain services and inputs at reduced prices, either through cash or credit, from cooperatives. Moreover, members in the conventional coffee cooperative benefited from access to the fertilizers tailored to their needs and coffee seeds and plants. This is also consistent with the findings of Baviskar (1988), Haque et al., 2009, Markelova et al., (2009), Getnet & Anullo, 2012 and Abebaw & Haile (2013). They conclude that members of cooperatives and other collective enterprises have witnessed significant benefits in terms of increased access to essential inputs and this includes access to inputs such as agrochemicals, fertilizers and seeds.

In contrast, the specialty coffee cooperative is at a disadvantage in providing a lot of inputs and services, as it lacks the financial resources to offer the same level of support to its members as the conventional cooperative. The study suggests that the conventional coffee

cooperative, being a registered cooperative, benefits from the government's financial support, which enables it to provide more agricultural inputs to its members using these funds. This aligns with the findings of (Garnevska et al., 2017) who found that the registered cooperative has a greater advantage to secure financial and technical support from the government.

In this study, marketing benefits were considered as the second most important member benefits in the specialty coffee cooperative and the fourth important member benefits in the conventional coffee cooperative. It was found that the specialty coffee cooperative delivers key marketing benefits by securing premium international markets and giving members the latest market information about the market trends like the increasing demand for organic specialty coffee. This aligns with the findings of Costales et al., (2003) and Narrod et al., (2009). They report that members received benefits from their cooperatives, such as services that aid in market access, including product and quality certifications.

In contrast, members of the conventional coffee cooperative use their cooperative as the primary market outlet and receive a uniform price for their coffee, regardless of quality. This is consistent with the findings of Bernard & Spielman (2009), Shiferaw et al., (2016) and Zeuli et al., (2004). They have demonstrated that collective enterprises have also functioned as outlets for members' products, providing a platform for them to sell their produce through the cooperative. The results revealed that the conventional coffee cooperative primarily ensures that members can sell their coffee with the same price, or higher price, compared to local brokers. This underscores the importance of the conventional coffee cooperative in enhancing market dynamics and protecting farmers, even when it does not provide significant direct economic benefits. By fostering competition between the cooperative and local brokers, the conventional cooperative can drive brokers to offer better prices to farmers, a phenomenon known as the "competitive yardstick effect." This effect ensures that producers receive more favorable prices for their products. The results revealed that the conventional coffee cooperative serves as a safety net for farmers, guarding them against exploitation by brokers in the region. Studies, such as those by Chagwiza et al. (2016) and Mujawamariya et al. (2013), highlight the critical role of cooperatives in elevating local prices and providing essential protection for their members.

In the case of financial benefits, they were considered the third most important member benefits in both cooperatives. However, the results of this study revealed that the financial benefits provided by the specialty coffee cooperative was found to be notably superior to those offered by the conventional coffee cooperative. It was found that in conventional coffee cooperatives, the pricing structure does not differentiate based on quality.

This indicates that farmers producing higher-quality coffee are not rewarded by higher price, which can be a disincentive for quality improvement in the conventional coffee cooperative. This supports the findings of (Wollni & Zeller, 2007) who found that farmers who sell their coffee through conventional coffee channels did not get the higher price based on the quality.

On the other hand, the results of this study reveal that members of the specialty coffee cooperative enjoy a significant price advantage over those in the conventional cooperative, with an increase of 12,940 MMK per pound (6.47 NZD per pound). This price premium underscores the financial benefits that come with accessing international specialty markets, where quality is highly valued and rewarded. This study suggests that the specialty coffee cooperative, where quality is directly linked to price, provides a financial motivation for members to focus on producing higher-quality coffee.

