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**Factors influencing the performance
of rice farmer cooperatives in
Davao del Norte, Philippines**

A thesis
submitted in partial fulfilment
of the requirement for the Degree of
Master of Applied Science

at
Lincoln University
by
Brenda A. Dimas

Lincoln University
2021

Abstract of a thesis submitted in partial fulfilment of the
requirements for the Degree of Master of Applied Science

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Farmer controlled cooperatives contribute significantly to the growth of the rice sector in the Philippines – the country’s most important agricultural sector both in production and in consumption. These cooperatives are promoted and supported by the government as a way of empowering farmers as buyers, value-adders, and sellers in the supply chain. Unfortunately, despite ongoing financial support from various government agencies, many of the country’s rice farmer cooperatives struggle to remain viable. Cooperative failure is often attributed to poor management, inadequate capital, and the members’ unreliable patronisation to the cooperative. However, a growing body of literature views these problems as symptoms of much more fundamental flaws in the institutional arrangements that tend to characterise cooperatives in developing countries.

This research examines the property rights and governance practices adopted by rice farmers cooperatives in the Davao del Norte province, and assesses their impact on cooperative performance. Four cooperatives were studied using a multiple case study approach. The study interviewed directors, managers, and members using semi-structured interview schedules designed to gather both qualitative and quantitative information. Pattern matching was used to test theory-based propositions about causal relationships between a cooperative’s performance and its institutional arrangements. This qualitative analysis was triangulated against the results of a quantitative hierarchical cluster analysis of the property rights, governance and performance attributes of the cooperatives studied.

The research found a strong relationship between good performance and the absence of institutional problems. In particular, the absence of a free-riding problem allows cooperatives to efficiently allocate resources and to establish and maintain their reputation. When institutional problems are present, cooperatives introduce policies to mitigate their effects. Strategies that promote proportionality of investments to patronage allows cooperatives to reliably generate internal capital. The Cooperative Code of the Philippines outlines specific governance practices that Philippine cooperatives must adhere to. Practices that embrace accountability and transparency are well-entrenched in the code. However, the research reveals that cooperatives have instituted practices that complement the existing law and alleviate the specific institutional problem they face.

This research offers policymakers, government support agencies, and cooperative leaders a better understanding of the problems confronting rice farmer cooperatives in the Philippines and highlights changes that could be made to address performance problems created by weak institutional arrangements.

Keywords: *institutional arrangements, property rights structure, governance practices, pattern matching, hierarchical cluster analysis*

Dedication

To the Almighty

for the gift of “now”

and

To Papa, Mama, Hazel and Mechelle

for making my present beautiful and livable

I humbly dedicate this thesis.

Acknowledgements

“We often take for granted the very things that most deserve our gratitude.”

Cynthia Ozick

I owe the completion of this research to the numerous souls who, in their own beautiful and simple way, have knowingly or unknowingly helped me.

My New Zealand postgraduate journey would not have been possible without the financial and academic assistance provided by the people of New Zealand, through the New Zealand Aid Programme administered by the Ministry of Foreign Affairs and Trade (MFAT), and Lincoln University, through the Faculty of Agribusiness and Commerce.

I have been blessed to work under the benevolent supervision of Professor Alison Bailey and Associate Professor Michael Lyne, who tirelessly shared their wisdom and expertise with me. I am indebted to both of them for their steadfast kindness, patience, and understanding, especially on the numerous instances that I doubted my ability to finish my postgraduate studies.

I always thought that the New Zealand postgraduate journey would just be another checkbox to tick off as I progressed in my professional life. But meeting and knowing the following beautiful souls who I am honoured to call my friends have made me realise that this journey is more about my life than it is about my career.

My LIAS, WDA and OCS family, Glen, Amanda, Daphne, Cara, Jonas, Craig, Levana, Sarah, Maui, Jay, Carole, Zoe, Hillary, Caroline, Jessica, Jessie, Nikki, Mofasah, and Learie – you all, taught me to appreciate hard work, simple labour, and camaraderie. I am thankful for the memories and conversations I have shared with each of you.

My flatmates, Sofi, Theresa, Ghouse, Sharon, Isidora, Balanama, Tamala and Maggie. Living in a multi-cultural household has made me appreciate the beauty of the world’s diversity and

differences. Thank you for making me feel at home, sharing your time with me, and welcoming me into your lives.

My friends from all over the world (Africa, Asia, The Caribbean, North America, Latin America, the Pacific and New Zealand), Raituti, Amaka, Jane, Samantha, Rama, Sibusiso, Ishaku, John, May, Soveasna, Chi, Irene, Damola, Hasib, Randel, Gorkhi, Aline, Lara, Nina, Christy, Oveka, Odiri, Priscilla, Sussana, Edinam, Joshua, Tsewang, Alex, Ben, Fr. Philip, Yoriko, Huy, Zuhaib, Javagn, and Ali. Thank you for spending time with me, getting to know me, and helping me to feel less alone. Thank you for constantly reminding me that no matter how different we are, our hearts are very much the same. Thank you for sharing your culture and uniqueness with me.

Thank you to my small Filipino community, Ginjr, Francis, Jon, Strev, Lester, Glenis, Maribeth, Scheherazaide, Lyra, Nicole, and Likha, who reminded me of my roots and made sure I did not feel so far away from home. I am thankful that our paths crossed in this foreign land.

Lastly, to my family, Papa, Mama, Hazel, Mechelle, Mark John, Glenn, Xyrus, and Kensley, who supported my aspirations to complete a postgraduate degree and sacrificed a lot for me to reach my goals. I am eternally grateful for your unconditional love and support and for encouraging me to pursue my dreams.

Lincoln University, June 2021

Brenda Dimas, Master of Applied Science

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Abbreviations

| | |
|--------|--|
| ACCFA | Agricultural Credit and Cooperative Financing Administration |
| ACPC | Agricultural Credit Policy Council |
| AFMA | Agricultural and Fisheries Modernisation Act |
| BPI | Bureau of Plant Industry |
| BOD | Board of Directors |
| CARP | Comprehensive Agrarian Reform Program |
| CDA | Cooperative Development Authority |
| DA | Department of Agriculture |
| DAR | Department of Agrarian Reform |
| DBM | Department of Budget and Management |
| DOLE | Department of Labour and Employment |
| FACOMA | Farmer's Cooperative Marketing Associations |
| FAO | Food and Agriculture Organization |
| GA | General Assembly |
| ICA | International Cooperative Alliance |
| IOF | Investor-owned Firms |
| LBP | Landbank of the Philippines |
| NCA | National Cooperative Administration |
| NIA | National Irrigation Administration |
| NGC | New Generation Cooperative |
| PAGRO | Provincial Agriculture Office |
| PSA | Philippine Statistics Authority |
| RA | Republic Act |
| RCEF | Rice Competitiveness Enhancement Fund |
| SEC | Securities and Exchange Commission |

Chapter 1 Introduction

1.1 Philippine rice sector

Rice is the single most important crop in the Philippine agriculture industry (Arnaoudov et al., 2015; Boquet, 2017, p. 215; Bordado et al., 1996; Ponce & Inocencio, 2017). Eighty per cent (80%) of the 106.6 million strong Filipino population (Philippine Statistics Authority [PSA], 2014) consider rice to be a primary staple food (Bordey, 2010, p. 1; Cororaton, 2004). Of the 13.48 million hectares of the country's land (PSA, 2014), 4.80 million hectares (35.6%) is dedicated to rice production (PSA, 2014; Suministrado, 2013). The rice sector also contributes the most, economically speaking (PhP 385 million), to the nation's total crop production value (PhP 1 billion) (PSA, 2019). Furthermore, the rice sector employs 21.4% (2.53 million) of all the workers engaged in the agriculture industry (11.84 million) (Food and Agriculture Organization [FAO], 2014; PSA, 2014).

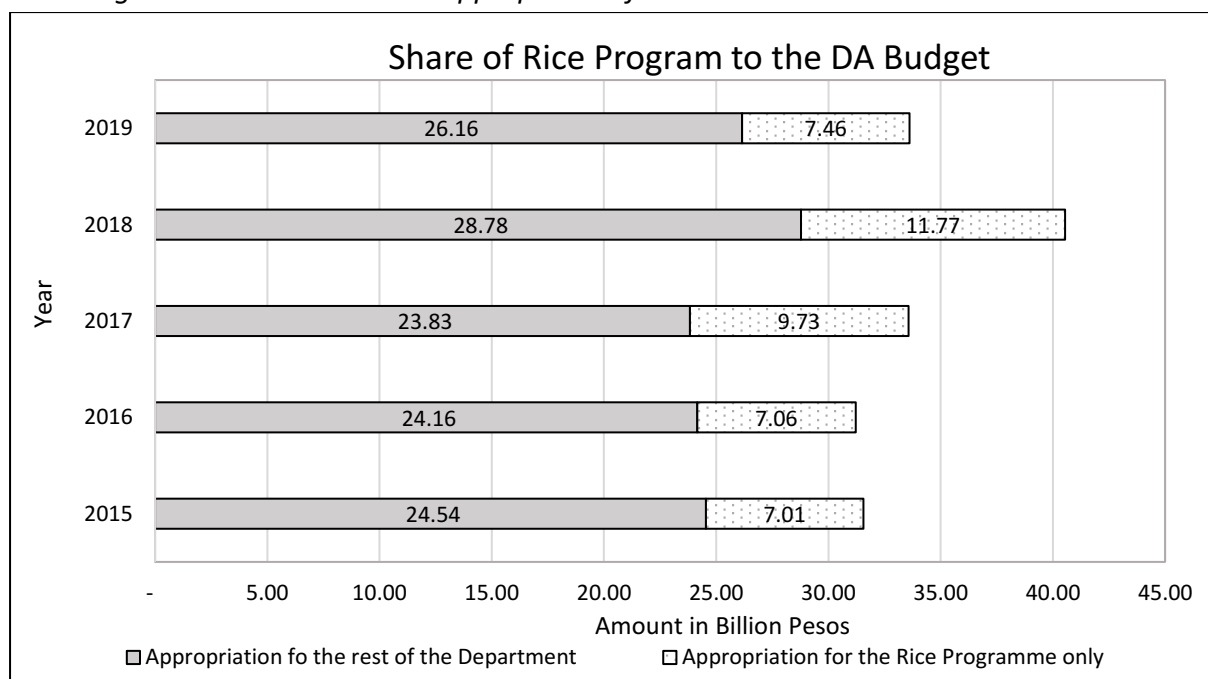
Although the significance of the rice sector to the country's social and economic landscape is undeniable (Bordey, 2010, p. 2), the sector is facing several major challenges. Farmers are struggling to meet the needs of the country's growing population (Ponce & Inocencio, 2017, p. 7), and to compete with imported rice in an increasingly liberalised trade environment (FAO, 2014). Falling productivity and rising input costs have resulted in decreasing farm incomes (FAO, 2014). Low productivity gains have been attributed to stagnating yield potentials of widely-used varieties (David et al., 2018; Koirala et al., 2014) and to persistent farm fragmentation that has reduced the average farm size to a mere 1.2 hectares per farming household (Arnaoudov et al., 2015, p. 23). Production has also been adversely affected by the conversion of farmland for other uses to meet the needs of a rapidly growing urban population (Bordey, 2010, p. 3).

The government has recognised these challenges and sought to remedy the issues through policy and investment. Post-Marcos regimes placed rice development at the forefront of agriculture development (Ponce & Inocencio, 2017, p. 9). The Republic Act (RA) 8435 of 1997 and the Agricultural and Fisheries Modernisation Act (AFMA) emphasised rice self-sufficiency as a primary agricultural policy which resulted in higher government spending in the sector (Bordey, 2010, p. 47). Since 2005, the Department of Agriculture's (DA) national rice

programme has consistently received a disproportionately larger share of the department’s budget (see Figure 1.1) (Department of Agriculture [DA], n.d.-a). In 2020 alone, PhP 10 billion of the department’s PhP 64.7 billion budget was solely allocated to the Rice Competitiveness Enhancement Fund (RCEF) (Department of Budget and Management [DBM], 2020). The national rice programme has largely focused on credit support, and grants for inputs, facilities, and machinery. Programme proponents argue that these grants aid low-income farmers by reducing their reliance on monopolistic input- and service-supply markets (Ponce & Inocencio, 2017, p. 19).

Figure 1.1

Rice Programme share to the DA Appropriation from 2015-2019



Note: Adapted from The Philippine Department of Agriculture’s Annual Financial Reports (2015-2019). (<https://www.da.gov.ph/transparency/>). Information available in the public domain.

1.2 Role of cooperatives in the rice sector

Farmer organisations play a significant role in facilitating government interventions. Farmers only obtain access to capacity-building and training, grants for input, machinery and facilities, and credit and marketing assistance through membership in either cooperatives, registered under the Cooperative Development Authority (CDA), irrigators’ associations, registered under the Securities and Exchange Commission (SEC), or farmers’ associations, registered under the Department of Labour and Employment (DOLE) (Araullo, 2006; Arnaoudov et al.,

2015, p. 23). Machinery and facilities donated under the rice mechanisation programme are distributed to farmer organisations, not individual farmers (OECD, 2017). Likewise, input grants from the newly established RCEF are accessible to organised farmers (DA, n.d.-b). Publicly-funded technologies were developed for village-level management and operations, as evidenced by the PhilRice-adapted flatbed dryer and the communal pumps of the pump irrigation programme (Bautista & Javier, 2008). The management, operation and maintenance of irrigation systems and the corresponding infrastructure were also transferred by the National Irrigation Administration (NIA) to organised irrigators' associations (Bandyopadhyay et al., 2010). Likewise, farmers can access four of the six agricultural and credit financing programmes administered by the DA's Agricultural Credit Policy Council (ACPC) only through farmer organisations (ACPC, n.d.). Farmer organisations also channel farmers' feedback about policies and interventions to the government and lobby the policymakers for beneficial terms (Librero & Tidon, 1996a; Parliament et al., 1990; Shepherd & Cadilhon, 2008).

Among farmer organisations, cooperatives stand out because of the other benefits they provide to their members. Aside from acting as channels of financial (Librero & Tidon, 1996b) and technical assistance (Bordado et al., 1996), farmers join cooperatives because of the assured output market, the communal acquisition of costly assets, and the expected increase in income. Leveraging the collective power afforded by cooperatives, farmers are able to influence market functions, such as price and other transaction terms, to their advantage (Librero & Aquino, 1996; Manalili et al., 2008). On behalf of the farmers, cooperatives negotiate better deals with downstream buyers and upstream suppliers (Araullo, 2006). Moreover, they countervail trading partners' potentially opportunistic behaviour (Valentinov, 2007). When negotiating with an Missouri-based processor, a Davao-based cooperative guaranteed a premium price for its members' produce (Quilloy, 2015a).

Inherent limitations in farming such as small farm size, capital-intensive operations and temporal price variability make rice farming prohibitively costly (Castillo, 2003) and inherently risky (Valentinov, 2007). Inadequate access to storage and drying facilities diminishes a farmer's bargaining power, especially during peak harvest months (Villano et al., 2015). Farmers have limited capacity to solely finance these lumpy production and post-production

assets. By organising themselves into a group, farmers can pool their resources to provide custom services and defray expenses for costly farm functions (Narro et al., 2009).

1.3 Cooperative policies in the Philippines

Legislation and statutory restrictions influence the practices adopted and implemented by cooperatives (Amongo & Larona, 2015; Bijman et al., 2014; Cook & Iliopoulos, 2016; Royer, 1992). Legislations pertaining to cooperative development will either deter or encourage the viability of these organisations within a particular jurisdiction. In the Philippines, farmer cooperatives were first legislated in 1915 upon the enactment of Act 2508 (Rural Credit Law) which promoted rural financing through cooperatives and saw the establishment of agricultural credit cooperative associations. To complement these rural credit associations, the government encouraged the formation of marketing societies via Act 3425 of 1927 (Cooperative Marketing Law) (CDA, n.d.; Ferrer, 1956).

The Commonwealth Act 565 of 1940 (Cooperative Law) and the RA 821 of 1952 (Agricultural Credit and Cooperative Financing System) saw the formation of regulatory bodies for cooperatives, the National Cooperative Administration (NCA) (Ferrer, 1956) and the Agricultural Credit and Cooperative Financing Administration (ACCFA) (Official Gazette, n.d.-a), respectively. ACCFA provided rural credit to farmers organised as Farmer's Cooperative Marketing Associations (FACOMAs). These acts defined cooperatives as any organisation governed by the principles of voluntary and open membership, democratic voting, limited interest on capital, and benefits distributed according to patronage.

Subsequent laws, including the RA 6389 of 1971 (Agricultural Land Reform Code), the RA 7607 of 1991 (Magna Carta of Small Farmers), the RA 6657 (Comprehensive Agrarian Reform Law of 1988), and the RA 8435 of 1997 (Agricultural and Fisheries Modernisation Act), emphasised the importance of cooperatives in empowering farmers and improving their socio-economic conditions (Chan Robles, n.d.; LawPHil Project, n.d.; Official Gazette, n.d.-b, n.d.-d). Under these laws, nothing has been done to enhance the cooperative definition nor modify the principles that govern them.

It was only in 2008 that policy concerning cooperatives was modified. The RA 9520 (Philippine Cooperative Code of 2008) amended the RA 6938 of 1990 (Cooperative Code of the Philippines) and became the principal law governing the cooperative movement in the country (Official Gazette, n.d.-c, n.d.-e). It expanded the definition of a cooperative by including autonomy, independence, and concern for the community. It also aligned the legislation to the principles adapted by the International Cooperative Alliance (ICA). Despite these legislative amendments, the structure and practices of the cooperative remained largely the same.

1.4 Problem statement and purpose

Although farmer cooperatives can and do play an important role in the growth and development of smallholder agriculture in the Philippines (Araullo, 2006; Castillo, 2003), there is little evidence relating to their performance as product and service providers in the rice sector. The country has a long history of cooperative failure and a poor record of developing their institutional capacity (FAO, 2001). Laws pertaining to the cooperative movement and development were built upon the failure of previous pieces of legislations. While cooperative activity intensified in the immediate years after the passing of legislations, the passion eventually wanes. After the passing of seminal cooperative laws in 1915 and 1927, active agricultural credit cooperative associations and marketing societies went down, to only 10% and 20% in 1935 and 1939, respectively (CDA, n.d.). Within a decade, two-thirds of the credit provided by ACCFA was unpaid (Tadem, 2002). Most agricultural cooperatives assisted by the government defaulted on their loan repayments and some have ceased operations altogether (Arnaoudov et al., 2015). Cooperatives failed to sustain the DA's postharvest development programmes. They were deemed weak and not competitive in providing marketing services due to their inability to provide storage facilities, which would have ensured their long-term success (Balgos & Digal, 2017).

Studies have identified several factors which led to the failure of farmer cooperatives. Among these are a poor understanding of cooperative principles and purposes, conflicting interests between members, poor cooperative leadership and management (Castro, 2003; Manalili et al., 2015), inadequate capital, and opportunistic behaviour on the part of members whose patronage vacillates between the cooperative and other organisations that temporarily offer

them better terms (Araullo, 2006; Balgos & Digal, 2017; CDA, n.d.; Ferrer, 1956; FAO, 2001; Tadem, 2002). Further analysis that explains why farmer cooperatives struggle to raise capital, to retain quality management, and to build long-term trading relationships with premium buyers is largely absent.