However, it was interesting to note that while both the specialty coffee cooperative and the conventional coffee cooperative facilitate low-interest loans for agricultural production, it was found that members of the specialty coffee cooperative face greater challenges in accessing these loans. Specifically, the requirement for collateral and the condition of selling coffee at pre-agreed prices has discouraged members from utilizing these low-interest loans, leading them to rely on high-interest loans from local money lenders. In contrast, members of the conventional cooperative have more flexible loan terms, making it easier for them to access affordable financing for agricultural production. This finding supports the findings of Fischer and Qaim (2012), and Nugussie (2010) and Fernando (2021) who identified access to credit services as a significant benefit for members in their studies. This is also consistent with the findings of Bernard and Spielman (2008) who found that 71% of the respondents in their study reported benefiting from credit. In this study, it was shown that the specialty coffee cooperative connects members with external loans while the conventional cooperative provides loans from its own funds.

Training and education benefits were considered as the fourth most important member benefit in the specialty coffee cooperative and the sixth most important member benefit in the conventional coffee cooperative. Results revealed that members from both cooperatives receive technical support related to their agricultural production. This supports the other findings that discuss training and education benefits. Several studies (Baviskar, 1988, Haque et al., 2009, Markelova et al., 2009, Getnet & Anullo, 2012, Abebaw & Haile, 2013 and Fernando, 2021) have demonstrated that members of cooperatives and other collective enterprises have witnessed significant benefits in terms of increased access to technology. Other studies (Abebaw & Halie, 2003 and Coulter et al., 1999) also conclude that many

technical services and information have been provided to members free of charge. Results revealed that the specialty coffee cooperative had better training and education benefits compared to the conventional coffee cooperative. This study suggests that the conventional coffee cooperative, with its lack of a professional team and more members to manage, becomes logistically challenged to provide the same level of personalized support that the specialty coffee cooperative can offer.

Environmental benefits were considered the fifth most important member benefit in the specialty coffee cooperative, and it was not applicable in the conventional coffee cooperative. The study found that the specialty coffee cooperative has integrated environmentally sustainable practices such as shade-grown coffee plantation into its operations. This supports the findings of Blackman and Naranjo (2012), which examined certified coffee cooperatives in Costa Rica, and they found that coffee growers improved their environmental practices. Specifically, members of the cooperatives decreased their use of chemical inputs and enhanced their adoption of eco-friendly methods. Moreover, members from the specialty coffee cooperative are practicing reduced both water usage and wastewater from the coffee processing. This supports the findings of Perthen-Palmisano & Jakl (2005) and Ma et al., (2018) who demonstrated that cooperatives and collective enterprises have played roles in reducing soil and water degradation, allowing members to rehabilitate depleted soils, purify contaminated water sources, and implement sustainable chemical practices. In this study, it was also found that members from the specialty coffee cooperative benefited from their sustainable environmental practices, and it was recognized in the marketplace, as evidenced by a premium of an additional 1620 MMK (\$0.81 NSD per pound) of coffee. The results suggest that the cooperative (the specialty coffee cooperative) that implements environmentally friendly practices can bring additional value to their members' produce. This supports the findings of several studies (Geeraert et al., 2019; Loureiro & Lotade, 2005; Quiñones-Ruiz, 2020; Vogt, 2020) who demonstrate that consumers view the eco-friendly aspect of shade-grown coffee as a favorable characteristic, often willing to pay a higher premium for it compared to organic coffee.

In the case of community benefits, they were regarded as the fifth most important member benefit in the conventional coffee cooperative and seventh most important member benefit in the specialty coffee cooperative. It has been found that the conventional coffee cooperative provides direct and tangible benefits that quickly improve the community's standard of living. It was evident in initiatives such as improving local infrastructure, supporting local monasteries, and providing funds for cooperative training schools. This

aligns with the findings of Samantha (2016) who reports that coffee cooperatives in Costa Rica contributed to community infrastructure by partnering with neighborhood associations to develop facilities such as bus stops, aqueducts, waste management systems, trash collection services, parks, recreational areas, and bridges and roads.