New Institutional Economics (NIE) views cooperative “problems” such as weak management and insufficient capital as symptoms of more fundamental problems created by the institutional arrangements that characterise traditional cooperatives (Cook & Chaddad, 2004; Cook & Iliopoulos, 1998, 1999). These arrangements influence the cooperative’s ability to access capital, to retain good managers (Cook, 1995) and to fully engage members in supporting the cooperative’s business (Esnard et al., 2017); these factors ultimately affect a cooperative’s efficiency and performance (Cook & Iliopoulos, 2000).

To address constraints that undermine the performance of rice farmer cooperatives, it is necessary to have a clear understanding of the institutional arrangements these cooperatives adopt. The overarching purpose of this research is to examine the property rights structure and governance practices that characterise rice farmer cooperatives in the Davao del Norte province in the Philippines, and to establish whether these arrangements hinder their performance. The research provides up-to-date information about the institutional arrangements of rice farmer cooperatives in the Davao del Norte and tests theory-based propositions about the relationships between these arrangements and indicators of cooperative performance. The results of this research offer policymakers, government support agencies, and cooperative leaders a better understanding of the problems confronting rice farmer cooperatives in the province. This research also identifies changes that could be made to address performance problems created by weak institutional arrangements.

1.5 Importance

Though there have been several studies which examine Philippine cooperatives (Araullo, 2006), their role in empowering farmers and improving their position in the market (Manalili, 2003; Quilloy, 2015a, 2015b; Sarmiento et al., 2014; Sumalde & Quilloy, 2015), and their performance (Castillo, 2003; Matienzo, 1968), only a few have mentioned the influence of

institutional arrangements in the performance of cooperatives (Manalili, Campilan, & Garcia, 2008). This research advances the cooperative literature on the Philippines by scrutinising the effects of institutional arrangements on cooperative performance.

Further, the research's results provide valuable insights which cooperative leaders can use for strategic and development planning. By clearly identifying the institutional arrangements that affect their performance, cooperative leaders can formulate strategies and policies that address, in the long-term, the primary causes of organisational failure.

Lastly, by identifying the characteristics of well-performing cooperatives, the research will be of great assistance to policymakers seeking to develop programmes and interventions targeted at farmer organisations. By having a deeper understanding of the linkage between institutional arrangements and cooperative performance, policymakers will be able to formulate policies and legislation that not only address the symptoms of cooperative failure but, more importantly, its causes.

1.6 Organisation of the research

This chapter has discussed the importance and challenges of the rice sector in relation to the Philippine socio-economic environment, and the role and failings of the cooperative movement. Over the years, legislation has been introduced and amended to strengthen the movement; however, the "causes of failure" – poor management, insufficient capital, and opportunistic behaviour – still remain. Chapter 2 thus examines literature that treats these "causes" as symptoms of failure, and that attributes these symptoms to weak institutional arrangements. This chapter concludes with a set of research questions that the study seeks to address. Chapter 3 describes the research method used to gather relevant data and to analyse it in ways that answer the research questions. Chapter 4 provides the case descriptions for each of the studied cooperatives, Chapter 5 compares the institutional arrangements between the four cooperatives. Chapter 5 also examines the results of the hierarchical cluster analysis of the performance, property rights, and governance attributes. Finally, Chapter 6 presents conclusions and recommendations. The conclusions were drawn from the results of both the qualitative and quantitative analyses.

Chapter 2 Literature Review

While the previous chapter has shown the significant role that farmer cooperatives play in advancing the Philippine rice sector, it also highlighted the failings of the cooperative movement due, in part, to the lack of better understanding of the effects of institutional arrangements on the performance of a cooperative. This literature review focuses on the institutional arrangements typical in traditional cooperatives, the problems arising from these arrangements, and the effect of these problems on cooperative performance. The chapter begins with a review of the unique nature of the cooperative and its distinct property rights structure. This structure, formed from the interpretation of the adopted cooperative principles, gives rise to institutional problems described in Section 2.3. Section 2.4 then discusses how governance practices mitigate or exacerbate these institutional problems, Section 2.5 reviews how performance is typically measured.

2.1 Distinguishing features of a cooperative

Cooperatives are economic organisations formed and designed to operate through collective action, where ownership rights are vested into the user-patrons (members) (Vitaliano, 1983). User-orientedness is a distinguishing feature of cooperatives (Bijman et al., 2014; Dunn, 1988). Essentially, user-orientedness means that cooperatives are user-owned (the owners and financiers of the cooperative are the major users of the cooperative's business); user-controlled (control rests in the hands of the users, usually via a democratic governance structure, that is, each member has one vote); and user-benefitted (benefits accrued and distributed are derived primarily from transacting with the organisation) (Borgen, 2001; Cook & Burrell, 2009; Dunn, 1988; Staatz, 1987).

As user-owned, property rights are owned by the members (users). Cook and Tong (1990, p. 114) have defined property rights as the "socially and legally enforced right to select uses of an economic good". The owners of the property rights are the claimant to the residual rights to returns and residual rights of control of the cooperative. Residual rights of control are partly exercised through the election of directors from and by the members (Vitaliano, 1983). In theory, interests are aligned when ownership and usage of the cooperative's business are unified. Market contracting costs are reduced, member benefits – both as users and owners – are maximised, and economic decisions are more efficient (Iliopoulos, 1998, p. iv).

However, New Institutional Economics (NIE) literature has demonstrated that traditional cooperatives' property rights are generally vaguely defined (Cook & Iliopoulos, 2000); in short, property rights are not fully assigned, fully enforced, or priced (Royer, 1999). This results in the misalignment of residual claim rights to returns and residual rights of control (Cook, 1995). Institutional arrangements arising from vaguely-defined property rights pave the way for organisational inefficiencies. As decision-makers do not bear the full impact of their decisions (Cook & Tong, 1990), internal transaction costs (that is, search and information costs, decision costs, and monitoring and enforcement costs) (Sykuta & Chaddad, 1999) and, consequently, ownership costs are aggravated. These costs are borne solely by the users who are also the owners of the cooperative, thus, diluting their benefits. As a result, members are discouraged from resolutely patronising and fully investing in the cooperative (Cook & Iliopoulos, 1998; Iliopoulos, 1998, p. 57).

2.2 Typical property rights arrangements

How the property rights of most traditional cooperatives are defined, allocated and distributed is heavily influenced by the cooperative principles adopted and dictated by legislation (Cook & Burrell, 2009; Cook & Tong, 1990). The property rights structure of traditional cooperatives are distinct to them because these organisations adopt similar cooperative principles. This section discusses the property rights structure common to traditional cooperatives, and the principles behind it.

2.2.1 Ownership rights and ownership horizon are restricted by patronage

Unique to cooperatives, ownership rights are limited to members of the cooperative's products and services (Chaddad & Iliopoulos, 2013; Vitaliano, 1983). In most traditional cooperatives, the primary membership qualification is the ability to patronise the products and services of that cooperative. When a member stops patronising the cooperative's business/es, ownership validity expires. Hence, the ownership horizon – the time period where the residual claim rights to returns are valid (Iliopoulos, 1998, p. 62) – is also constrained by patronage. The second property rights arrangement discussed in Section 2.2.2 reinforces the first. Benefits accrued are contingent on the degree of patronage; hence, ownership benefits expire when patronage ends (Borgen, 2004; Vitaliano, 1983).

The ICA's cooperative principle of voluntary and open membership shaped this arrangement. The principle implies that, although anyone can join the cooperative, the individual must be able to voluntarily and actively perform the responsibilities of membership; this primarily involves patronising the business of the cooperative (Hoyt, 1996). In emphasising patron ownership as a basic cooperative principle, Abramhansen (1976), as cited by Royer (1992), has argued that cooperatives operate best when both ownership and control rests in the hands of those who benefit the most from patronising the cooperative's business.

In short, a cooperative's ownership base is limited to those who are able and willing to patronise its business at a given point in time (Ernst & Young, 1995), regardless of one's ability and willingness to finance the business activities of that cooperative. However, members' investment decisions are likely to be influenced by the time horizon they can optimally use and benefit from the cooperative's assets. An individual's appetite to invest is usually only up to the point that will allow access to the cooperative's services and products, that is, the bare minimum required. Patronage restriction of ownership rights also means that, regardless of their contribution to the equity of the cooperative, non-patronising members may lose or dilute their residual rights of control, that is, lose their voting rights, as stated in the cooperative bylaws. This disenfranchisement makes their membership susceptible to termination (Royer, 1992).

2.2.2 Residual claim rights to returns are proportional to patronage not to investment, and patronage is not proportional to investment

As a result of patronage restriction on ownership (Ernst & Young, 1995), patronage not only restricts the claimants of the residual rights to returns, but also the degree of benefits enjoyed by the claimants (Chaddad & Iliopoulos, 2013). Unlike investor-owned firms (IOFs) wherein residual claims are distributed to investors in proportion to their investment, residual claims received by members of most traditional cooperatives are based on the extent of their usage, that is patronage, of the cooperative's services or products (Royer, 1999). Further, patronage is not contingent on investment. Hence, levels of ownership, in the form of investment, do not affect the benefit claims (Cook & Iliopoulos, 2000).

Ernst & Young (1995) have explained that the user-oriented nature of cooperatives means that a member's residual claim rights to returns is relative to their level of use of the cooperative's business/es. The ICA's cooperative principle of member economic participation (Hoyt, 1996) stresses that cooperatives are primarily designed to meet their members' needs, not to accumulate wealth for investors (Bijman et al., 2014; Hoyt, 1996). While the principle maintains that cooperatives should compensate capital and labour fairly, it does not compel members to equitably contribute to the cooperative's capital. The determination of how much should be contributed to the cooperative's capital falls under the discretion and preference of the member.

Members will tend to maximise benefits at minimum investment, resulting in the misalignment of patronage and investment. The lack of proportionality between the patronage and investment levels, means that there is no impetus to invest commensurate to the patronage level. Members do not have any incentive to invest beyond the required minimum because their investments do not affect their residual claim rights to returns. Instead, a member's individual economic interests and needs will determine their level of patronage to the cooperative's products or services; this decision will consequently influence the benefits enjoyed by that member.

2.2.3 Residual claim rights to returns are redeemable and non-appreciable

In most traditional cooperatives, residual claim rights to returns are typically redeemable and non-appreciable (Chaddad & Iliopoulos, 2013; Staatz, 1987). Iliopoulos (1998, p. 49) has defined redeemability as a member's ability to claim from the cooperative the return of the equity originally invested to gain residual claim rights to returns. When residual claim rights are redeemable, members can sell their stake back to the cooperative at any point in time. However, the redeemed residual claim rights to returns only carry the accumulated value of the rights up to the date in which they want to redeem them. In short, the cooperative is not required to consider the future earning potential of the claim rights (Iliopoulos, 1998, p. 61). This is because residual claim rights to returns are non-appreciable. When residual claim rights to returns are non-appreciable, members do not capture the accrued value or the earning potential of their investment since the equity value remains the same.

This is associated with the principle of voluntary and open membership. The principle means that individuals who desire to join the cooperative are not discriminated against (Hoyt, 1996). If residual rights to returns were appreciable, new members would be required to pay a different joining equity value that reflects the current market value of the equity. When new members are expected to pay more or less than existing members, cooperative practitioners argue that membership is no longer open, but is discriminatory. Further, the cooperative principle of user-benefitted states that the primary objective of the cooperative is not profit but the delivery of services and products at rates most beneficial to the members. This means that the cooperative should operate at cost (Royer, 1992). Appreciation of shares means that the cooperative needs to operate at profit which runs contrary to the principle of user-benefitted.

There are no capital gains to be derived from investments made to the cooperative because the value of the equity than can be redeemed does not fully represent the actual market value of the share. Further, there is no inducement to trade claim rights due to their non-appreciable nature (Burress et al., 2008). Like the property rights arrangements discussed in Sections 2.2.1 and 2.2.2, this arrangement does not encourage members to invest more equity capital into the cooperative than what is required. Because members do not invest more, there is also no incentive to consistently patronise the cooperative's business/es.

2.2.4 Limited transferability of residual claim rights to returns.

Transferability refers to the ease of transferring the residual claim rights to returns from one person to another (Iliopoulos, 1998, p. 58). Ownership rights are transferable when shares are freely traded in a secondary equity market. The value the shares are traded in reflects the actual market value and perceived earning potential of the shares. In traditional cooperatives, transferability of residual claim rights to returns is limited (Ernst & Young, 1995). Share transfer is restricted either to other members or to the member's next of kin.

Limited transferability did not directly ensue from prevailing cooperative principles; but rather it is an endogenous effect of two other property rights arrangements – restriction of the ownership rights to patrons and non-appreciable residual claim rights to returns. As ownership rights are restricted to patrons, transferability of residual claim rights to returns is

limited to only those who patronise the cooperative (Royer, 1999). Potential investors who do not and will not patronise the cooperative's business/es are disqualified from investing in the cooperative. To ensure members maintain ownership, there is no secondary equity market that will facilitate the trading of shares (Royer, 1992; Vitaliano, 1983). Furthermore, a secondary market to trade shares is unlikely to develop because residual rights of returns are non-appreciable and redeemable (Staatz, 1987). Hence, there is no incentive to trade shares since the value that the residual claim rights to return can be traded in is not the actual market value of the rights. Members are better off redeeming their share if they decide to exit the cooperative rather than going through the trouble of transferring it to someone else at the same value.

As residual claim rights to returns are not tradeable or freely transferrable, members tend to underinvest in the cooperative (Hendrikse & Veerman, 2001a). The inability to trade shares also deters the efficient use of resources because these resources are unlikely to "end up with those who can make best of use of them and so value them most" (Cook & Tong, 1990, p. 114). Members are unable to determine the perceived worth of the cooperative (Ernst & Young, 1995) because there is no market that appraises the cooperative's value. Hence, the cooperative is unable to capitalise on the improved perception of the cooperative's value (Royer, 1999) because any increase in net worth is not reflected on the share value.

2.2.5 Residual rights of control are equally distributed among patron-members

Residual rights of control encompass all rights to the control and use of an asset that are not stipulated in the contract. These are retained by the asset's owner even when the use of that asset is granted to another (Grossman & Hart, 1986). In traditional cooperatives, residual rights of control are distributed equally among members on a per membership basis (Ernst & Young, 1995). In the established electoral and decision-making processes, each member is granted a single vote, regardless of their level of investment or patronage (Ernst & Young, 1995; Royer, 1992). Voting rights are not apportioned according to the risks assumed by the members, nor according to the amount of business transacted by the members.

The principle of democratic member control that is adopted by most traditional cooperatives is the foundation behind this arrangement. The principle is hinged on the belief that no

member should have a greater voice, through greater voting power, than any other member (Hoyt, 1996). Robotka (1947), as cited by Royer (1992), has stressed that, by design and purpose, cooperatives are meant to be focused on the users' interests not on the owners' profits. Distributing voting rights equally amongst members ensures that the members' interests as users take precedence over their interests as investors.

Members who have disproportionate patronage and investment are likely to support policies with minimal risks and short-term rewards. Hence, policies relating to long-term investments might change drastically, or shift the benefits away from what was originally decided on. Long-term rewards are unattractive for members because they know that their influence is diluted. Diluted control rights fosters apathy among members (Nilsson, 2001). Members feel that their diluted voice will not make an impact on the decision-making processes (Borgen, 2004).

2.3 Institutional problems due to property rights structure

Literature has shown that the property rights structure distinct to traditional cooperatives is a result of the influence of the principles governing cooperatives as a whole (Royer, 1992; Staatz, 1987). Royer (1999) has noted that these distinctive arrangements create inefficiencies and limits a cooperative's ability to effectively compete in the market. Specifically, these property rights arrangements result in the development of institutional problems which affect members' inducement to invest in the cooperative (Cook & Iliopoulos, 1998, 1999).

Section 2.2 outlined the typical property rights arrangements prevalent in traditional cooperatives. Scholars have identified five institutional problems arising from the constraints to property rights. The first three property rights constraints – free-rider problem, horizon problem and portfolio problem – inhibit a cooperative's ability to raise capital (Borgen, 2004; Cook, 1995; Cook & Iliopoulos, 1998). The remaining two property rights constraints – control problem and influence problem – affect a cooperative's decision-making processes (Borgen, 2004; Nilsson, 2001).

2.3.1 Free-riding problem

A notable effect of the prevailing property rights structure is the free-rider problem. Free-riding occurs when patrons, either member or non-members, do not bear the full cost of their usage of the cooperative's products or services. This means that owners do not receive the full benefits of their investments (Cook, 1995; Cook & Iliopoulos, 1998, 2000; Royer, 1999). Herein, costs incurred, and benefits reaped from such costs are not aligned; instead they are disparate (Borgen, 2004; Evans & Meade, 2005, p. 21). Free-rider problems can either be internal or external. An internal free-rider problem occurs when new members acquire ownership rights held by current members at costs that are not approximately representative of the market value of these rights (Vitaliano, 1983). An external free-rider problem occurs when members and non-members alike partake of the cooperative's products or services at the same costs or when members do not possess transaction-based advantages over non-members in the use of the cooperative's products or services (Rosairo et al., 2012). In short, external free-riders do not contribute to the necessary capital to make the products or services available in the first place. The cost incurred to deliver the products or services are borne solely by the members.

This problem occurs because the residual claim rights to returns are not proportional to investment and the investment level is not proportional to patronage. Since the basis for the gains of the residual claim rights to returns is the level of patronage (Royer, 1999), a high-user member receives a bigger share of the cooperative's investments returns without the corresponding proportionality in the contribution to said investments. The non-appreciable and non-tradeable nature of the residual claim rights to returns further encourages the free-rider problem (Borgen, 2004; Cook, 1995). Changes in the value of the cooperative's future cash flows are not reflected in the current equity value (Cook & Tong, 1990); hence, new members obtain the same patronage rights and residual claim rights to returns as existing members through the same nominal equity contribution (Royer, 1999; Vitaliano, 1983). New members free-ride on the gains made by the equity contributions of existing members; this practice dilutes the existing members' ability to fully enjoy the rewards of their contributions. As a result, existing and more tenured members' appetite to invest is severely diminished (Cook, 1995; Ernst & Young, 1995; Royer, 1999).

Consequently, generating internal equity becomes tedious and costly for the cooperative. As a result of the dilution of benefits, members are discouraged from investing more than the required minimum. Instead, members opt to free-ride on any expansion through the contributions of other members. Members' investment behaviour, especially for the more senior members, would also tend to favour decisions that would increase current cash flows for the member, rather than retaining earnings (Vitaliano, 1983). This practice results in inefficiency (Borgen, 2004) which will ultimately affect performance. It also results in apathy in the membership which consequently give rises to weak membership commitment to patronise (Borgen, 2004; Nilsson, 2001). The free-rider does not equitably contribute to the acquisition of assets and does not equitably bear the losses of cooperative underperformance. As a member's investment is usually just the required minimum, there is no compulsion for the member to resolutely patronise the cooperative's business/es.

2.3.2 Horizon problem

The horizon problem occurs when prevailing property rights arrangements regarding residual claim rights to returns discourage members from investing in the cooperative's long-term projects (Cook & Iliopoulos, 2000). This is because the horizon period of the residual claim rights to returns to an asset is "shorter than the productive life of that asset" (Porter & Scully, as cited by Cook, 1995, p. 1156). Valentinov (2007) has pointed out that a member's claim over their investment is bounded by the time horizon of their expected membership, rather than the useful life of the investment. Hence, the claim on the net cash flow generated by an asset is expected to terminate before the end of the asset's useful life, resulting in a net gain captured by the claimant that is less than the potential gain generated by the asset (Royer, 1999).

As the ownership rights and horizon are limited by patronage, the benefits that members enjoy from individual investments in the cooperative are only valid when they are able and willing to patronise the cooperative's businesses (Royer, 1999; Vitaliano, 1983). Since the residual claim rights to returns are not appreciable and redeemable, the value of these benefits does not reflect the potential future gains of these investments. Consequently, the horizon problem is bound to occur. The limitations on the transferability, that is, non-tradability, and the absence of a secondary market to trade residual claim rights to returns at

market prices also contributes to the horizon problem (Cook, 1995). Non-tradability of residual claim rights to returns inhibits the member from disposing their claim rights at market value, reflecting accrued and future value, thus discouraging long-term investments and growth.

As a result, members are likely to underinvest on assets with long-term payoffs. Instead, members are more inclined to invest in short-term projects (Borgen, 2001; Vitaliano, 1983). This is because short-term projects enable them to capture a greater portion of the gains of the project compared to long-term assets. Members' short-sighted perspective also means that they are less concerned about the cooperative's long-term success and more concerned about their immediate profit, either through transacting with the cooperative or its competitors. Moreover, members are more likely to demand that a higher proportion of the earnings be distributed rather than retained (Cook, 1995). Management are also encouraged to prioritise equity retirement over equity build-up (Royer, 1999). Cooperatives are less likely than other firms to undertake long-term investments, particularly in intangible assets, because members do not have the incentive to contribute to growth-oriented but risky investments (Cook & Iliopoulos, 1998). This prevents cooperatives from choosing the optimal mix of inputs and results in allocative inefficiency (Royer, 1999).

2.3.3 Portfolio problem

A portfolio problem exists when the property rights prevents members from freely adjusting their investment levels in the cooperative to reflect their risk preferences (Cook, 1995; Ernst & Young, 1995). Members have different risk and reward profiles due to their different investment and patronage horizons in the cooperative (Borgen, 2004). However, members do not diversify their individual investment portfolios according to risk capacity and preferences because of the property rights constraints in the cooperative.

The benefits gained by members rely on their level of patronage; hence, an increase in the level of investment, regardless of usage level, will not be reflected in a proportional increase in the benefits gained. Members who have a greater risk appetite and who may have surplus capital are reluctant to invest more than what is required due to the inability to capture the gains of additional investments. Restrictions on appreciation, transferability, and liquidity of

the ownership rights contributes to this portfolio problem (Cook, 1995; Royer, 1999) because these property rights arrangements further disable members from capturing accrued and future gains in their preferred investment portfolios. Being unable to trade their shares means that members are limited in their ability to diversify, upgrade or downgrade freely, their portfolios at any given time (Borgen, 2004; Ernst & Young, 1995; Hendrikse & Veerman, 2001a). The restriction of ownership rights to patrons also prohibits financially able and greater risk appetite non-patrons from investing in the cooperative. Investment risks, which could be high, are borne solely by members, resulting in members' further reluctance to invest purely based on risk appetite (Royer, 1999). Instead, members are more likely to favour decisions with lower levels of risk (Borgen, 2004; Vitaliano, 1983).

2.3.4 Control problem

The fourth institutional problem, the control problem, is present in all organisations where there is separation of ownership and control. Separation of ownership (principal) and control (agent) paves the way for risks and inefficiencies (Ernst & Young, 1995) resulting from the principal and the agent's divergent interests (Cook, 1995; Royer, 1999). When agents control the decision management, then they are more likely to focus on improving their gained value at the expense of the principal's interests. Consequently, the principal, represented by the board, will try to exercise control over the decisions made by the agents to regulate the latter and to ensure that the interests of residual claimants are protected (Vitaliano, 1983). This incurs costs because resources are directed towards monitoring and controlling the agent (Borgen, 2004).

Although the control problem is common to all forms of organisations, this problem is more serious in traditional cooperatives because of the prevailing property rights arrangements (Royer, 1999). The absence of secondary markets to trade equity deprives members of an external channel to measure the value of the cooperative and to reflect their satisfaction, or dissatisfaction, with the cooperative's performance (Cook, 1995; Ernst & Young, 1995; Royer, 1999). As a result of the restrictions on transferability, a cooperative is also unable to introduce performance-based incentives that would align management interests with the shareholders'; that is, allocation of shares in the cooperative as rewards for performance (Ernst & Young, 1995). In effect, this limits their ability to attract and retain quality

management (Royer, 1999). Cooperatives are also hypothesised to be technically inefficient because of the transferability problem. As a cooperative share is both non-transferable and non-appreciable, cooperatives are unable to rely on share prices as a barometer of performance (Ernst & Young, 1995). As ownership is generally dispersed over many members, individual members have limited incentives to monitor performance (Royer, 1999). In addition, as the ownership rights are limited to patrons, the principal's representatives (board) are more likely to lack the specialist skills needed to effectively manage the cooperative in a competitive environment (Royer, 1999).

This institutional problem increases transaction costs, in particular, agency costs, within the organisation (Cook & Iliopoulos, 1998). These costs are incurred due to the need to monitor and control the management to reduce opportunistic behaviour and to align management objectives. As a result, efficiency and performance are greatly affected. The lack of clear control mechanisms can encourage managers to shirk their obligations and pursue interests inconsistent with members' interests (Royer, 1999).

2.3.5 Influence problem

The influence problem occurs because members' interests in the cooperative's business will always be aligned with their self-interests; they may, in fact, diverge from the interests of other members. Differing sets of objectives amongst members may lead to diverse influence activities. As decisions made could have a favourable effect for one group of members and an adverse effect on another group, members are expected to engage in activities designed to sway the decisions towards their preferences and what will benefit them the most (Cook, 1995; Royer, 1999; Valentinov, 2007).

Equal distribution of residual rights of control affects the magnitude of the influence problem (Mwayawa et al., 2018). Democratic voting means that each member has an equal contribution in the decision-making processes of the cooperative, regardless of the level of patronage; that is, engagement with the cooperative's business, or level of investment; that is, risks assimilated. The influence problem increases the transaction costs within a cooperative because there is a coordination cost associated with influencing divergent members' decision-making (Cook & Iliopoulos, 1998).

2.4 Governance practices in traditional cooperatives

Section 2.3 discussed how the property rights structure that arose from ill-defined ownership rights gave rise to institutional problems in traditional cooperatives. These institutional problems have tangible effects on a cooperative's performance. This section discusses how governance practices in cooperatives mitigate or exacerbate the effects of the institutional problems on a cooperative's performance.

Chaddad and Iliopoulos (2013) found that, rather than market contracting cost, ownership costs primarily influence the choice of governance in a cooperative. Bijman et al. (2014, p. 641) have defined governance as the "system of decision-making, direction and control of an organisation". In short, governance is the allocation and regulation of the formal and effective decision authority (Hendrikse & Veerman, 2001a). In defining governance structure, Yin and Zajac (2004), not only included the system of decision-making, but also operational control and incentives. Governance covers who makes the decisions, who implements the decisions made, who monitors and controls the decision-makers and decision-implementers, how the decisions are made, and how the decision-makers and implementers are monitored and controlled. Good governance is characterised with structuring practices with transparency, and accountability (Chibanda et al., 2009).

2.4.1 Allocation of decision rights – the governance model

The basic model of cooperative governance features two decision bodies – the General Assembly (GA) and the Board of Directors (BOD) (Chaddad & Iliopoulos, 2013). The GA, comprised of all members of a cooperative, hold the residual rights of control. Due to their diverse and diffuse membership, participation in decision control is often costly, time-consuming and inefficient (Fama & Jensen, 1983) and can result in slow reactions to dynamic market movement (Hendrikse & Veerman, 2001b). Hence, the GA only performs crucial decision control functions. Decision control, typically exercised by the GA, are primarily *ex post* and include the election of the directors and the ratification of cooperative bylaws, annual reports, and other major organisational changes (Chaddad & Iliopoulos, 2013).

Effective and formal control of the cooperative is delegated primarily to the BOD (Hansmann, 1996). Traditionally, the directors are democratically elected by and from the membership

(Bijman et al., 2014; Bijman et al., 2012). In other words, the BOD's composition is limited to members only. This is in accordance with the cooperative principle of being user-controlled and the ICA principle of autonomy and independence (Hoyt, 1996). As elected representatives of the GA, the BOD holds both formal and effective authority in the cooperative. The directors collectively exercise *ex ante* decision control on operational and strategic decisions (Chaddad & Iliopoulos, 2013) with the key objectives of safeguarding the interests of members as users of the cooperative's business (Bijman et al., 2014; Bijman et al., 2012) and driving organisational performance (Cornforth, 2004).

When decision management is delegated to managers, the basic model of governance is expanded to three decision bodies. Decision-making powers, such as initiation and implementation (Fama & Jensen, 1983), are transferred from members to managers (Bijman et al., 2012). Although strategic and policy decisions are determined by the BOD, it is the manager who makes operational decisions and carries out the BOD's decisions. In a traditional cooperative, adding more decision bodies complicates the existing control problem. Additional costs are incurred in aligning the interests of the members, BOD, and the management team (Bouamra-Mechemache & Zago, 2015). There are also costs involved in monitoring the actions of the decision bodies and in acquiring information across decisions bodies.

2.4.2 Board of directors – composition and effectiveness

Safeguarding members' interests, which are divergent and misaligned with the management's profit-based goal, is a key function of the BOD because profit maximisation is not the members' only objective (Bouamra-Mechemache & Zago, 2015). Furthermore, there is no share market that will monitor management performance (Cornforth, 2004). As there is no external mechanism to assess performance, the introduction of strategies and policies that will promote efficient operations rests heavily on the BOD (Fulton, 2001).

Given the critical role that the BOD plays in governing the cooperative, it is important to qualify who can govern the cooperative. The partnership model of governance contends that the selection of directors should be based on expertise and contacts that will enhance the organisation's value rather than monitor management (Cornforth & Edwards, 1998). The

director's skills and experience determine the performance of the organisation. Without these qualifications, the BOD will be ill-equipped to monitor and assess management behaviour, and advise and support management decisions. Board quality is affected by the director qualification requirements, board selection processes (Grashuis, 2018), and board processes (Cook & Burrell, 2013; Cornforth, 2004).

2.4.3 Mechanisms to monitor and control

Not only does a secondary share market measure the current and future value of the cooperative, but it also acts as a measure of the management's quality (Ernst & Young, 1995). The absence of a secondary share market means that members do not have a straightforward measure to appraise performance (Bijman et al., 2014; Cornforth, 2004). There is also no explicit and extrinsic way for the cooperative to reward or sanction good or bad management (Bouamra-Mechemache & Zago, 2015). Internal control systems serve as the primary mechanisms to discipline or reward decision-makers and decision-implementers in the cooperative. There are a variety of internal monitoring and control mechanisms that the members can use to regulate decision-makers and decision-implementers in the cooperative (Hendrikse & Veerman, 2001a) as follows.

The right to elect the BOD provides the GA a mechanism to exercise decision control. It provides members with a sense of ownership (Benson, 2014). Members can hold officials to account for unsatisfactory performance by voting against them or by removing them from office. Voting via secret ballot in the election of directors is a hallmark of good governance (Rosairo et al., 2012) because confidentiality vested by secret ballots allows members to vote with minimal influence or pressure from powerful individuals (Chibanda et al., 2009).

Access to information about the cooperative's operational and financial standing is another method that members can use to monitor and control cooperative decision-makers. Information is made accessible and available when Annual General Assemblies (AGMs) are conducted and when members can access and assess the minutes of board meetings and other documents at a convenient time. When these activities are conducted regularly and easily for members, there is transparency (Rosairo et al., 2012). Governance practices that

promote transparency enhance members' trust in the cooperative processes. These also improve members' loyalty to the cooperative.

Regular financial audits are objective mechanisms to ensure that cooperative leaders and staff can be held accountable for the decisions they make, particularly in relation to the cooperative's finances. With financial audits, cooperative officials and staff are compelled to act prudently and use resources efficiently and to the best interests of the members (Benson, 2014).

Likewise, the BOD have the power to select and replace managers, formulate and enforce internal performance measures, authorise special audits, and appraise and endorse investment and operating proposals by the manager (Hendrikse & Veerman, 2001a). The BOD process of appointing and removing managers promotes accountability (Rosairo et al., 2012). It provides the BOD with a mechanism to retain quality management and to discipline an underperforming manager. However, the relationship between the BOD and management is dynamic, fluctuating between control and collaboration; hence, there is a need to regularly review the relationship between the two (Cornforth, 2004) to ensure that the appropriate behaviour prevails according to the decision requirement.

Governance practices that embrace accountability and transparency improve a cooperative's performance. Weak governance structures will have negative implications since managers can pursue activities that do not serve the best interests of the members (Bouamra-Mechemache & Zago, 2015). Without measures of accountability and transparency, members cannot reliably trust the information provided to them and thus, cannot make informed decisions.

2.5 Performance measures

As a user-oriented organisation, a cooperative is perceived to be successful if its members access products and services better than if acquired individually, outside the cooperative (Soboh et al., 2009), or through other market channels (Sexton & Iskow, 1993). This means that the net benefits gained by the cooperative's members is greater compared to other alternative means. A cooperative's performance is measured to assess if it is achieving its

objectives or not. As cooperatives have varied objectives, including, but not limited to, profit maximisation, and performance measurement is linked to its objectives (Soboh et al., 2009), cooperative scholars have used different means to measure performance (Benos et al., 2016). This research uses financial ratios, which is a commonly used measure to evaluate cooperative performance (Bond, 2009; Soboh et al., 2009), and growth trends to measure the examined cooperatives' performance.

Profitability ratios, such as the return on equity, assess a cooperative's ability to generate profit from its capital. Since cooperatives are assumed to have a zero-profit objective, profitability is expected to be lower than IOFs in the same industry (Evans & Meade, 2005, p. 53; Soboh et al., 2009).

Leverage, solvency, and liquidity reveal how a cooperative is financed and how well it meets its financial obligations (Evans & Meade, 2005, p. 53). Leverage refers to the proportion of debt used to finance the cooperative's operations. Solvency indicates a cooperative's ability to service its long-term liabilities and ability to accomplish long-term growth. Liquidity reflects a cooperative's ability to meet its current obligations (Evans & Meade, 2005, p. 53; Parliament et al., 1990; Rosairo, 2010; Soboh et al., 2009). In traditional cooperatives, property rights constraints limit their ability to generate internal capital. Hence, cooperatives are expected to have higher leverage ratios than IOFs. Resulting from moral hazard, cooperative managers perceive that, in the event of financial stress, cooperative mergers rather than bankruptcy are the likely outcome (Gentzoglanis, 1997). Due to a higher reliance on debt capital and moral hazard problems, solvency and liquidity ratios are expected to be lower in traditional cooperatives than in IOFs (Evans & Meade, 2005, p. 53; Parliament et al., 1990; Soboh et al., 2009). Further, due to the cooperatives' zero-profit objective, net earnings are also expected to be low relative to IOFs; hence solvency is also low (Parliament et al., 1990).

2.6 Research questions

NIE theory predicts that the 'weak' property rights and governance practices characterising traditional cooperatives will diminish a cooperative's ability to raise equity and debt capital, to comply with supply contracts through stable and reliable operations, and to retain good managers or sanction bad managers. The restrictions on ownership, on ownership transfers,

and on benefits, and the disproportionality of patronage, investment, and benefits, dissuade members from actively participating – through fully investing, and consistently and reliably patronising – in the cooperative’s business.

Poor governance practices further exacerbates the institutional problems for three reasons. First, it limits the GA’s and BOD’s ability to monitor and control performance. Second, it reduces members’ trust and loyalty to the cooperative processes and operations. Third, it increases coordination costs due to increased costs in accessing and distributing accurate information. In turn, poor governance practices further constrain the cooperative’s ability to finance value-adding assets, to build long-term trading relationships with premium buyers, and to grow the value of the cooperative’s equity.

Given the oscillating path of the cooperative movement in the Philippines, and the traditional cooperative principles entrenched by its current legislation, this research asks the following questions:

1. What institutional arrangements characterise rice farmer cooperatives in the Davao del Norte province?
2. How do the institutional arrangements impact the performance of these cooperatives?
3. Why do these institutional arrangements impact the performance of these cooperatives?
4. What changes in these arrangements would help to improve the performance of rice farmer cooperatives?

Having reviewed the relevant literature, Chapter 3 describes the research methods used to gather and analyse relevant data in ways that answer these research questions.

Chapter 3 Methods

Chapter 2 reviewed the literature and found that there is a relationship between a cooperative's property rights, its governance practices, and its performance. The fundamental purpose of this research is to examine the institutional arrangements of rice farmer cooperatives in the Davao del Norte province, located in the Philippines, and to determine if and how these arrangements affect the performance of these cooperatives. This chapter discusses how multiple case studies and the chosen methods answered the research questions posed in Section 2.6.

3.1 Study area

The research was confined to the Davao del Norte province, mainly because rice is relatively important in this province, ranking amongst its top three crops, and partly because the research team already had social and professional networks in the province necessary to support the research. Familiarity with the local community, culture, and practices proved advantageous. The researcher and research team easily established rapport and trust with government offices, farmer cooperatives, and respondents.

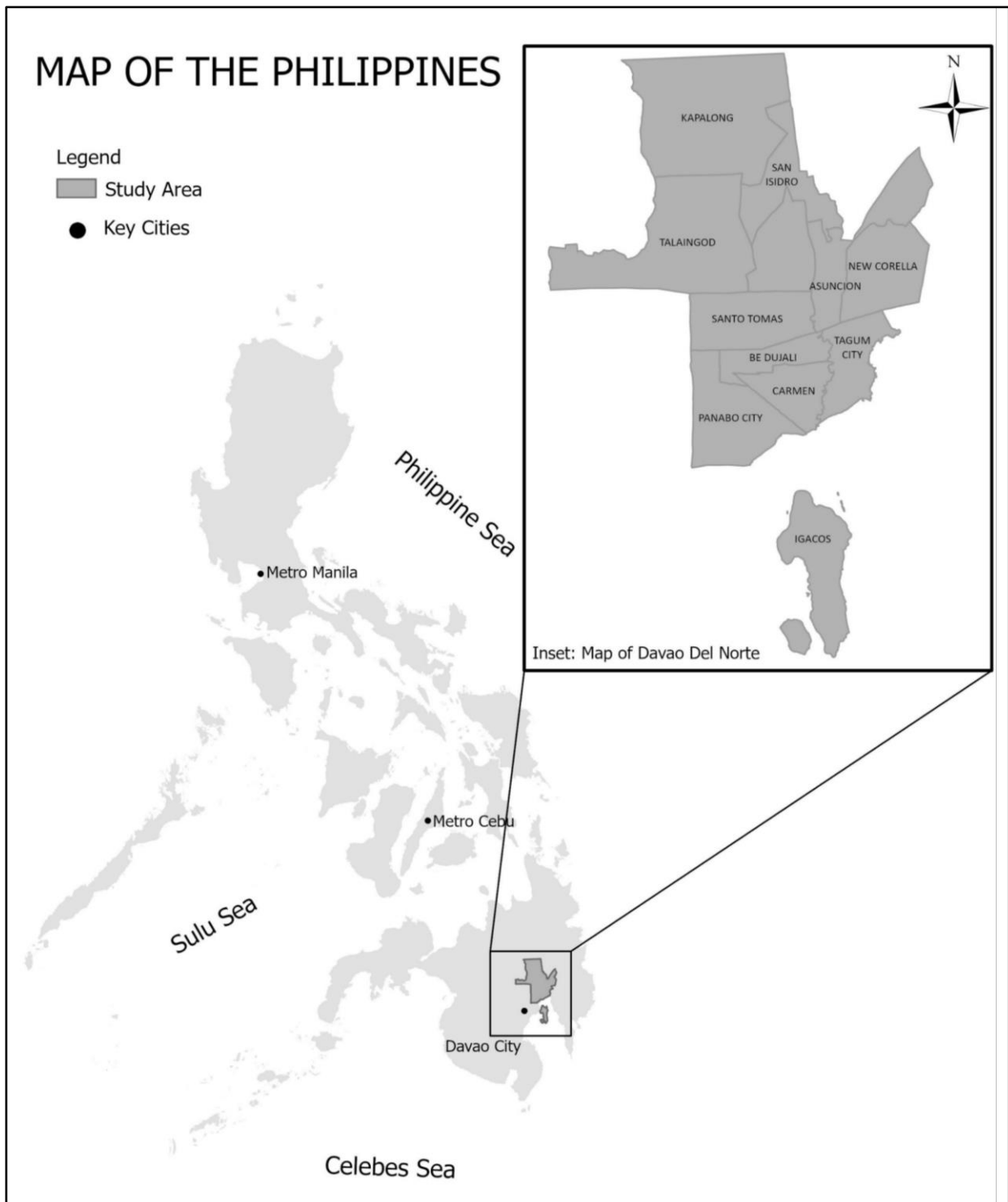
Davao del Norte is one of the 83 provinces in the Philippines. Talaingod, a mountainous municipality on the province's border, and the island municipality of IGaCoS (see Figure 3.1) were excluded from the study area to help control for the effects of different agro-climatic conditions on cooperative performance.