In contrast, results indicated that the specialty coffee cooperative contributes to community development in more indirect but meaningful ways. Although it lacks the financial capacity to provide extensive direct benefits, its members actively participate in community initiatives. The specialty cooperative's activities, such as quality training and international market access, indirectly benefit the community by increasing members' income levels, which can lead to greater economic stability and spending within the local community. In this study, it was found that members of the specialty coffee cooperative pool funds to repair local roads, which improves transportation and protects coffee quality. Additionally, they donate resources like printers and books to local schools and make financial contributions to local monasteries, supporting education and cultural traditions. This study suggests that the cooperative can drive community development by fostering collaboration among its members.

CHAPTER 7 CONCLUSION AND RECOMMENDATIONS

This chapter provides the conclusion and recommendations of the study. Section One reviews the overall conclusion of the study. Section Two provides recommendations of the study while Section Three gives the limitations of the study. The last section describes the implications for future research.

7.1 Conclusion

The Government of Myanmar has recognized the potential of agricultural cooperatives to improve the socio-economic status of smallholder farmers, particularly in rural areas where most of the population relies on agriculture for their livelihoods. Although Shan State is a region with significant potential for quality coffee production due to its favorable climate and unique geographical conditions, many farmers in Shan State face challenges in producing high-quality coffee and accessing markets that offer better prices. Therefore, this study aimed to compare the benefits of a specialty coffee cooperative and a conventional coffee cooperative in Shan State, focusing on how these cooperative models impact the livelihoods of smallholder coffee farmers.

The objectives of this research were: to review the literature to understand how cooperatives provide benefits to members; to study and analyze two types of coffee cooperatives: the specialty coffee cooperative and the conventional coffee cooperative in the study area; and to analyze and compare the member benefits between the specialty coffee cooperative and conventional coffee cooperative. To achieve the research objectives, a survey was conducted using a convenience sampling technique, involving 18 members and five cooperative leaders of two cooperatives as respondents. Online Zoom interviews by using semi-structured format were conducted to gather data on the demographic profile of farmers, farming characteristics, the background information of two cooperatives, their governance and management structure, the functions of two cooperatives (processing/storage and coffee sourcing activities), marketing of two cooperatives and member benefits provided by two cooperatives. Collected data was analyzed by using qualitative data analysis.

The findings indicated that both cooperatives rely on small-scale farming operations as their foundation. However, they differ significantly in their management structures and

market focus. The specialty coffee cooperative is managed by a professional team that ensures the production of high-quality coffee, enabling access to international markets and better pricing opportunities. In contrast, the conventional coffee cooperative lacks a professional management team, which limits its ability to meet quality standards and restricts its market access. As a result, the conventional cooperative primarily produces lower-quality coffee and depends on neighboring markets through informal trade channels, rather than accessing the more lucrative international markets.

Moreover, the study revealed that while the specialty coffee cooperative offers significant social, financial, marketing, and environmental benefits, it is less effective in providing basic input supplies and community benefits compared to the conventional cooperative. On the other hand, it was found that the conventional cooperative plays a vital role in meeting immediate needs, such as supplying inputs at reduced prices and supporting community infrastructure. However, it is less focused on achieving long-term sustainability and quality standards. Consequently, the economic benefits for members of the conventional coffee cooperative are not as significant. This study also suggested that a professionally managed cooperative, like the specialty coffee cooperative, can offer more effective training and extension services tailored to the specific needs of its members compared to the conventional coffee cooperative. Understanding these differences is crucial for stakeholders and policymakers to design targeted strategies that optimize the unique strengths of each cooperative model, thereby promoting the socio-economic development of smallholder coffee farmers in Shan State and ensuring the sustainability of the coffee sector.

7.2 Recommendations

7.2.1 Recommendations for the two cooperatives studied

On the one hand, the specialty coffee cooperative should prioritize registering as an official cooperative to access government support and resources. It should also seek alternative financial sources to strengthen its financial stability amid political uncertainties. To address members' financial needs during the gap between harvesting and receiving payments from buyers, the cooperative should explore more accessible financing options.