3.2 Research design

The case study approach is an appropriate research method to answer explanatory 'how' and 'why' research questions (Yin, 2018, p. 10). It involves the contextual examination of complex and bounded, single or multiple cases to provide an holistic analysis using observational data (Gerring, 2017, pp. 28-30; Tight, 2017, p. 17). It is thus well suited to this research which posed both descriptive, 'what institutional arrangements characterise rice farmer cooperatives', and explanatory, 'how and why do these arrangements affect a cooperative's performance' questions.

Figure 3.1

Map of the Philippines with an Expanded View of the Davao del Norte province.



Note: From Author, 2020

Multiple cases were studied to facilitate robust and compelling answers to the research questions (Burns, 2000, p. 464). Multiple cases strengthen research interpretations, by either having similar observations amongst cases or yielding contrasting findings with predictable

reasons (Yin, 2003, p. 47). The presence of similar arrangements in several cases with similar performance levels strengthens the assumption that institutional arrangements affect performance. Rice farmer cooperatives are the units of analysis, cases, to be studied.

The cases were purposely selected to give the researcher some scope to compare cases that differed on the issues under investigation while controlling for the effects of other factors (Seawright & Gerring, 2008). Thus, cases with similar performance levels were selected to predict similar results, literal replication. Cases with variable performance levels were also selected to provide contrasting but predictable observations, theoretical replication (Burns, 2000, pp. 463-464; Yin, 2003, p. 47). This method improves design validity and reduces the chances of accepting or rejecting a proposition erroneously (Tight, 2017, pp. 162-164).

3.3 Quality of the research

To establish the quality of the research, validity and reliability tests were integrated into the research design.

Validity refers to research that has properly collected and interpreted its data so that the conclusions accurately reflect the real world that was studied. To improve the research validity, the research followed the recommendations made by Yin (2003, pp. 34-37). First, we collected evidence from different sources (see Section 3.5). Doing so enabled data triangulation, a strategy recommended to improve the construct validity of case study research (Bloomberg & Volpe, 2019, p. 193; Burns, 2000, pp. 419-420; Flick, 2007, pp. 43-44). Second, during analysis, the research used pattern matching to ensure internal validity. Third, the researcher ensured external validity by comparing findings with NIE theories and by observing replication of findings in multiple cases.

The research also considered reliability tests to minimise biases and errors. If another study is conducted using the same methods, then they should achieve similar results and come to similar conclusions (Yin, 2011, p. 78). To address this, the research used a comprehensive interview schedule (see Appendices 1-3). The researcher also used a case study database to collate and organise the collected field data.

3.4 Replication design

The research used replication logic rather than sampling design. As Yin (2003, pp. 48-51) has explained, the use of sampling design is not appropriate for case studies. The researcher kept the logic of replication in mind when selecting the cases and the respondents. Each case is considered a whole study in itself, which provides convergent evidence for the research's propositions. As such, conclusions from one case are expected to be replicated by the other cases.

3.4.1 Selection of the cases

The population was defined as all rice farmer cooperatives operating in the Davao del Norte province. A list of these cooperatives was compiled from records maintained by the Provincial Agriculture Office (PAGRO) and the CDA. While neither of these organisations had a complete list of all cooperatives in the province, it was possible to cross reference their lists and identify a total of nine rice farmer cooperatives, all of which, at the time of data collection, operated under similar agro-climatic conditions and benefited from similar levels of government support.

Four of these nine cooperatives were selected and studied between July and December 2020. The selection was purposeful in that prior information about each cooperative's performance and membership were used to ensure differences in performance across cooperatives of similar and different sizes. This prior information came from PAGRO and CDA estimates of cooperative asset values and membership size, and the subjective assessment of performance made by a key informant at PAGRO. Influence problems are a common cause of failure in farmer-owned organisations and are more likely to occur in organisations with larger membership, particularly if their governance practices do not adequately separate ownership from control (Rosairo et al., 2012). Size of membership was thus also a consideration in the selection process. The research also considered the cooperative's willingness and ability to participate in the study.

3.4.2 Selection of respondents

Respondents selected for interviews were chosen from within each of the four case studies. The selection process was purposeful because the researcher recognised that not all

members of the cooperative would be able to provide the full range of data required. The researcher also intended to triangulate the data provided from all types of respondents, patrons, directors and managers. It was assumed that cooperative officials, the directors and manager, would have better knowledge of their organisation's institutional arrangements. Likewise, the researcher believed that patrons would provide better information about incentives to invest and patronise, and the benefits associated with being a member. The cooperative's manager and chairperson were prioritised for interviews and were asked to nominate a small number of members who could be approached for personal interviews. The researcher also used snowball sampling in the selection of members; respondents in the first round of interviews were asked to identify other potential respondents capable of providing rich data (Bloomberg & Volpe, 2019, p. 385).

3.5 Sources of data

Through converging lines of inquiry, information from multiple sources can be triangulated (Burns, 2000, p. 419). As discussed in Section 3.3, this research employed data triangulation to ensure the findings' validity and reliability. When data from one source corroborates data from another source, the conclusions are considered more robust and convincing. To achieve this, the research considered two sources of evidence – primary data from interviews and secondary data from documents. Data collection was conducted using the help of hired and trained research assistants.

3.5.1 Interviews

Burns (2000, p. 467) has noted how valuable interviews are because “most case studies are about people and their activities”. It is paramount to capture the insights and perspectives of the individual respondents who have first-hand experience of the practices within a specific cooperative. In-depth information required to describe and explain phenomena are ideally elicited using techniques such as personal observation and personal interviews with key informants. Researcher-respondent interaction is highest when interviews are conducted face-to-face, rather than virtually. Likewise, the elicited information is rich and detailed (Bloomberg & Volpe, 2019, pp. 193-194; Rea & Parker, 2005, p. 19). However, because the researcher was living overseas, hired research assistants conducted the face-to-face interviews. Video conferences were also organised for the interviews of selected key

informants, the directors and managers. During the later stages of data collection, new COVID-19 guidelines in the Philippines restricted the research assistants' movement and meant that they could not conduct face-to-face interviews. To resolve this, later interviews were conducted over the phone.

Every effort was made to hire and train experienced research assistants who were familiar with the study area and the respondents (Rea & Parker, 2005, p. 20). These circumstances favoured the use of semi-structured interviews to elicit both qualitative and quantitative data. This mix of data types helps to improve the research's internal validity as one type of data substantiates the other (Yin, 2011, p. 291). Semi-structured interview schedules were developed for each type of respondents – directors, managers, and patrons (see Appendices 1-3). Interview schedules were drafted and pre-tested, first with the research assistants and then with respondents in the first case study. Pre-testing was designed to improve the clarity, acceptability and comprehensiveness of the final interview schedules.

3.5.2 Documents

The research assistants gathered additional primary data through personal observation of each case study's physical assets, and secondary data from each case study's own documents – annual reports, articles of cooperation, bylaws, and AGM minutes. The use of documents was vital to further corroborate the evidence derived from the interviews. This additional information broadened the scope for data triangulation, improving the quantity and quality of information and its interpretation (Bloomberg & Volpe, 2019, p. 193). The review of these documents further corroborated the evidence derived from the interviews (Burns, 2000, p. 467). Greater and more specific details about practices and events discussed during the interviews were gleaned during the review of the documents.

3.6 Data analysis

Data was analysed in three consecutive steps. First, elements of the qualitative and quantitative data were used to describe each case study, focusing on indicators of performance and the property rights structure and governance practices. The researcher used case descriptions to uncover causal patterns in the data (Yin, 2003, p. 114), which in turn, made qualitative and quantitative analysis easier. Second, the researcher analysed qualitative

data using the pattern matching technique recommended by Yin (2018, pp. 175-178). Third, the researcher analysed quantitative data using hierarchical cluster analysis of variables, rather than the cases themselves.

As Yin (2003, pp. 116-118) has explained, in pattern matching, theoretical propositions relating to a cooperative's performance and its property rights structure and governance practices were tested against the data. Where more and less successful cooperatives exhibit contrasting attributes consistent with NIE theory, the proposition is confirmed. Otherwise, the argument is questioned, and the analysis enters its 'explanation building' phase to account for the inconsistency or to refine the theory. Together, these processes identified the institutional arrangements that could be used to group cooperatives or distinguish them from one another.

The opportunity then arose to supplement and triangulate the results quantitatively using hierarchical cluster analysis. This technique was used to identify relationships between these attributes and variables measuring cooperative performance. In general terms, cluster analysis is a multivariate technique that aims to group entities from a data set into homogenous clusters (Aldenderfer & Blashfield, 1984, p. 7). Entities in the same clusters are expected to be similar with each other in some respect and unlike those from other clusters (King, 2015, p. 2). This technique is used to confirm the presence of clusters, or relationships, hypothesised by theory. Hierarchical cluster analysis is a version of cluster analysis that can be used to group positively related variables, when all the variables are binary, measuring the presence or absence of 'good' attributes. In this instance, the variables measured the presence of 'good' performance, property rights, and governance attributes. Propositions are accepted if the clusters produced by the analysis group performance variables with institutional and governance variables. Rosairo et al. (2012) used this mixed methods approach to triangulate the results of a similar study investigating the failure of famer companies in Sri Lanka.

3.7 Human ethics consideration

Within this study, the researcher considered two levels of confidentiality: that of the organisations involved and that of the organisations' members. The researcher provided each

organisation with written assurance that the study would be conducted in a non-invasive manner, and that any publications emanating from the research would not disclose the organisation's name. The interviewees were also assured that their names would not be recorded or disclosed in any database, report, or publication.

No application was made for Human Ethics clearance as the questions posed to the respondents were of a non-personal nature and related to matters within the respondent's professional competence. This exemption is offered in article 6.2.3 of Lincoln University's policy on human ethics. As the researcher and research assistants come from the study area, they were aware of what the respondents would perceive to be sensitive information.

In the interests of best practice, the researcher and research assistants informed the cooperatives about the nature of the study, its objectives, expectations, and data to be collected in both English and Cebuano. This same information was provided to the respondents before the interviews commenced. All respondents were informed that participation was voluntary, confidential, and anonymous and that verbal informed consent would be sought prior to the start of each interview. Respondents were informed of their right to withdraw from the interview during or after data collection.

The methods outlined in this chapter paved the way for the collection of data analysed in the subsequent chapters. Chapter 4 presents the case reports for each of the cooperatives studied.

Chapter 4 Case Descriptions

This chapter provides a description of the four selected rice farmer cooperatives. Each case description includes a brief history and background of the selected case, its vision, mission, goals, objectives, and its business segments. It discusses the current performance status, property rights structure, and governance practices of each case.

4.1 Case 1: Cooperative A

4.1.1 Background

Cooperative A is a multi-purpose cooperative for farmers and irrigators. It was originally founded by 15 Comprehensive Agrarian Reform Programme (CARP) beneficiaries as a farmers' organisation in 1990. It was registered under the CDA as a cooperative on the 10th of February 1992. The founding purpose was to comply with the Department of Agrarian Reform (DAR) requirement for CARP beneficiaries to organise. Hence, founding and most current members of the cooperative are residents or have farms within a specific geographic location (*barangay*) which is covered by CARP. Seven of the 12 interviewed members joined the cooperative because of the said DAR requirement. The cooperative's office and business coverage are also within the same *barangay*. The cooperative's boundaries are outlined in its amended bylaws (Article II Section 2).

In the late 1990s, the cooperative's membership grew to more than 300 members. The cooperative took out a PhP5.6 million loan from the government-owned and -operated Landbank of the Philippines (LBP) to finance planned expansion into banana production. However, this business failed within a year due to unfavourable weather conditions, exacerbated by officials and members' lack of management and technical knowledge. As a result, the cooperative incurred heavy losses and defaulted on its loan obligations. This failure affected membership morale and confidence, and a considerable number of disillusioned members withdrew from the cooperative.

The cooperative reorganised in 1999 with assistance from the DA and DAR. The LBP also relaxed the cooperative's loan repayment schedule. These changes encouraged former members to rejoin the cooperative. To date, the cooperative has 182 members, two-thirds of whom are farmers. Table 4.1 presents Cooperative A's key features.

Table 4.1*Key Historical and Operational Information of Cooperative A*

| Characteristics | Details |
|---|--|
| Year founded | 1990 |
| Date of registration | February 10, 1992 |
| Facilitating organisation | Department of Agrarian Reform (DAR) |
| Nature of assistance provided | Capacity-building |
| Purpose of foundation | Compliance to DAR CARP requirements |
| Founding membership size | 15 |
| Current membership size | 182 (according to Roster of Members, 2020) |
| Membership qualification and major responsibilities | <ol style="list-style-type: none"> 1. Natural person 2. Residency within a specific geographic territory 3. Subscription of at least 50 shares |
| Key business segments | <ol style="list-style-type: none"> 1. Supply of non-farm inputs 2. Marketing of farm outputs 3. Provision of machinery services 4. Provision of financing services |

Note: Obtained from articles of cooperation, amended bylaws, AGM minutes, and interviews with key informants from Cooperative A.

4.1.2 Vision, mission, goals, and objectives

The cooperative has clearly defined its vision, mission, and goals of promoting a progressive and peaceful community by improving its members' socio-economic condition. Since its inception in 1992, the cooperative has maintained the following objectives:

1. Create funds to grant loans to its members for productive and personal purposes.
2. Supply members and non-members production inputs and market their products.
3. Retail commodities to members and non-members.
4. Lease out post-harvest facilities to members and non-members.

The cooperative's goals have evolved since its inception. The original 15 goals stipulated in the Articles of Cooperation were scaled down to nine. These nine goals were identified and developed by the BOD during the 2013 fiscal year with the participation of the management team and the support from the Davao Federation of Fishers and Farmers' Cooperative (DACOFARM) – a secondary cooperative of which Cooperative A is a member. The new goals were presented to and ratified by the GA in 2014. The goals supported the cooperative's objectives. They also included additional goals that mandate monthly member contributions

and increase the membership size. These goals emphasise the cooperative's need for additional capital.

Despite the recent amendments, none of the goals addressed objective 2, supply of production inputs. Interview responses show that current operations and intended expansions also do not address this objective. An obvious explanation for this apparent omission is that the government provides seasonal inputs such as seeds and fertilisers to members free of charge.

4.1.3 Business segments

Cooperative A's current business segments fall into four categories only: supply of non-farm inputs (objective 3), marketing of farm outputs (objective 2), provision of machinery services (objective 4), and provision of financial services (objective 1). Seeds, fertilisers, and chemicals are provided gratis by government agencies (DA, DAR, and the local government) to Cooperative A. The cooperative subsequently distributes these inputs to its members free of charge. Eight of the 12 interviewed members accessed these government donations through the cooperative.

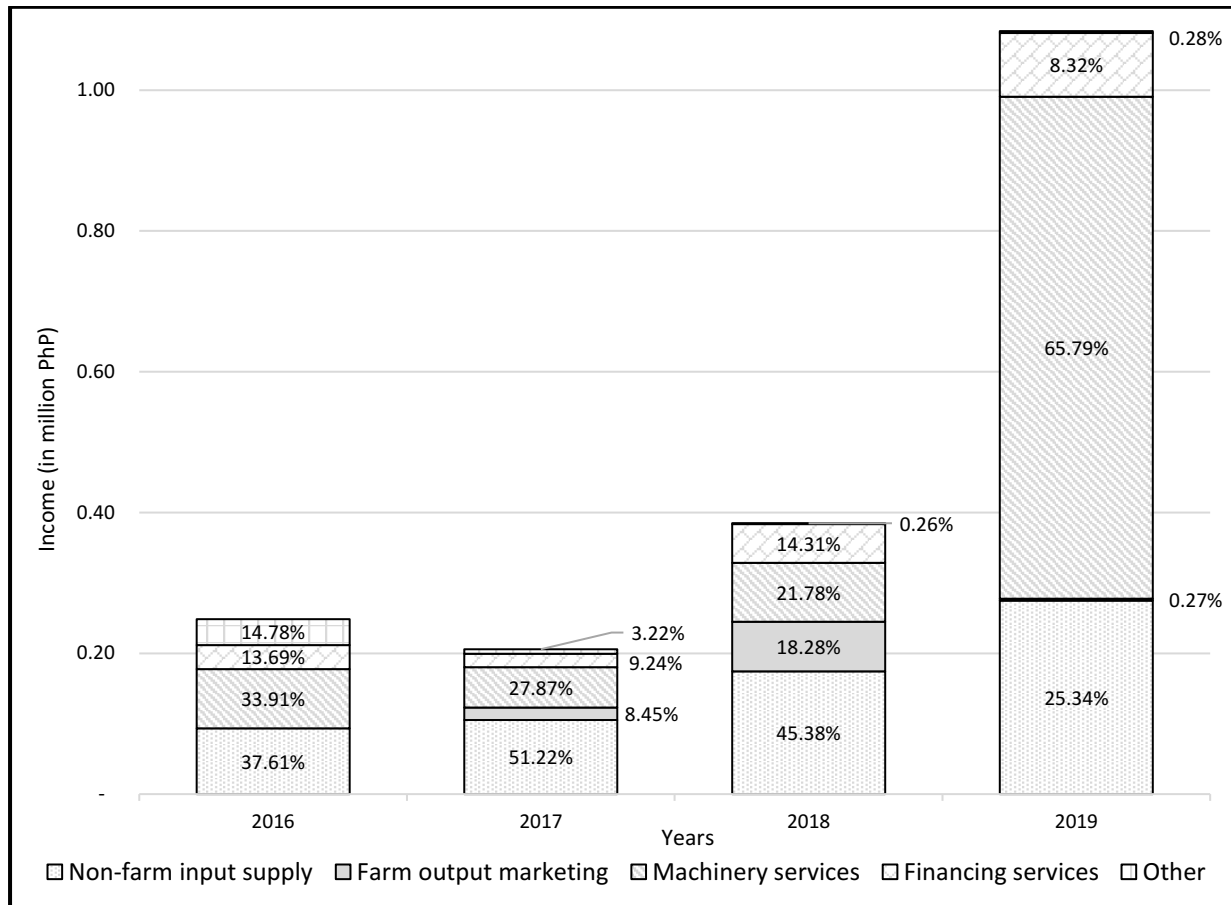
From 2016 to 2018, business segment 1, non-farm input supply, was Cooperative A's primary source of revenue. It contributed more than a third of each year's total revenue (see Figure 4.1). Interviewed members buy their consumer goods from the cooperative; with three-fourths of the members claiming that they do so to increase their patronage refund. Patronage-based benefit claims are reserved for members; however, members and non-members can shop at the store on the same terms.