One potential solution is for the cooperative to establish an internal revolving loan fund, which would allow members to borrow small amounts at low or no interest without the need for collateral. This fund could be supported by a portion of the cooperative's profits or partnerships with microfinance institutions that offer low-interest loans specifically designed for cooperatives. Additionally, the cooperative could negotiate more flexible loan terms with external lenders, potentially removing the need for collateral or reducing the interest burden on members. Moreover, the cooperative should also adopt financial strategies to mitigate exchange rate risks and protect its revenue from international sales and ensure sustainable growth.

On the other hand, the conventional coffee cooperative should prioritize improving the quality of coffee produced by its members to enhance access to more lucrative markets. This can be achieved by introducing basic training programs on best farming practices that can help farmers gradually improve the quality of their coffee. The cooperative managers need to consider asking NGOs for technical assistance and cooperative management trainings such as capacity building, management of price-related risks, marketing strategies and long-term strategies. Additionally, the cooperative should consider adopting a more professional management structure to better organize member activities, enhance communication, and effectively deliver technical training to improve the quality of members' coffee. The cooperative should also explore partnerships with local and regional traders to establish more stable and formal market channels, reducing reliance on informal trade with neighboring markets.

7.2.2 Recommendations for policy makers

Policymakers, particularly the Ministry of Cooperatives and Rural Development in Myanmar, should prioritize creating an enabling environment for cooperatives to thrive. This includes developing policies that support smallholder farmers by providing access to affordable credit, market information, and extension services. It is crucial to enhance infrastructure development, such as improving roads and transportation networks, to reduce costs and facilitate access to both domestic and international markets. Additionally, the Government should promote integrated systems involving various stakeholders, such as cooperatives, private sector actors, and NGOs, to address institutional gaps related to market

access, standards, and quality control. The Government should also establish additional coffee-milling facilities to enable all coffee producers, including those not affiliated with cooperatives, to process their coffee efficiently and deliver their products promptly to both local and international markets. Moreover, the Government should collaborate with international organizations in order to provide technical assistance, capacity building, and resources that align with the specific needs of coffee farmers in Shan State, fostering sustainable development and economic growth in the region.

7.3 Limitations of the study

In this research, there are some limitations which require consideration.

- 1) Owing to time and financial limitations, this study was limited to only two coffee cooperatives with a total of 23 participants. The findings of the study are therefore specific to the situation in Shan State and may not be generalizable to cooperatives in other provinces or to different types of cooperatives across Myanmar.
- 2) The availability of secondary data was very limited, with little to no existing research on coffee cooperatives in the study area. As a result, the majority of the information used in the study was derived from primary data. Additionally, cooperative officers were reluctant to provide secondary information, particularly financial reports, which made it challenging to obtain a comprehensive overview of the benefits available to cooperative members in the study area, as only brief details were accessible.
- 3) The use of two languages, English and Burmese, in the interview notes may have impacted the accurate documentation of the interviewees' intended meanings. Moreover, many respondents from the study area primarily speak Shan, and while they can communicate in Burmese, they may struggle to express themselves fully. This posed a challenge for the researcher, who is only proficient in Burmese, in effectively communicating the questions to ensure a mutual understanding.
- 4) Fourthly, the use of convenience sampling to select participants, driven by the conflict in the study area, may have limited the diversity of opinions collected regarding

member benefits in the cooperatives and it will therefore affect the analysis of the study.

7.4 Implications of future research

Since this study was conducted in Shan State, there may be implications in the accuracy of interpretations. Future research should be carried out in other states and regions of Myanmar to provide a more comprehensive understanding. Additionally, data collection was affected by conflict in the study area, which prevented some farmers from participating in interviews, resulting in a relatively small sample size. This raises concerns about the generalizability of the findings, and future studies should aim for a broader scope, including a larger number of cooperative members in Shan State. Furthermore, this study did not cover other types of cooperatives in different regions or states in Myanmar, so future research should focus on cooperatives involved in both agriculture and other industries across various regions.