Except for 2018, business segment 2, farm output marketing, did not contribute significantly to Cooperative A's total revenue. Although this business is part of the cooperative's original goals, three factors hampered its growth. First, the cooperative's rice mill has a small capacity which limits the volume of paddy that can be milled at any given time. Second, the cooperative does not have sufficient capital to competitively buy paddy during the peak harvest period. Third, a sizeable portion of the membership are contracted to traders who

finance their rice production. None of the interviewed members market their farm produce through the cooperative.

Figure 4.1

Total Income and Income Source Distribution for FY 2016-2019, 2019=100



Note: Obtained from Cooperative A's 2017-2019 audited financial statements.

The combine harvester donated by the government in late 2018 more than doubled the cooperative's revenue for 2019. Business segment 3, provision of machinery services, became Cooperative A's primary income source in 2019; it contributed 65.79% of the cooperative's total income which was significantly higher than its 21.78% contribution for 2018 (see Figure 4.1). While both members and non-members can use this service, membership has added benefits. The use of production machinery, which is the floating tiller, 4WD tractor, or hand tractor, are free-of-charge to members provided they use the cooperative's post-production machinery, which is the thresher or combine harvester. The member's service fee, 8% of their total yield, is also lower than of the non-members, 19% of their total yield. The revenue

generated in 2019 encouraged Cooperative A to acquire another combine harvester. Cooperative A intends to develop its machinery services and farm output marketing businesses. A third of the interviewed members were aware of the planned expansions and said that these align with their farming goals.

The members' greater reliance on external financiers, traders, for rice production is also reflected in business segment 4, provision of financial services, low share (less than 15%) of revenue generation. While all of the interviewed members borrowed money from the cooperative, only four did so to finance their production. To encourage members' patronage, in 2019, the loan retention fee was reduced from 5% to 3%.

4.1.4 Level of performance

As shown in Table 4.2, the growth of Cooperative A's assets (0.04%) has been slow for the past four years. Cooperative A has struggled to generate capital to finance growth. Net equity, which includes the members' share capital reported at par value, retained annual earnings, and donated capital, has experienced a downturn of -1.08% resulting in a -19.14% contraction in the per share book value (PhP333.88). Growth in members' share capital (PhP771,420.37) was low at 0.16% per annum. However, this allocated equity capital accounts for only a third of the cooperative's 2019 net equity (PhP2.58 million). A substantial share of the net equity comes from government donations, part of the unallocated equity. It can be surmised that the level of government support enjoyed by the cooperative is high.

Table 4.2

Cooperative A's 2019 Financial Position and Percentage Growth per Annum, 2019=100

| Financial Indicators | 2019 value in PhP | % Growth per Annum^a |
|--------------------------------------|--------------------------|---------------------------------------|
| Total assets (in millions) | 2.94 | 0.04 |
| Total liabilities (in millions) | 0.36 | 0.40 |
| Net equity (in millions) | 2.58 | -1.08 |
| Members' share capital (in millions) | 0.77 | 0.16 |
| Book value/share (PhP) | 333.88 | -19.14 |
| Revenue (in millions) | 1.08 | 55.87 |

Note: Obtained from Cooperative A's 2017-2019 audited financial statements.

^a Values measured on a trend line.

Cooperative A is not heavily reliant on debt financing to fund its operations. Only a fifth of the cooperative’s growth is financed by debt (see Table 4.3). Solvency ratios, debt-to-assets and debt-to-equity, are below the acceptable range. The low debt-to-equity ratio indicates that the cooperative is borrowing conservatively. For the past four years, the cooperative did not report any long-term debt financing. Cooperative A was able to maintain its liquidity ratios, current ratio and quick ratio, just slightly higher than the acceptable range. This means that the cooperative is liquid. However, more than half of the cooperative’s current assets are loan receivables. If there is high incidence of past due loans, the cooperative may struggle to convert its assets to cash and risk its liquidity position. Both profitability ratios, return on assets and return on equity, show signs of growth. This has been brought about by the sizeable growth of revenue at 55.87% which resulted in a higher net surplus. Though it is improving, return on assets, has remained below the acceptable range; however, the return on equity for 2019 grew to acceptable levels. It is also better than the rates offered by the bank (4.1%).

Table 4.3
Cooperative A’s Predicted Financial Performance for 2016 and 2019^a

| Financial Ratios | Acceptable Range | 2016 | 2019 |
|--|-------------------------|-------------|-------------|
| Net profit margin (net income/revenue) (%) | 15-25 ^b | 5.86 | 5.09 |
| Return on assets (%) | 4-8 ^b | 0.17 | 1.50 |
| Return on equity (%) | 3-10 ^b | 1.06 | 6.35 |
| Debt-to-assets ratio | 0.6-0.3 ^b | 0.05 | 0.19 |
| Debt-to-equity ratio | 1.5-0.43 ^b | 0.06 | 0.23 |
| Current ratio | 1.3-2.0 ^b | 3.54 | 1.64 |
| Quick ratio (cash + receivables) | 1 ^c | 2.85 | 1.15 |

Note: Obtained from Cooperative A’s 2017-2019 audited financial statements.

^a Values measured on a trend line.

^b Based on the University of Minnesota Extension’s recommended values.

^c Based on the FAO’s recommended values (1991).

4.1.5 Property rights structure

As stated in the amended bylaws (Article II Sections 3 Item d and 7 Item b), cooperative membership, and hence ownership rights, are limited to users of the cooperative’s businesses. Membership is also limited to natural persons, as required by the law (RA 9520 Articles 14 Section 1 and 23 Section 2i) and as specified in the cooperative’s amended bylaws (Article II Section 2). There is also a geographic limitation to membership: the members reside

within a specific *barangay* within the Davao del Norte province. However, if a member moves from this area they can retain their membership. Thirty-eight members (20.8%) are considered inactive because they no longer patronise the cooperative's businesses owing to distance. To become a member, an applicant must subscribe to at least 50 shares and pay for at least ten shares upfront (Amended Bylaws Article II Section 6). Cooperative A is authorised to issue 40,000 shares valued at PhP100.00 per share. These shares are redeemable and non-appreciable. There is no requisite proportionality between a member's shareholding to their level of patronage.

Interviewed cooperative officials agreed that the foremost hurdle in pursuing expansion is the limited capital: that is, their inability to generate internal capital. Member share capital contributions fund 70%-80% of their annual budget. Cooperative A introduced measures to improve capital accumulation. First, the cooperative mandated its members to contribute monthly to their share capital regardless of their level of patronage or investment preferences. Second, 3% of any amount borrowed by a member is automatically retained; half of it is added to the member's shareholdings. Third, the minimum share capital subscription was increased from 40 to 50 shares. Although members can readily exit and redeem their shares, over the past two years, the cooperative has recorded zero share redemptions. The cooperative does not allow partial redemption of shares. Profits are distributed mostly in the form of cash. Fifty per cent of these payments are based on an individual's patronage level. The remaining half is a dividend on their share capital, which is not proportional to patronage. Both the dividend on share capital and patronage refund were consistently declared and distributed during the annual General Assembly meeting for the past five years. For members with unpaid share capital subscription, profits from dividend on share capital and patronage refund were withheld by the cooperative and used to offset unpaid obligations.

Cooperative A's residual rights of control are distributed equally. Each member, regardless of their patronage or investment level, is entitled to only one vote. This arrangement is mandated by the country's prevailing cooperative law (RA 9520 Article 4 Section 2) and emphasised by the cooperative's amended bylaws (Article II Section 9). As only members have this right, they are the only ones who can nominate and elect directors. However, non-

members, representatives from the DACOFARM, DA, and DAR, attend AGMs and counsel the GA when asked to. The property rights attributes of Cooperative A are presented in Table 4.4.

Table 4.4
Cooperative A's Property Rights

| Attributes | Arrangement |
|--|---|
| Claim to ownership | Restricted to patrons only upon entry |
| Investment proportional to patronage | No |
| Benefits proportional to investment | Yes (Short-term through dividend which is 50% of distributed profits. No capital gains) |
| Redeemable and non-appreciable rights | Yes |
| Control rights are equally distributed | Yes |

Note: Obtained from articles of cooperation, amended bylaws, AGM minutes, and interviews with key informants from Cooperative A.

4.1.6 Governance practices

Cooperative A follows the extended traditional governance structure of most cooperatives: it has a General Assembly (GA), a Board of Directors (BOD) and a management team.

The GA, composed of all members entitled to vote (Amended Bylaws Article III Section 1), convenes annually (Amended Bylaws Article III Section 4). During the annual General Assembly Meeting (AGM), major strategic plans and decisions were presented to and discussed with the GA including presentation and ratification of the annual development plan. This includes the proposed budget for the incoming year and the targeted operational expansions. Respondents attested that major decisions made by the cooperative, such as the ratification of amendments to the constitution and bylaws, policies, strategies, and external party contracts, still rest on the GA. However, depending on the amount, decisions relating to the purchase of substantial assets and operational expenses rest in the hands of the BOD and manager. Respondents can easily discuss and recommend strategies with the directors and operations with the manager. They also have no trouble accessing cooperative documents such as BOD meeting minutes and financial reports. Independently audited financial reports, AGM minutes, and BOD and committee reports are also presented and distributed during the AGM.

Interview results and cooperative documents showed that the cooperative has held AGMs for the past five years. Members receive prior notice, usually a week before the AGM, via

registered mail, mobile messages, social media posts, and word of mouth. Operational and strategic policies presented to and ratified by the GA during the AGM were formulated by the BOD during the monthly BOD meetings. The BOD, together with the elected committee members, are elected by, and from, the GA. Directors and committee members voluntarily vie for the position by lodging their candidacy at least two months before the AGM. When the number of candidates is less than the position contested, filing for candidacy during the AGM is considered valid. The GA cast their vote for directors and committee members via secret ballot. As shown by the AGM minutes and attested by the interviewed members, the electoral process has been considered fair and robust for the past three years. Over this period, a sizeable number of members stood for elections for various positions; six to nine candidates applied for three BOD positions and votes were well-distributed. The GA has the power and ability to remove non-performing directors. In the past, an underperforming director resigned after being advised to do so by the BOD.

The cooperative's day-to-day operations are supervised and managed by the manager and the management team. In Cooperative A, only active members can apply for the manager position. The manager is selected and appointed by the BOD. The manager regularly attends BOD meetings to provide proposals and information to the BOD about how the cooperative operations meet the needs of their members and clients. Consequently, 11 of the 12 interviewed members believed that the manager is qualified to manage the cooperative. The amended bylaws (Article IV Section 4 Item b) prohibit sitting directors from intervening in the cooperative's management. A few years ago, a director was appointed to, and served in an appointive committee, for six months; however, this appointment violated the amended bylaws (Article IV Section 4 Item b). When the violation was uncovered, the director immediately stepped down from the committee.

4.2 Case 2: Cooperative B

4.2.1 Background

Cooperative B is a multi-purpose cooperative for rice seed producers. It was founded as a seed growers' association in 1978 by 30 rice farmers with farms within the Davao del Norte province. It was converted into a cooperative in 1983 and formally registered under the CDA on the 7th February 1992. The cooperative's primary purposes are to provide inputs and

services to ensure that members produce quality rice seeds and to market the seeds produced by its members. Although not stipulated in the cooperative’s bylaws, membership has been, and still is, restricted to rice seed producers farming within the province or the adjacent Davao de Oro province, which was formerly part of Davao del Norte. Current members produce rice for seed purposes only. Marketing of farm outputs, rice seeds, through the cooperative is one of the reasons why the interviewed members joined the cooperative.

During its early years, the PAGRO allowed the then association to use an idle government facility as a temporary office, drying, and storage building. Cooperative B’s improved financial standing allowed them to acquire land and construct their own building and warehouse. It also improved confidence in the cooperative resulting in increased membership. In 2019, the cooperative had 104 members. Key features of Cooperative B are summarised in Table 4.5.

Table 4.5
Key Historical and Operational Information of Cooperative B

| Characteristics | Details |
|---|--|
| Year founded | 1978 |
| Date of registration | February 07, 1992 |
| Facilitating organisation | No |
| Purpose of foundation | Market members’ produce |
| Founding membership size | 30 |
| Current membership size | 104 (according to Roster of Members, 2020) |
| Membership qualification and major responsibilities | <ol style="list-style-type: none"> 1. Natural person 2. Rice seed producer 3. Subscription of at least 100 shares |
| Key business segments | <ol style="list-style-type: none"> 1. Supply of farm inputs 2. Marketing of farm outputs 3. Provision of machinery services 4. Provision of financing services |

Note: Obtained from articles of cooperation, amended bylaws, AGM minutes, and interviews with key informants from Cooperative B.

4.2.2 Vision, mission, goals, and objectives

For the last four decades, Cooperative B’s goals and objectives have consistently upheld the cooperative’s vision and mission of enabling members to produce quality rice seeds to be marketed by the cooperative. The cooperative’s six objectives are listed below:

1. Create funds and savings to provide members productive and personal loans.

2. Procure and market paddy seeds.
3. Engage in paddy and rice trading.
4. Engage in the sale of fertilisers and chemicals.
5. Engage in pre- and post-harvest services.
6. Engage in building a hostel with function hall/room.

While the first five objectives focus on the production and marketing of paddy seeds, objective 6, ratified by the GA in 2019, reflects a divergence in the cooperative's business portfolio. The last objective was introduced to use idle land purchased by the cooperative. As the property is not considered agricultural, the GA agreed to use it for other profit-generating purposes.

4.2.3 Business segments

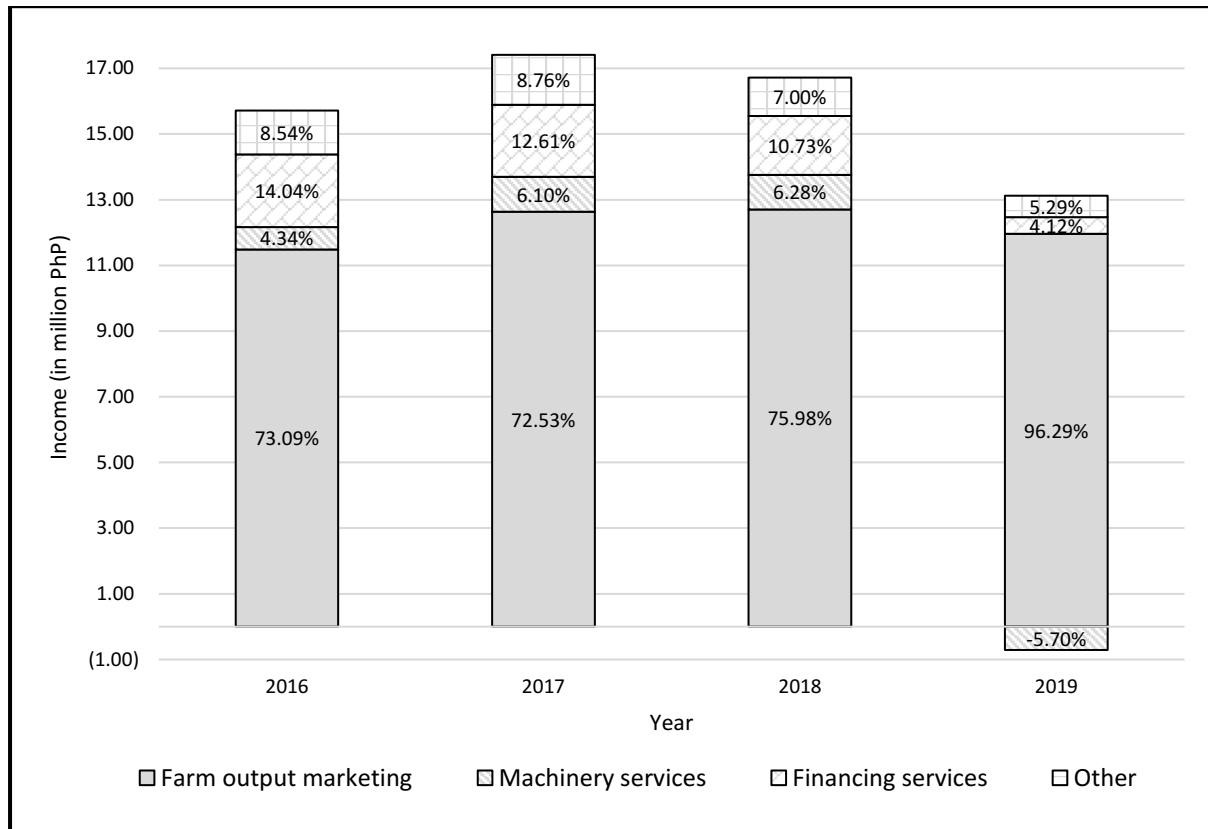
As the end of 2019, Cooperative B had four business segments: supply of farm inputs (objective 4), marketing of farm outputs (objectives 2 and 3), provision of machinery services (objective 5), and provision of financial services (objective 1). These four business segments complement each other in meeting the cooperative's vision of producing high quality seeds.

Business segments 1, farm inputs supply, and 2, farm outputs marketing, are managed and operated jointly by the cooperative. Farm inputs are supplied by the cooperative exclusively to its members to ensure that the latter produce and deliver high quality seeds to the former. Members can acquire farm inputs such as seeds, fertilisers, and chemicals on credit. The total costs of the farm inputs procured by a member are deducted from the sale of farm outputs by the member. Only members can exclusively market their farm outputs through the cooperative. Cooperative B exclusively cater to its members, that is, the cooperative buys rice seeds from members only. This decision was made because the cooperative wanted to safeguard the reputation it established as a provider of high-quality rice seeds. This entails quality monitoring and control, not only during post-production including delivery, sorting, and grading, but also during production in the planting and plant care stages. Accepting produce from non-members removes the cooperative's ability to monitor the production stages. Figure 4.2 shows the considerable contribution of this joint business segment to the cooperative's total income. For the past four years, marketing of farm outputs, together with

supply of farm inputs, has contributed approximately three-quarters of the cooperative's income.

Figure 4.2

Total Income and Income Source Distribution for FY 2016-2019, 2019=100



Note: Obtained from Cooperative B's 2017-2019 audited financial statements.

Business segment 3, provision of machinery services, has contributed less than 5% of the cooperative's total revenue. As explained by a cooperative official, this business segment was initially introduced to provide its members with custom services, mechanised farm operations. However, non-members can also pay for these services during off-peak periods. In 2019, this part of the business incurred a 5.70% loss (see Figure 4.2). According to the manager, there was an unexpected large supply of farm outputs, seeds, compared to the projected and actual market demand. As such, the cooperative had to mill the paddy and retail it as consumer rice to avoid further losses through wastage.

Like business segment 3, business segment 4, provision of financial services, does not contribute much to the cooperative's total revenue. This business segment is available only to members. Members can borrow up to 80% of their share capital contribution at an annual

interest rate of 24%. Despite the high interest rate, a quarter of the interviewed members borrow from the cooperative to finance their rice production.

4.2.4 Level of performance

Over the past four years, Cooperative B's per annum asset growth at 0.21% and net equity growth at 6.30% have been considerable (see Table 4.6). Growth is driven by intensified investing activities and positive net cash flow from operating activities. It appears that the cooperative's operation is financially viable, and that the cooperative's financial health is stable. Unallocated equity, largely consisted of donated tangible assets, make up 29.22% of the cooperative's net equity. Depreciation of these assets resulted in the contraction of the per share book value.

Table 4.6

Cooperative B's 2019 Financial Position and Percentage Growth per Annum, 2019=100

| Financial indicators | 2019 value in PhP | % growth per annum^a |
|--------------------------------------|--------------------------|---------------------------------------|
| Total assets (in millions) | 120.98 | 0.21 |
| Total liabilities (in millions) | 63.23 | 0.45 |
| Net equity (in millions) | 57.75 | 6.30 |
| Members' share capital (in millions) | 40.87 | 0.10 |
| Book value/share (PhP) | 1,413.04 | -7.47 |
| Revenue (in millions) | 12.42 | -6.80 |

Note: Obtained from Cooperative B's 2017-2019 audited financial statements.

^a Values measured on a trend line.

The cooperative's financing behaviour appears to be consistent with its investing activities. Financing activities were positive for the entire period. Although the per annum growth of share capital is only 0.10%, it contributed 70.77% to the cooperative's net equity (see Table 4.6). This figure indicates that Cooperative B is not heavily reliant on donations from government offices. Cooperative B's growth is largely sustained by internally-generated capital. This could be attributed to the per-unit retaining mechanism imposed by the cooperative. For every bag of paddy delivered to the cooperative, PhP100.00 is retained as an additional share capital contribution.

Aside from equity, debt at 47% has also helped to finance cooperative growth (see Table 4.7). Cooperative B's debt-to-equity ratio is also within the acceptable range, at 0.90. It can be

surmised that short-term creditors trust the cooperative's performance; hence, the latter was able to improve its leverage position. Table 4.7 shows that the cooperative's liquidity has declined over the past four years. This could be attributed to the more pronounced change in the cooperative's short-term debts compared to the change in cash and receivables. However, at the end of 2019, the cooperative remained liquid. Cooperative B has kept its profit margin either within or above the acceptable range. However, the operating losses incurred in 2019 resulted in a sharp contraction in their profitability. Their return on assets at 2.09% fell below the acceptable range while return on equity also dropped from 25.18% in 2016 to 5.66% in 2019. Notwithstanding these declines, the cooperative's return on equity is still slightly better than that of the banks.

Table 4.7

Cooperative B's Predicted Financial Performance for 2016 and 2019^a

| Financial ratios | Acceptable range | 2016 | 2019 |
|--|-------------------------|-------------|-------------|
| Net profit margin (net income/revenue) (%) | 15-25 ^b | 44.18 | 16.58 |
| Return on assets (%) | 4-8 ^b | 13.02 | 2.09 |
| Return on equity (%) | 3-10 ^b | 25.18 | 5.66 |
| Debt-to-assets ratio | 0.6-0.3 ^b | 0.17 | 0.47 |
| Debt-to-equity ratio | 1.5-0.43 ^b | 0.21 | 0.90 |
| Current ratio | 1.3-2.0 ^b | 4.42 | 1.50 |
| Quick ratio (cash + receivables) | 1 ^c | 3.50 | 1.09 |

Note: Obtained from Cooperative B's 2017-2019 audited financial statements.

^a Values measured on a trend line.

^b Based on the University of Minnesota Extension's recommended values.

^c Based on the FAO's recommended values (1991).

4.2.5 Property rights structure

Cooperative B's property rights structure is the same as most traditional cooperatives. However, as revealed by the cooperative's documents and confirmed by interviews, Cooperative B introduced mechanisms to reduce the effects of these arrangements.

Article II Section 7 Item b of the Cooperative B's amended bylaws requires members to patronise the cooperative's businesses. Hence, membership and ownership rights is limited to the cooperative's patrons. Although not stated in the amended bylaws, Cooperative B also restricts membership to the next of kin of existing members only. As explained by the chairperson, the cooperative wanted to limit membership to those who have the necessary

technical skills and experience to meet the cooperative's quality standards. In doing so, the cooperative is able to safeguard its established reputation. Members must also be natural persons as required by the law and as indicated in the cooperative's amended bylaws (Article II Section 2). At least two institutions expressed interest in patronising and investing in the cooperative. The cooperative thus introduced a policy that allows institutional partners to register provided that an identified representative, who is a natural person, will complete any transaction in lieu of that institution. Qualified applicants must subscribe at least 100 shares (PhP100,000.00) from the 50,000 shares valued at PhP1,000.00 per share that the cooperative is authorised to issue.

Although membership is restricted to usage, existing members who no longer patronise the cooperative's businesses are not dismissed. The cooperative acknowledges that, despite an absence of patronage, these members' share capital contributes to the cooperative's sustainability and growth. Moreover, according to the manager, these members want to retain membership due to the dividend on share capital gained annually. Members' share capital gives them claim rights to 60% of the net profits. Their patronage gives them claim rights to 40% of the net profits. In short, claim rights are not restricted to patronage. However, patronising members receive a better share of the profits than non-patronising members.

Although members can invest as much or as little as they want, the cooperative is slowly introducing proportionality of investment to patronage. Since 2018, the cooperative has retained PhP100.00 from the sale of each sack of paddy seeds delivered by members to the cooperative. This per unit retained monies is added to the members' share capital and builds the cooperative's internal equity. Although shares are redeemable and non-appreciable, the cooperative does not allow partial redemption.

All members who have paid for 25 shares (PhP25,000.00) enjoy equal voting rights in the cooperative's decision-making processes. They can also stand for and vote for elected positions. This is in accordance with the law (RA 9520 Article 4 Section 2) and Cooperative B's amended bylaws (Article II Section 8). Table 4.8 summarises the property rights attributes of Cooperative B.

Table 4.8
Cooperative B's Property Rights

| Attributes | Arrangement |
|--|---|
| Claim to ownership | Restricted to patrons only upon entry |
| Investment proportional to patronage | Yes (Partly through per unit retains) |
| Benefits proportional to investment | Yes (Short-term through dividend which is 60% of distributed profits. No capital gains) |
| Redeemable and non-appreciable rights | Yes |
| Control rights are equally distributed | Yes |

Note: Obtained from articles of cooperation, amended bylaws, AGM minutes, and interviews with key informants from Cooperative B.

4.2.6 Governance practices

Cooperative B has adopted an extended traditional governance model, the GA, the BOD and the management team, to allocate control rights. The GA, the highest governing body of the cooperative, consists of all members entitled to vote (Amended Bylaws Article III Section 14). The GA has the right to ratify amendments to the bylaws; and review, reject, or approve development plans, and any substantial financial and operational changes, such as the acquisition of land or the construction of buildings. Members can exercise these rights during the AGM. Half of the members interviewed said that they were consulted on cooperative matters during the AGM. AGM minutes also show how the GA put to a vote certain resolutions and recommendations decided upon by the BOD.

Cooperative B's documents reveal practices designed to promote transparency and accountability. AGMs have been held every year for the past five years. Average AGM attendance is above 60% which is more than enough to satisfy the quorum requirements of 25% (Amended Bylaws Article III Section 22). Notices for the AGM are circulated to the GA 14 days prior using registered mail and mobile messages. Historically, independently audited financial reports, previous AGM minutes, and BOD and committee reports were distributed together with the AGM notice. However, the cooperative found that members do not review these reports prior to the AGM and do not bring these reports with them to the AGM. Hence, the BOD opted to distribute the reports during the AGM and only distribute them prior to this when requested by the members.

The GA also elect directors and committee members via secret ballot elections during the AGM. Members who wish to be elected must file for candidacy at least a month before the AGM. According to interviewees, Cooperative B's election process is fair and robust. AGM minutes showed that there are historically more candidates vying for elective positions than the total number of vacant positions. However, at least half of these candidates are incumbent directors. Current directors all have tertiary qualification even though the amended bylaws do not require this qualification.

The nine-member BOD plan, set, and formulate the cooperative's strategy, direction, and policy which is subsequently presented to the GA for ratification. However, in lieu of the GA, the BOD decides on the purchase of substantial assets, except for land and buildings, and contracting with external parties. The BOD is also responsible for the selection and recruitment of the management team. According to the chairperson, a selection sub-committee within the BOD was created to assess applicants for the manager position. A university degree is required for the manager role. The chairperson explained that this qualification is important to ensure that the hired manager has the appropriate technical skills to manage the business. The manager is also not required to be a member of the cooperative. Cooperative leaders felt that restricting the manager role to active members would limit the cooperative's ability to hire a qualified manager. The manager is responsible for the cooperative's day-to-day operations. The BOD also entrusts final decisions on daily operations and expenses to the manager. Interviewed members believe that the current manager is qualified for the role.

4.3 Case 3: Cooperative C

4.3.1 Background

Cooperative C was established in 1978 as a satellite unit of an existing cooperative. It was designed to cater to rice farmers in a specific geographic location (*barangay*) within the province. Eight directors represented 34 rice farmers that enrolled in the satellite cooperative. The cooperative's founding members are rice farmers residing within the *barangay*. Its head office and scope of business operations are also limited to within the *barangay*. The cooperative's original objectives were to provide its member with lending services to finance their rice production and to procure and process its members' farm

outputs. As Cooperative C's operation and assets grew, it sought to have greater autonomy. On 10th January 1995, it formally separated from the original cooperative to become an independent primary multi-purpose cooperative. Upon re-establishment, the cooperative also expanded its membership criteria to include all residents of the Davao del Norte province, whether farming or not, as stipulated in its amended bylaws (Article II Section 2). As a result of this re-structuring, the cooperative's membership rose significantly. In 2019, the cooperative had 138 members.

Since 2000, the DA has donated physical assets, a rice mill, a hand tractor, and a harvester, to the cooperative to help the latter achieve its goal of procuring and processing members' paddy rice. LBP has also allowed Cooperative C to borrow PhP11.5 million to finance members' rice production. The cooperative also self-financed their buildings and land, including a 1-ha rice field, a warehouse, an office, a machinery shed, and a solar dryer. A summary of Cooperative C's key features is presented in Table 4.9.

Table 4.9
Key Historical and Operational Information of Cooperative C

| Characteristics | Details |
|---|--|
| Year founded | 1979 |
| Date of registration | January 10, 1995 |
| Facilitating organisation | No |
| Purpose of foundation | Provide financing services to members and market members' produce |
| Founding membership size | 34 |
| Current membership size | 138 (according to Roster of Members, 2020) |
| Membership qualification and major responsibilities | <ol style="list-style-type: none"> 1. Natural person 2. Residency within a specific geographic territory 3. Subscription of at least 120 shares |
| Key business segments | <ol style="list-style-type: none"> 1. Supply of farm inputs 2. Supply of non-farm inputs 3. Marketing of farm outputs 4. Provision of machinery services 5. Provision of financing services |

Note: Obtained from articles of cooperation, amended bylaws, AGM minutes, and interviews with key informants from Cooperative C.

4.3.2 Vision, mission, goals, and objectives

Cooperative C's vision, mission, goals, and objectives advocate for the improvement of both members and non-members' quality of life within the specific geographic location it operates. To achieve this purpose, the cooperative reduced the number of goals from 15 developed in 1994 to just five in 2018. These five goals are directed towards the achievement of the following objectives:

1. Generate funds and extend credit to members for productive and personal purposes.
2. Procure and distribute commodities to members and non-members.
3. Engage in the supply of production inputs to members and market their products.
4. Operate and manage farm machinery.
5. Engage in the grains business.

Amendments to the cooperative's strategic and policy direction are developed during the annual planning workshop attended by the BOD, the management team, various committees, and five GA members. The results of the planning workshop including any proposed changes to the cooperative's bylaws, strategies, and policies are then presented to the GA during the succeeding AGM for ratification.

4.3.3 Business segments

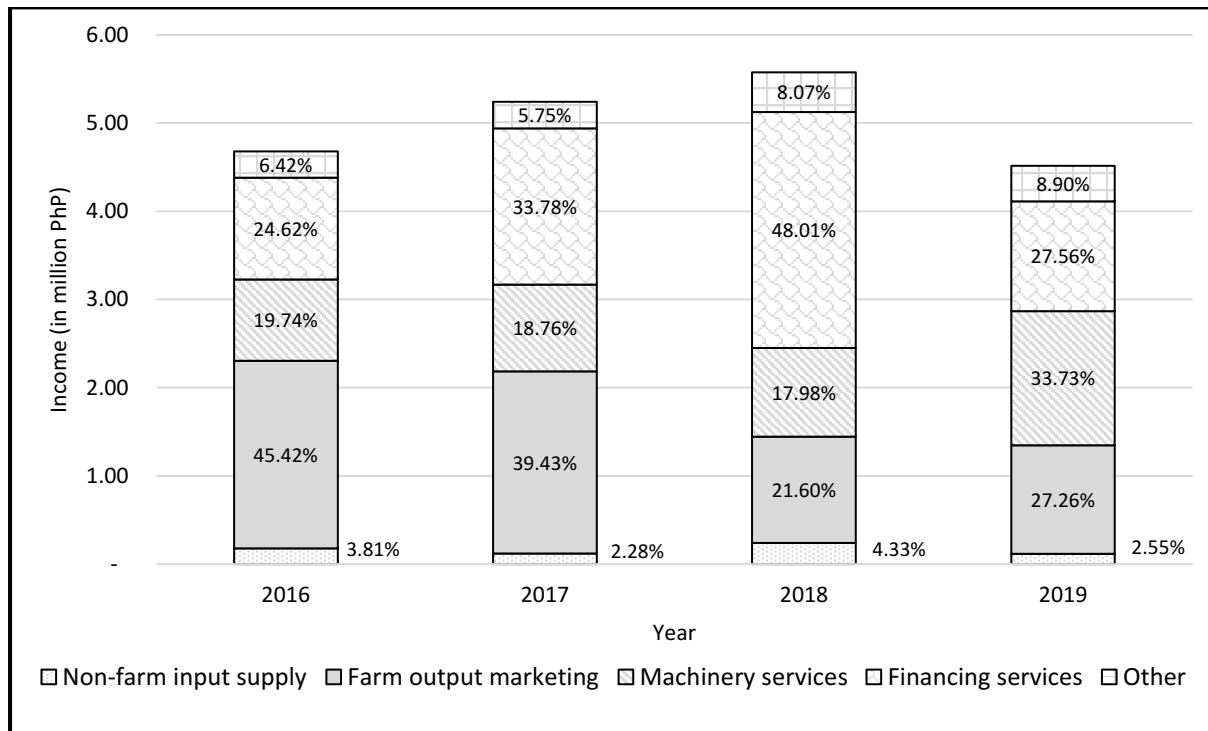
Cooperative C operates five business segments: supply of farm inputs (objective 3), supply of non-farm inputs (consumer goods) (objective 2), marketing of farm outputs (objectives 3 and 5), provision of machinery services (objective 4), and provision of financial services (objective 1). Although objectives 1 and 3 are meant exclusively for members, interviews with cooperative officials revealed that these business segments are also accessible to non-members. It appears, then, that all five business segments of the cooperative are open to both members and non-members.

Business segments 2, farm input supply, and 3, farm output marketing are managed and operated concurrently. Between 2016 and 2019, these joint business segments supplied approximately 20%-45% of the cooperative's total revenue (see Figure 4.3). A sizeable share of the cooperative's income is still reliant on rice production. This is significant considering that only two of the 12 members interviewed reported delivering their produce to the

cooperative. This finding indicates that the cooperative is actively procuring paddy for processing from non-members. According to the manager, there is no membership advantage associated with marketing farm products through the cooperative.

Figure 4.3

Total Income and Income Source Distribution for FY 2016-2019, 2019=100



Note: Obtained from Cooperative C's 2017-2019 audited financial statements.

At most, business segment 1, non-farm input supply, contributes 5% to the cooperative's total revenue (see Figure 4.3). This segment is accessible to both members and non-members. Like business segments 2 and 3, there is no price variation for members and non-members. However, the cooperative allows members to purchase products on credit to encourage them to patronise the business.

Although accessible to non-members, business segments 4, provision of machinery services, and 5, provision of financial services, provide membership advantages in the form of cheaper service fees and interest rates, respectively. While non-members are charged 5% interest on any money they borrow from the cooperative, members only pay 3% interest. As shown in Figure 4.3, machinery services contributed 15%-35% and financial services contributed 20%-50% to the cooperative's total income, respectively.

4.3.4 Level of performance

The cooperative's total asset value, net equity, and book value per share has contracted in the past four years (see Table 4.10). External financing declined at -0.09% per annum and there was no significant growth in members' share capital, which accounted for almost two-thirds (PhP5.48 million) of the cooperative's 2019 net equity (PhP9 million). As a result, the cooperative struggled to finance its operations and revenue declined at -0.32% per annum. This was also likely to discourage members from further investing with the cooperative. Over the previous four years, per share book value slumped significantly at -4.64% per annum. This contraction reflects insignificant growth in members' share capital and depreciation of the cooperative's tangible assets. These tangible assets are primarily physical assets donated by government organisations, and which account for a large share of the cooperative's unallocated equity. A quarter of the cooperative's assets are donations.

Table 4.10

Cooperative C's 2019 Financial Position and Percentage Growth per Annum, 2019=100

| Financial Indicators | 2019 value in PhP | % Growth per Annum^a |
|--------------------------------------|--------------------------|---------------------------------------|
| Total assets (in millions) | 19.94 | -1.36 |
| Total liabilities (in millions) | 10.95 | -0.09 |
| Net equity (in millions) | 9.00 | -0.72 |
| Members' share capital (in millions) | 5.48 | 0 |
| Book value/share (PhP) | 820.73 | -4.64 |
| Revenue (in millions) | 4.52 | -0.32 |

Note: Obtained from Cooperative C's 2017-2019 audited financial statements.

^a Values measured on a trend line.

From 2016 to 2018, Cooperative C's profitability, return on assets and return on equity, had declined significantly due to decreasing revenue and net surplus. The predicted return on equity for 2019 at 3.42% was lower than the rates offered by the bank (4.1%) (see Table 4.11). Cooperative C is heavily reliant on debt finance, with debt accounting for more than 50% of its asset value. The cooperative's debt is mostly long-term bank loans. However, solvency ratios had come down to the acceptable range for the past four years. Liquidity ratios also declined during this period but the cooperative remained highly liquid. This is largely attributed to cooperative's loan receivables, that is, short-term loans issued by the cooperative.

Table 4.11*Cooperative C's Predicted Financial Performance for 2016 and 2019^a*

| Financial Ratios | Acceptable Range | 2016 | 2019 |
|--|-------------------------|-------------|-------------|
| Net profit margin (net income/revenue) (%) | 15-25 ^b | 13.92 | 3.89 |
| Return on assets (%) | 4-8 ^b | 2.90 | 0.94 |
| Return on equity (%) | 3-10 ^b | 12.43 | 3.42 |
| Debt-to-assets ratio | 0.6-0.3 ^b | 0.61 | 0.55 |
| Debt-to-equity ratio | 1.5-0.43 ^b | 1.57 | 1.24 |
| Current ratio | 1.3-2.0 ^b | 5.50 | 2.95 |
| Quick ratio (cash + receivables) | 1 ^c | 4.14 | 2.43 |

Note: Obtained from Cooperative C's 2017-2019 audited financial statements.