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Appendix 1: Awards from Myanmar Coffee Association

1 st Place	
Score	89.08
Code name	GVM430
Variety	Catuai/Caturra
Region	Hti Kham Village, Hopong Township
Producer	Hti Kham
Year	2020

Source: The co-op documents

2 nd Place	
Score	88.33
Code name	ELE822
Variety	Catuai/Caturra
Region	Hti Kham Village, Hopong Township
Producer	Khun Sein Shwe
Year	2020

Source: The co-op documents

Appendix 2: Letter to participants

Research Interview on Comparative Analysis of Member Benefits in the Specialty Coffee Cooperative and the Conventional Coffee Cooperative: A Case Study in Shan State, Myanmar

This letter serves to inform you that I, *Hnin Nu Hlaing*, a student studying at Massey University will be conducting a Case Study interview with regard to the above subject matter. The purpose of the interview is to gather primary data to answer the aim of my research. The objectives of the research include:

1. To review the literature to understand how cooperatives provide benefits to members
2. To study and analyze two types of coffee cooperatives: the specialty coffee cooperative and the conventional coffee cooperative in the study area
3. to analyze and compare the member benefits between the specialty coffee cooperative and conventional coffee cooperative

The overall outcome of this research will contribute to enhancing the well-being of smallholder coffee farmers and promoting the sustainability of the coffee industry in Shan State.

Participant rights

You are under no obligation to accept this invitation. If you decide to participate, you have the right to:

- Decline to answer any questions.
- Withdraw from the study (at any point in the research).
- Ask any questions about the study at any time during participation.
- Provide any information on the understanding that your name will not be used unless you give specific permission the researcher.
- Be given access to the summary of the project findings when it is concluded.
- Ask for the recorder to be turned off at any time during the interview.

Appendix 3: Consent Form for Cooperative Case Study Participants

I,, have read the information contained in the Information Sheet for Participants and all questions have been answered to my satisfaction. Yes/No

I agree to participate in this activity, realizing that I may withdraw at any time. Yes/No

I agree that research data gathered for the study may be quoted and published using a pseudonym. Yes/No

I agree to having my interview audio recorded and transcribed. Yes/No

I am older than 18 years of age. Yes/No

.....
Participant Date

.....
Researcher Date

Appendix 4: Semi-structured questions for cooperative leaders/ managers

General Background Information of Cooperative leaders/ managers

- 1) Can you please tell me about your background and how you get involved in the cooperative and coffee industry? (Name, age, educational background, position in your cooperative, experience in the current position, experience in the coffee sector, experience in cooperative management training courses, specific role and responsibilities within the cooperative)

Background information of the cooperative

- 1) Can you please tell me about your cooperative? (When was it established and why, how many members since establishment and now, evolution/key milestones and current activities/ operations)
- 2) Do you have any external support since establishment, over the years and now? From whom? (financial, administrative, facilities)

Management of the cooperative

- 1) Can you please tell me about the organizational structure of the co-op? (How are BOD selected or elected, voting rights, how many BOD members, how often the BOD members re-elected, how many members attending)
- 2) Can you please tell me about membership in the co-op? (Fees, buying shares, price of share, rules to enter & exist, services, policies, profit distribution, dividend, other benefits)
- 3) According to your observation, what might be the contribution factors that motivated new members to join the cooperative? (Benefits, trainings, extension services, technical support, market, price)

Cooperative Functions (Processing, storage, Transaction and marketing)

Processing/Storage

- 1) What does your cooperative do after buying coffee from members? (processing methods and why, storage, time, transportation and why, additional processes and why, safety and quality control)

Transaction arrangement

- 1) How do your cooperative transact with your growers? (volume, quality)
- 2) What is the relationship you build with your members? (transaction of buying coffee and why, agreement between your co-op and members)

Marketing

- 1) Where do you sell your coffee? (Who are the buyers and why, volume and price for your coffee)
- 2) With international markets, how are you dealing with them? (Volume, price, certificate, quality, contract, relationship, agreement between the buyer and your co-op)
- 3) With domestic markets, how are you dealing with them? (Volume, price, certificate, quality, contract, relationship, agreement between the buyer and your co-op)