^a Values measured on a trend line.

^b Based on the University of Minnesota Extension's recommended values.

^c Based on the FAO's recommended values (1991).

4.3.5 Property rights structure

Membership, as required by the law, and emphasised by the cooperative's amended bylaws is restricted to natural persons who reside within the Davao del Norte province (Article II Section 2) and can patronise the cooperative's businesses (Article II Section 7 Item b). Thus, membership is restricted to patronage. However, the cooperative has a diverse business portfolio which caters to the various needs of the community. A considerable number of the members are non-farmers.

The cooperative is authorised to issue 20,000 shares, with a nominal share price of PhP500.00. These shares are non-appreciable and redeemable. Applicants for membership must subscribe to at least 120 shares (PhP60,000.00) and pay for 10 shares upfront (PhP5,000.00). When a member's shareholding exceeds PhP120,000.00, the cooperative automatically redeems the excess shares. A director explained that this policy was designed to avoid excessive gaps in the shareholding sizes between members, with only a few holding a sizeable share of the cooperative's equity. Aside from this policy, the cooperative also allows for the partial or total redemption of share capital at par value, at any time, on a case-by-case basis, provided that pending obligations are settled. To date, more than half of the membership have share capital contributions above the minimum requirement.

Patronage is also the basis for the net profits distributed to the members. Forty per cent of the net profits are allocated for patronage refunds. The remaining 60% is allocated as

dividends for each members' share capital. This means that members who have stopped patronising the cooperative's business can still enjoy short-term rewards as long as they do not withdraw their investments. The level of investment does not determine the level of patronage a member is obliged to meet. Members can access services and products at quantities that suit their needs. The cooperative reported that 5% of its members are inactive. According to interviewed officials, members typically stop patronising the cooperative for one of two reasons. First, some have unpaid obligations that deter them from doing further business with the cooperative. Second, others have relocated far away from the cooperative.

Cooperative C's amended bylaws (Article V Section 10) specify that each member is entitled to one vote, regardless of the size of shareholding. Voting rights, and the right to be elected, in the cooperative are also restricted to paid up members only. The property rights characteristics of Cooperative C is presented in Table 4.12.

Table 4.12

Cooperative C's Property Rights Structures

| Attributes | Arrangement |
|--|---|
| Claim to ownership | Restricted to patronage upon entry |
| Investment proportional to patronage | No |
| Benefits proportional to investment | Yes (Short-term through dividend which is 60% of distributed profits. No capital gains) |
| Redeemable and non-appreciable rights | Yes |
| Control rights are equally distributed | Yes |

Note: Obtained from articles of cooperation, amended bylaws, AGM minutes, and interviews with key informants from Cooperative C.

4.3.6 Governance practices

Cooperative C's governance structure consists of the GA, the BOD, and the management team. The GA is composed of all members entitled to vote; that is, those who have paid for at least ten shares. The cooperative's amended bylaws (Article III Section 1) identify the GA as the cooperative's highest policy-making body. It determines and approves any amendments to the cooperative's bylaws and approves the development plans and programmes formulated by the BOD. Significant asset purchases, amounting to more than PhP100,000.00, require the GA's approval. Moreover, it is the GA who elects the BOD via secret ballot. This occurs during the AGM. Members who wish to stand for elections must file

candidacy a month before the AGM. Interviewed members considered the electoral process to be fair. AGM minutes show that the number of candidates nominated was the same as the number of vacant positions. Despite that, the AGM proceeded with voting via secret ballot.

The GA has been consistently convening for the past five years. AGM attendance is high, more than 90%. Interviewed officials attribute this to the penalty imposed on members who miss the AGM which is PhP1,000.00 per member. As membership is individual, proxies are not allowed to attend in lieu of the members. Members are notified about the AGM through registered mail, mobile message, and word of mouth at least 14 days before the AGM. The cooperative also holds quarterly meetings wherein the AGM schedule is announced. Thus, the cooperative's AGMs tend to be short and straight to the point as most topics have already been discussed during the quarterly meeting.

The BOD is composed of five elected directors from the membership. Reviewed documents and interview responses show that the annual and multi-year development plan ratified by the GA were prepared by the BOD with input from the management team. The management team participates in the development of these plans because the team is responsible for the implementation of these plans. The manager oversees the daily operations of the cooperative. The manager is required to be an active member and to have a tertiary qualification. Interviewed cooperative leaders stated that technical competencies in managing a business are critical for ensuring that the cooperative's objectives are met. Further, the manager should not be related to any of the BOD within the first degree by consanguinity or affinity. This policy was implemented to ensure that no minority group can wield considerable authority in the cooperative.

4.4 Case 4: Cooperative D

4.4.1 Background

Cooperative D is a multi-purpose cooperative for farmers and irrigators. It was originally organised by 36 farmers in 1961 to establish an irrigation system to service their farms. The group was then restructured as an irrigators' association in 1970 with DAR assistance. During this time, beneficiaries of the Davao Settlement Project of Sto. Tomas were admitted to the association. In 1980, the association formally registered under the SEC.

The association was re-organised into a cooperative on the 7th of July 1999. The cooperative’s leadership recognised that by becoming a cooperative they would have better access to tangible and financial assistance from government and non-government organisations. At this time, the cooperative’s purpose had shifted from solely providing irrigation services to the provision of financial services and the sale of farm and non-farm inputs to its members. Originally restricted to rice farmers and irrigators, membership was opened up to natural persons residing in a specific municipality in the province, as stipulated in the cooperative’s amended bylaws (Article II Section 2). Cooperative D operates and maintains an office within the same municipality. In 2019, the cooperative had a total of 189 members.

To a large extent, the cooperative’s operation was initially financed by grants from the local government and loans from DAR and LBP. DAR and DA also donated physical assets such as a solar dryer, a rice mill, and a seed bank. DOLE donated a water refilling station, both a building and equipment, and CDA donated an electric rice mill. The land where these facilities stand was purchased by the cooperative. To expand its operation and augment its income, Cooperative D bought various form of machinery, including a hand tractor, a floating tiller, a thresher, and a hauling truck. Table 4.13 shows the key features for Cooperative D.

Table 4.13

Key Historical and Operational Information of Cooperative D

| Characteristics | Details |
|---|--|
| Year founded | 1961 |
| Date of registration | July 7, 1999 |
| Facilitating organisation | No |
| Purpose of foundation | Establish irrigation system |
| Founding membership size | 36 |
| Current membership size | 189 (according to Roster of Members, 2020) |
| Membership qualification and major responsibilities | <ol style="list-style-type: none"> 1. Natural person 2. Residency within a specific geographic territory 3. Subscription of at least 250 shares |
| Key business segments | <ol style="list-style-type: none"> 1. Supply of farm inputs 2. Supply of non-farm inputs 3. Marketing of farm outputs 4. Provision of machinery services 5. Provision of financing services |

Note: Obtained from articles of cooperation, amended bylaws, AGM minutes, and interviews with key informants from Cooperative D.

4.4.2 Vision, mission, goals, and objectives

Cooperative D's vision and mission are directed towards providing satisfactory and quality services to its constituency. In 2018, the GA ratified 15 goals that will allow the cooperative to achieve its five objectives:

1. Engage in lending services.
2. Engage in rice milling services.
3. Engage in paddy and rice trading services.
4. Engage in land preparation and post-harvest services such as water supply, agricultural inputs, and farm machinery.
5. Engage in water refilling services.

Of the five objectives, three are related to the rice sector. This indicates that the cooperative's core business is centred on meeting the needs of rice farmers even though it admits non-farmers as members.

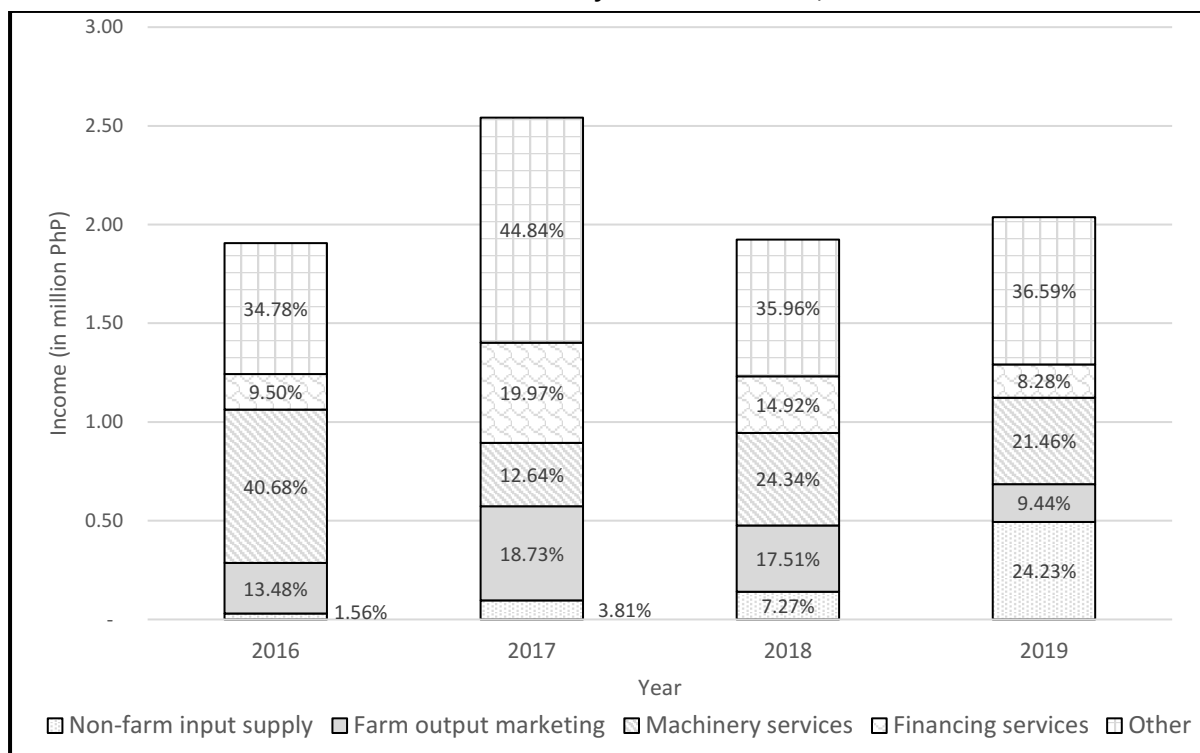
4.4.3 Business segments

The Cooperative D's operations can be divided into five business segments: supply of farm inputs (objective 4), supply of non-farm inputs (meat products and water refilling station) (objective 5), marketing of farm outputs (objectives 2 and 3), provision of machinery services (objective 4), and provision of financial services (objective 1). Except for business segment 4, provision of machinery services, all of the cooperative's business segments are accessible to both members and non-members.

Business segments 1, farm inputs supply, and 2, non-farm inputs supply, are jointly managed and operated. While this joint segment used to provide a low share in the total revenue of the cooperative (see Figure 4.4), the water refilling station donated by DOLE has significantly increased the business' share to a quarter of the cooperative's total income. Of the 12 members interviewed, only six buy their farm inputs from the cooperative. However, 11 of them sourced their potable water from the cooperative. According to them, the superior quality and convenience afforded by the business explains their decision to patronise it. Members and non-members access this business on the same terms.

Figure 4.4

Total Income and Income Source Distribution for FY 2016-2019, 2019=100



Note: Obtained from Cooperative D’s 2017-2019 audited financial statements.

The average contributions of business segments 3, farm outputs marketing, and 5, financial services, are each less than a fifth of Cooperative D’s total revenue. Machinery services, business segment 4, accounts for more than 20% of the cooperative’s total income. This segment includes the irrigation fee collected for the original irrigation system established by the then association.

4.4.4 Level of performance

Table 4.14 shows the growth in Cooperative D’s total assets at 0.02% and net equity at 3.51%. These growths can be attributed to the members’ increased share capital contribution at 0.07%, and reduced reliance on debt financing of -0.07%. There has also been growth in the cooperative’s unallocated equity. More than 60% of the cooperative’s net equity is from donations from government agencies. Members’ share capital contributions accounts for less than 30% of the net equity. The book value per share is contracting at -7.86% because of the depreciation of donated assets, which accounts for almost 70% of the cooperative’s net equity and more than 90% of the cooperative’s unallocated equity. The level of government

support enjoyed by Cooperative D is high. More than 50% of the cooperative's assets were donated.

Table 4.14

Cooperative D's 2019 Financial Position and Percentage Growth per Annum, 2019=100

| Financial Indicators | 2019 value in PhP | % Growth per Annum^a |
|--------------------------------------|--------------------------|---------------------------------------|
| Total assets (in millions) | 8.15 | 0.02 |
| Total liabilities (in millions) | 2.14 | -0.07 |
| Net equity (in millions) | 6.01 | 3.51 |
| Members' share capital (in millions) | 1.74 | 0.07 |
| Book value/share (PhP) | 344.10 | -7.86 |
| Revenue (in millions) | 2.04 | -1.08 |

Note: Obtained from Cooperative D's 2017-2019 audited financial statements.

^a Values measured on a trend line.

The predicted profitability measures for 2019 are negative (see Table 4.15). The cooperative has reported net losses for the past two years. However, the cooperative is solvent. Debt-to-assets and debt-to-equity ratios, at 0.25 and 0.39, respectively, have stayed below the acceptable range. The cooperative is borrowing conservatively. The cooperative's debt financing is a mixture of both short-term and long-term debt. The cooperative has exceedingly high liquidity ratios. This indicates that the cooperative is holding too much cash, and thus, is not maximising its resources.

Table 4.15

Cooperative D's Predicted Financial Performance for 2016 and 2019^a

| Financial Ratios | Acceptable Range | 2016 | 2019 |
|--|-------------------------|-------------|-------------|
| Net profit margin (net income/revenue) (%) | 15-25 ^b | 6.92 | -26.98 |
| Return on assets (%) | 4-8 ^b | 1.87 | -6.57 |
| Return on equity (%) | 3-10 ^b | 10.31 | -31.44 |
| Debt-to-assets ratio | 0.6-0.3 ^b | 0.34 | 0.25 |
| Debt-to-equity ratio | 1.5-0.43 ^b | 0.54 | 0.39 |
| Current ratio | 1.3-2.0 ^b | 3.71 | 5.44 |
| Quick ratio (cash + receivables) | 1 ^c | 3.54 | 5.38 |

Note: Obtained from Cooperative D's 2017-2019 audited financial statements.

^a Values measured on a trend line.

^b Based on the University of Minnesota Extension's recommended values.

^c Based on the FAO's recommended values (1991).

4.4.5 Property rights structure

Membership for Cooperative D is restricted to natural persons residing in a specific municipality in the Davao del Norte province (Amended Bylaws Article II Section 2). Members must commit to patronise the cooperative's business (Amended Bylaws Article II Section 7 Item b). Member respondents all patronise at least two of the cooperative's business segments. However, around 16% of the members have outstanding financial obligations to the cooperative and are thus unable to use the cooperative's services.

Except for financing services, both members and non-members can access the cooperative's business segments on the same terms. However, at the end of the year, members claim benefits proportional to patronage. Profits for distribution at the end of the year are allocated to patronage refund (40%) and to dividends to share capital (60%). Hence, members also claim benefits proportional to their investment in the cooperative. However, the level of investment is not dependent on the members' level of patronage. Members' investment portfolio are not restricted by their level of usage of the cooperative's business segments. This policy does not hold true for the financial services. Five per cent of every loan released to a cooperative member is retained upfront by the cooperative to add to the member's share capital.

Aside from retaining a portion of the loan, the cooperative builds up its capital using mandatory member contributions of PhP1000.00 per year or PhP500.00 per cropping for rice farmer members regardless of their individual level of patronage. Members are required to subscribe to at least 250 shares and pay upfront for 20 of these shares. The cooperative is authorised to issue 120,000 shares. These shares are non-appreciable and redeemable. During the interviews, key informants revealed that the cooperative has struggled to retain internal capital. In 2018, the cooperative amended their membership classification to include associate members. Associate members are members who have not fully paid for their required 20 shares. Associate members are not entitled to vote, stand for elections, or receive a dividend on their share capital.

In the past, Cooperative D encountered high redemption; thus, they introduced measures to reduce the risk associated with redemption. Members cannot readily exit the cooperative.

Only one member can redeem their shares and leave the cooperative each year. Members who wish to exit outside the allowed threshold may do so if they can find a new entrant who will take over their membership. Partial redemption of shares is also not allowed. However, these measures contradict recent amendments to the cooperative’s bylaws. As per the new amendments, members who failed to increase their shareholdings for two consecutive years are subject to involuntary termination. Table 4.16 presents Cooperative D’s property rights characteristics.

Table 4.16
Cooperative D’s Property Rights

| Attributes | Arrangement |
|--|---|
| Claim to ownership | Restricted to patronage upon entry |
| Investment proportional to patronage | No |
| Benefits proportional to investment | Yes (Short-term through dividend which is 60% of distributed profits. No capital gains) |
| Redeemable and non-appreciable rights | Yes |
| Control rights are equally distributed | Yes |

Note: Obtained from articles of cooperation, amended bylaws, AGM minutes, and interviews with key informants from Cooperative D.

4.4.6 Governance practices

Cooperative D has an extended traditional model of governance structure. This model consists of the GA, the BOD, and the management team. The GA is comprised of all members entitled to vote (Amended Bylaws Article III Section 1). The GA exercise *ex-post* powers such as the approval of amendments to the cooperative’s articles of cooperation and bylaws, and approval of development plans and programmes. These powers are exercised during the AGM. AGM minutes indicate that proposed amendments to cooperative bylaws were presented to the GA for ratification. The purchase of substantial assets such as land and buildings also require the GA’s approval. The amended bylaws (Article III Section 4) specify that the GA convene annually, within 90 days of the close of the calendar year. For the last five years, Cooperative D has consistently held its AGM on the last Friday of March. Written notices of the AGM are sent out at least 14 days prior to the meeting, either through house delivery by cooperative staff or personal pick-up at the office by the individual members. Mobile messages are also sent out days before the meeting to remind members about the

AGM. Average membership turnout for AGM is between 70%-80% which is higher than what is required to declare a quorum at 50%.

During the AGM, the GA elect the directors through secret ballot. Eleven of the 12 members interviewed view the election procedure as fair. Any qualified members can voluntarily and freely stand for elections. Only active members who have paid for at least 150 shares (PhP15,000) are qualified to apply for the directorship. A certificate for candidacy must be lodged a month before the AGM. For the last two elections, the number of candidates has been equal to the number of positions contested. Likewise, at least half of the candidates were incumbent directors.

The BOD, composed of seven elected directors, meet monthly to formulate the cooperative's strategies and policies. There is no specialisation of roles among the BOD. The BOD deliberates on matters concerning the cooperative. Each director has an equal voice during deliberations and only one vote during decisions. Decisions made by the BOD are presented to the GA, either through the AGM or through a quarterly meeting regularly held with the GA. Members may query and make recommendations on the proposed policies and strategies. The recommendations are noted and considered by the BOD during policymaking.

The BOD's operational policies are implemented by the management team, headed by the hired manager. The BOD selected and recruited the manager. Cooperative D requires that the manager be an active member with at least 100 paid-up shares (PhP10,000). The manager makes decisions regarding the daily operations including any expenses of less than PhP10,000.00. The manager regularly attends the monthly BOD meetings and reports on the status of the cooperative's finances and operations. Although directors are discouraged from managing the cooperative, they will if the BOD deems it necessary. One such case was reported where a manager, some ten years earlier, had claimed cooperative property as his own. The BOD took over the management of the cooperative's operations for the following two years for two reasons. First, the cooperative did not have funds to pay for a management team's services. Second, the cooperative officials wanted to directly manage the cooperative's recovery.