Member benefits

- 1) What are the benefits that your producer cooperative provide to your members? (Production, supplying inputs & services, extension, training & education- who provide trainings & why, loans, marketing, social benefits & others)

Challenges and future plans of the cooperative

- 1) What are the main opportunities of your cooperative?
- 2) What are the challenges of your cooperative?
- 3) What are your future plans and goals (for example, next 5-year strategies) in terms of products, markets, and operational activities

Appendix 5: Semi-structured questions for cooperative members (farmers)

Demographic profile of farmers

- 1) Can you tell me about your background and how you get involved in the co-op (Name, age, educational background, experience in farming sector, experience in coffee production)

Farming Characteristics

- 1) Can you please tell me about your coffee plantation? (Total acres, ownership status, the reason you grow coffee and annual production volume)
- 2) Do you have other off-farm activities?
- 3) What is your source of income? (% of income from farm and off-farm activities)

Production/ Harvesting/Processing/Storage

Production

- 1)What inputs do you use for your coffee production? Why?
- 2)What production practices do you use for your coffee farming? (Methods and why, tools, labor)

Harvesting/Post-Harvesting

- 1)What do you do after your coffee production? (Frequency of the harvest, when, harvesting methods and why, loss and waste, transportation and why, additional processes and why, safety, quality control)
- 2)What are the post-harvest activities that you do? (Methods and why, tools, labor, additional processes and why, safety, quality control)

Processing/Storage

- 1) What do you do after the harvest of your coffee? (processing methods and why, storage, time, transportation and why, additional processes and why, safety and quality control)

Marketing

- 1) Where do you sell your coffee? (Who are the buyers and why, volume and price for your coffee)
- 2) Do you sell all of your coffee to the co-op? Why? Why not?
- 3) How does the sales arrangement work? (Contract term/ policy and why, payment method and term, quality standard and how, traceability)

Member benefits

- 1) How did you become a member of the producer cooperative? When? Why?
- 2) Do you have a say in decision-making of the cooperative? (Meeting participation, board voting, role in the board, responsibilities, shares, ownership, profit distribution)
- 3) Please explain the benefits that you get from the co-op. (Production, supplying inputs & services, extension, training & education, loans, marketing, social benefits & others)

Future aspects

- 1) Are you going to grow coffee in the next 5 to 10 years? Why?
- 2) Are you going to continue to be a member of the cooperative in the next 5 years? Why?

Appendix 6: Ethical Approval



Date: 20th October, 2023

Dear Hnin Nu Hlaing,

Ethics Notification Number: 4000028286

Project Title: Comparative Analysis of Member Benefits and Sustainable Contributions for Certified and Non-certified Coffee Cooperatives: A Case Study in Shan State, Myanmar.

Thank you for your notification which you have assessed as low risk.

Your project has been recorded in our database for inclusion in the Annual Report of the Massey University Human Ethics Committee.

The low risk notification for this project is valid for a maximum of three years.

Please notify the Human Ethics Team if situations subsequently occur which cause you to reconsider your initial ethical analysis that it is safe to proceed without approval by one of the University's Human Ethics Committees.

Please note that travel undertaken by students must be approved by the supervisor and the relevant Pro Vice-Chancellor and be in accordance with the Policy and Procedures for Course-Related Student Travel Overseas. In addition, the supervisor must advise the University's Insurance Officer.

A reminder to include the following statement on all public documents:

“This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The researcher(s) named in this document are responsible for the ethical conduct of this research.

If you have any concerns about the conduct of this research that you want to raise with someone other than the researcher(s), please contact the Research Ethics Office, email humanethics@massey.ac.nz.”

Please note: If a sponsoring organisation, funding authority or a journal in which you wish to publish require evidence of committee approval (with an approval number), you will have to complete the application form again, answering “Yes” to the publication question in order to complete a full application for review by one of the University's Human Ethics Committees. You should also note that such an approval can only be provided prior to the commencement of the research.