4.5 Summary

This chapter described the four rice farmer cooperatives studied. It presented in-depth discussions about the history, the objectives, and the current positions of the cooperatives in question. It also discussed the property rights and governance practices observed in each cooperative.

The cooperatives studied had been operating for a considerable period of time and had evolved through various organisational forms. Officials, with the support of the members, reconfigured these organisations to adapt to changes in market conditions and to better positions themselves in the sector. Nevertheless, the cooperatives remained true to their original objectives of providing products and services to improve the socio-economic conditions of the members. While only two of the four cooperatives were established with the help of government facilitators, all four received government support in the form of capacity-building, credit, and grants for machinery and facilities.

The cooperatives shared many of the property rights that characterise a traditional cooperative. First, the shares are redeemable and non-appreciable. Second, members are required to hold some minimum number of shares regardless of their level of patronage. Third, each member has only one vote regardless of their level of shareholding. The cooperatives were also similar in their governance structure (GA, BOD, management team) and followed governance practices that embrace transparency and accountability. First, the directors were elected from and by the membership through secret ballot. Second, AGMs were held regularly. Third, financial reports were prepared by external auditors.

Despite these similarities, meaningful differences were observed in the institutional arrangements practiced by these four cooperatives. Differences were also observed in their performance. Chapter 5 compares observed indicators of performance, property rights and governance practices across the four cooperatives to confirm or reject theory-based propositions relating a cooperative's performance to its underlying institutional arrangements.

Chapter 5 Comparative Case Study Results

The previous chapter reported measures of performance and described the institutional arrangements observed in the cooperatives studied. This chapter presents a qualitative comparative analysis of the cases to test propositions relating a cooperative's performance to its property rights and governance practices. It also presents a quantitative cluster analysis of variables measuring performance and the quality of property rights and governance practices observed in the case studies to triangulate and broaden the results of the qualitative analysis. The chapter starts with a brief review of the contexts within which the cooperatives operate.

5.1 Contextual similarities and differences among the cooperatives

Several external factors may affect a cooperative's performance. The study endeavoured to select cooperatives that have minimal differences on the influencing external factors. In that way, differences in the cooperatives' performances are more likely to be attributed to observed differences or similarities in their institutional arrangements.

All of the cooperatives studied operate within the Davao del Norte province. Farming members from all four cooperatives practice lowland irrigated rice production on land that has similar topographical and geological features. All farms included in the study experience similar climatic conditions. All the farmers also deal with similar market forces and dynamics. Spot market traders operating with the same methods and practices are present within the geographic locations covered by each cooperative. The cooperatives' core business activities are associated with rice production. Products and services provided under the cooperatives' business segments, farm input supply, farm output marketing, machinery services, and financial services, are either solely or largely related to rice production. Farm products marketed are either paddy or milled rice. Likewise, machinery and facilities for lease are used solely for rice production, for example, floating tillers, hand tractors, transplanters, rice mills, mechanical and solar dryers, and combine harvesters. A large share of the farm inputs supplied, and financial services offered are for rice production.

The cooperatives accessed similar levels of support from various government agencies. The CDA provided them with technical and capacity-building assistance, and they received similar

donations of farm machinery and inputs from the DA and DAR (see Table 5.1). It follows that the technology available to rice farmers does not vary much between cooperatives. All of the cooperatives can borrow from the LBP to finance their business operations, and they operate under the same legislation (RA 9520) and policies, and are overseen by the same regulatory body (CDA).

Table 5.1
Physical Assets Donated to Cooperatives A, B, C and D

| Physical assets | Cooperative A | Cooperative B | Cooperative C | Cooperative D |
|------------------------|----------------------|----------------------|----------------------|----------------------|
| Solar Pump | Yes | No | No | No |
| Floating Tiller | Yes | No | Yes | Yes |
| Hand Tractor | No | No | Yes | No |
| 4WD Tractor | No | Yes | Yes | Yes |
| Transplanter | No | No | Yes | No |
| Combine Harvester | Yes | Yes | Yes | No |
| Hauling Truck | Yes | No | No | No |
| Solar Dryer | Yes | No | No | No |
| Flatbed Dryer | Yes | No | No | No |
| Recirculating Dryer | No | Yes | No | No |
| Rice Mill | Yes | No | Yes | Yes |

Note: Information obtained from interviews with key informants of Cooperatives A, B, C, and D

Cooperative B differs slightly from the other cooperatives. First, its members produce rice for seed. In contrast, the other three cooperatives produce rice for consumption. Although production and post-production practices are similar for both purposes, there are slight differences in plant care operations and post-production operations (the drying, grading, and storage). Seed paddy must also be certified by the Bureau of Plant Industry (BPI). Certification is costly but the price paid for seed paddy is higher than the price paid for paddy that is processed into rice. Second, although all of the cooperatives studied serve rice farmers, Cooperatives A, C and D admit non-farming patrons whereas Cooperative B admits only farmers who specialise in seed production. The interests of Cooperative B's members are therefore more homogenous compared to the interests of members in the other three cooperatives. Table 5.2 summarises the key characteristics of the four case studies.

Table 5.2*Summary of Key Characteristics of Cooperatives A, B, C and D*

| Characteristics | Cooperative A | Cooperative B | Cooperative C | Cooperative D |
|--|----------------------|----------------------|----------------------|----------------------|
| Years since foundation | 30 | 42 | 41 | 59 |
| Years in operation as cooperative | 28 | 29 | 25 | 21 |
| Founding membership size | 15 | 30 | 34 | 36 |
| Current membership size | 182 | 104 | 138 | 189 |
| Percentage of inactive members | 21% | 19% | 7% | 16% |
| Foundation externally assisted | Yes | No | No | No |
| Assistance provided | Capacity-building | Not applicable | Not applicable | Not applicable |
| Member's contribution | | | | |
| Nominal share value (in PhP) | 100.00 | 1,000.00 | 500.00 | 100.00 |
| Minimum share subscription per member | 40 | 100 | 120 | 250 |
| Average share subscription per member, as of 2019 | 42 | 393 | 79 | 92 |
| Members' contribution, as of 2019 (in million PhP) | 0.71 | 40.9 | 5.67 | 1.77 |
| Business segments | | | | |
| Farm input supply | No | Yes | Yes | Yes |
| Non-farm input supply | Yes | No | Yes | Yes |
| Farm output marketing | Yes | Yes | Yes | Yes |
| Machinery services | Yes | Yes | Yes | Yes |
| Financing services | Yes | Yes | Yes | Yes |

Note: Information obtained from articles of cooperation, amended bylaws, AGM minutes, and interviews with key informants of Cooperatives A, B, C, and D.

5.2 Performance levels

The study cases had been operating for at least 30 years as different types of farmer organisations. All converted to multi-purpose agricultural cooperatives around the time the Cooperative Code of the Philippines was enacted in 1990. Despite receiving similar levels of government support, a review of each cooperative's financial documents highlighted differences in their performance levels. Growth in assets over the past four years was highest in Cooperative B at 0.21%. Positive, asset growth in Cooperatives A and D was small by comparison. Cooperative C performed poorly with negative asset growth of -1.36% (see Table 5.3).

Cooperative B was also the only cooperative that achieved equity growth (6.30%). The other three cooperatives' net equity diminished over the past four years (2016-2019). This could be explained by two reasons. First, the members' allocated equity accounts for more than 50% of Cooperative B's total net equity. Members' share capital contributions was also growing (0.10%). Thus, growth in share capital contributions propelled growth in the net equity. Although Cooperative C's members' share capital contributions was more than 50%, they have not experienced any significant growth in the allocated equity. Even when the share of allocated equity is higher than unallocated equity, a lack of growth in the allocated equity meant that net equity growth is driven primarily by changes in the unallocated equity. Second, the unallocated equity, which is primarily composed of donated capital, is depreciating. Unallocated equity accounts for more than 50% of Cooperatives A and D's net equity. Shrinkage in the unallocated equity significantly impacts a cooperative's net equity especially if the share of unallocated equity is greater than allocated equity.

The shrinkage in the cooperatives' unallocated equity has also contributed to contractions in the book value per share. Additional assets acquired by the cooperatives were not enough to offset the depreciation of donated physical assets. All four cooperatives' book value per share have declined. The cooperatives are also issuing more shares. The issuance of more shares results in the dilution of the per share book value.

Table 5.3

Financial Position of Cooperatives A, B, C and D for 2019 and Percentage Growth per Annum, (2019 = 100)

| Financial indicators | Cooperative A | | Cooperative B | | Cooperative C | | Cooperative D | |
|--------------------------------------|---------------|---------------------|---------------|---------------------|---------------|---------------------|---------------|---------------------|
| | PhP | % p.a. ¹ | PhP | % p.a. ¹ | PhP | % p.a. ¹ | PhP | % p.a. ¹ |
| Total assets (in millions) | 2.94 | 0.04 | 120.98 | 0.21 | 19.94 | -1.36 | 8.15 | 0.02 |
| Total liabilities (in millions) | 0.36 | 0.40 | 63.23 | 0.45 | 10.95 | -0.09 | 2.14 | -0.07 |
| Net equity (in millions) | 2.58 | -1.08 | 57.75 | 6.30 | 9.00 | -0.72 | 6.01 | 3.51 |
| Members' share capital (in millions) | 0.77 | 0.16 | 40.87 | 0.10 | 5.48 | 0 | 1.74 | 0.07 |
| Book value/share (PhP) | 333.88 | -19.14 | 1,413.04 | -7.47 | 820.73 | -4.64 | 344.10 | -7.86 |
| Revenue (in millions) | 1.08 | 55.87 | 12.42 | -6.80 | 4.52 | -0.32 | 2.04 | -1.08 |

Note: Information obtained from Cooperatives A, B, C, and D's 2017-2019 audited financial statements.

¹ Values measured on a trend line.

Table 5.4

Predicted Financial Performance of Cooperatives A, B, C and D for 2016 and 2019

| Financial ratios | Acceptable range | Cooperative A | | Cooperative B | | Cooperative C | | Cooperative D | |
|--|-----------------------|---------------|------|---------------|-------|---------------|------|---------------|--------|
| | | 2016 | 2019 | 2016 | 2019 | 2016 | 2019 | 2016 | 2019 |
| Net profit margin (net income/revenue) (%) | 15-25 ^b | 5.86 | 5.09 | 44.18 | 16.58 | 13.92 | 3.89 | 6.92 | -26.98 |
| Return on assets (%) | 4-8 ^b | 0.17 | 1.50 | 13.02 | 2.09 | 2.90 | 0.94 | 1.87 | -6.57 |
| Return on equity (%) | 3-10 ^b | 1.06 | 6.35 | 25.18 | 5.66 | 12.43 | 3.42 | 10.31 | -31.44 |
| Debt-to-assets ratio | 0.6-0.3 ^b | 0.05 | 0.19 | 0.17 | 0.47 | 0.61 | 0.55 | 0.34 | 0.25 |
| Debt-to-equity ratio | 1.5-0.43 ^b | 0.06 | 0.23 | 0.21 | 0.90 | 1.57 | 1.24 | 0.54 | 0.39 |
| Current ratio (cash) | 1.3-2.0 ^b | 3.54 | 1.64 | 4.42 | 1.50 | 5.37 | 3.28 | 3.71 | 5.44 |
| Quick ratio (cash + receivables) | 1 ^c | 2.85 | 1.15 | 3.50 | 1.09 | 4.14 | 2.43 | 3.54 | 5.38 |

Note: Information obtained from Cooperatives A, B, C, and D's 2017-2019 audited financial statements.

^a Values measured on a trend line.

^b Based on the University of Minnesota Extension's recommended values.

^c Based on the FAO's recommended values (1991).

Trends in the financial ratios further strengthen Cooperative B's position as the most successful cooperative among the four studied cooperatives. Trendline predicted returns on equity for 2019 were positive (5.66%) despite a significant drop in revenue for the year (see Table 5.4). Likewise, Cooperative B reached healthy positions in leverage and liquidity in 2019. These positions do not hold true for Cooperative D. Profitability, leverage and liquidity are outside the acceptable ranges indicating that, in 2019, Cooperative D's position was not promising. Meanwhile, Cooperative A and C stand in the middle of the four cooperatives. Cooperative A has a good liquidity position and is not highly leveraged. Cooperative C is solvent but is unhealthily liquid.

Even though the level of government support has been much the same for all four cooperatives (see Table 5.1), the government's donated capital, in the form of physical assets, forms a large part of Cooperative A and D's net equity. It can be surmised that both cooperatives are heavily reliant on government support. In contrast, donated capital contributes less than 30% of Cooperative B and C's total equity. In addition, only Cooperative B has established and is maintaining a market reputation (see Table 5.5). This intangible asset means that Cooperative B has established market leadership and, therefore, has a guaranteed market for its products, so long as it maintains its reputational criteria.

Table 5.6 presents a summary of the financial and non-financial indicators that determine the cooperative's individual level of performance. An affirmative response means that a positive performance indicator is observed in the cooperative. The cooperatives are ranked according to the decreasing number of affirmative responses to the indicators. Based on the ranking, Cooperative B appears to be the best performing cooperative among the four, both in terms of the financial and non-financial criteria. Cooperative A and C are positioned in the middle with four and three positive indicators, respectively. With only two positive indicators, Cooperative D appears to be the worst performing cooperative in the studied cases.

5.3 Institutional problems resulting from property rights structure

This section discusses the presence, or absence, of institutional problems observed in the studied cooperatives. It also identifies the existing property rights arrangements that are likely to cause these institutional problems.

Table 5.5*Non-financial Measures of Performance of Cooperatives A, B, C and D in 2019*

| Criteria | Indicator | Cooperative A | Cooperative B | Cooperative C | Cooperative D |
|--|---|---------------|---------------|---------------|---------------|
| Outreach | Average annual membership growth (size) | 8.68% | 3.00% | 3.48% | 4.23% |
| Level of government support ^a | | High | Low | Low | High |
| Presence of relevant linkages | Intangible assets (reputation) | No | Yes | No | No |
| | Significant downstream linkages | No | Yes | No | No |
| Directors are qualified | Percent positive response by members | 91.7% | 100% | 100% | 83.3% |
| Manager is qualified | Percent positive response by members | 91.7% | 100% | 91.7% | 83.3% |

Note: Obtained from articles of cooperation, amended bylaws, audited financial statements, AGM minutes, and interviews with key informants of Cooperatives A, B, C, and D.

^a Low means less than 30% of the assets are from donated capital, moderate means 30% - 60% of the assets are from donated capital, and high means more than 60% of the assets are from donated capital.

Table 5.6*Summary of Performance Indicators for Cooperatives A, B, C and D*

| Performance indicator | Cooperative B | Cooperative A | Cooperative C | Cooperative D |
|--|---------------|---------------|---------------|---------------|
| <u>Performance measures</u> | | | | |
| Net equity growth | Yes | No | No | Yes |
| Asset growth | Yes | Yes | No | Yes |
| Low contraction (<10%) in book value per share | Yes | No | Yes | Yes |
| Profitability (2019 ROE) | Yes | Yes | Yes | No |
| Profitability growth (ROE trend) | No | Yes | No | No |
| Leverage (2019 debt-to-equity ratio) | Yes | No | Yes | No |
| Liquidity (2019 current ratio) | Yes | Yes | No | No |
| Low level of government support | Yes | No | Yes | No |
| Presence of intangible assets (reputation) and significant markets | Yes | No | No | No |

Note: Adapted from Tables 5.3-5.5.

5.3.1 Free-riding problem

Cooperatives A, C, and D face external free-riding problem. Except for Cooperative A and D's, financial services, Cooperative A, C and D's businesses are accessible to non-members. An external free-riding problem exists when non-members enjoy the same transactional benefits as members without bearing the full costs of transacting with the cooperative (Cook & Iliopoulos, 2000). This is the situation with some of the business segments of the three cooperatives: non-farm input supply for Cooperative A; farm input supply, non-farm input supply, and farm output marketing for Cooperative C; and farm input supply, non-farm input supply, farm output marketing, and machinery services for Cooperative D. The situation is worse in Cooperative D because free-riding occurs in four of its five business segments. Both members and non-members can access these businesses at the same prices and terms. Providing members with exclusive incentives such as better prices alleviates the external free-riding problem (Giannakas et al., 2016). Cooperative C offers members better terms, that is, cheaper service fees and interest rates for its machinery and financial services businesses, respectively. Among the three cooperatives, Cooperative A minimises the effects of external free-riding problem the most. Three of its four business segments offer transactional advantages to its members.

Unlike the other three cooperatives, Cooperative B caters only to its members. Thus, Cooperative B does not face external free-riding problem. Although Cooperative B has multiple business segments, all of them cater to one core business – marketing of paddy seeds. Farm input supply, machinery services, and financial services are all directed towards optimising the quality and quantity of their members' paddy which will subsequently be delivered to the cooperative. Although interviews with officials indicate that they are open to service (machinery) and supply (farm input) non-members, this is a rare occurrence since the cooperative's business operations are designed to meet the specific and immediate farming needs of its members. Moreover, Cooperative B has a reputation for the quality of the paddy seeds that they market. As such, Cooperative B does not process non-members' paddy since the cooperative does not have the means to monitor the quality of the non-members' paddy. Cooperatives A, C and D do not distinguish between the paddy delivered by members and non-members.

All four cooperatives suffer from internal free-riding problem. New members benefit from the use of the cooperative's existing assets without the proportionate investment required to access those assets (Vitaliano, 1983). For all the studied cooperatives, entry requirements are the same. New entrants and existing members are required to subscribe similar levels of share capital regardless of their usage level. Members of all four cooperatives pay the same nominal share price, enjoy the same criteria to claim benefits, and redeem shares at their nominal (par) value regardless of length of membership. However, benefit claims for all of the four cooperatives are not only based on patronage. The level of investment is also considered in the distribution of benefit claims. This somewhat alleviates the internal free-riding problem because there is proportionality between a member's level of investment and level of benefits they can claim.

Cooperative B addressed internal free-riding by introducing per unit retains in their farm output marketing business segment. Cooperative B retains a specific amount per sack of paddy delivered by members. This retained amount is added to the member's share capital. Thus, a member's level of investment is at least proportional to that member's level of patronage, the volume of paddy delivered. Patronage for other business segments are also affected by the policy since the level of usage is proportional to the volume of paddy delivered, that is, farm inputs purchased, machinery hired, and production loans applied for are proportional to the members' farm area and expected volume of paddy delivered.

Cooperatives A, C, and D have also imposed proportionality of investment and patronage in one business segment – financial services. The amount members can borrow from the cooperative is dependent on their level of investment. Further, Cooperatives A and C have introduced a loan retention policy wherein the cooperative retains a percentage of the loaned amount and adds it to the member-borrower's share capital contributions. This policy creates some proportionality between the level of patronage and investment. A member who borrows more from the cooperative is expected to have a higher share capital contribution than a member who borrows less. Aligning patronage with investment addresses the internal free-riding problem (Cook & Iliopoulos, 1998). Table 5.7 presents the observed attributes of the four cooperatives that are believed to contribute to the free-riding problem.

Table 5.7*Property Rights that affect Free-Rider Problems in Cooperatives A, B, C and D*

| Attributes | Cooperative A | Cooperative B | Cooperative C | Cooperative D |
|---|----------------------|----------------------|----------------------|----------------------|
| <u>External free-riding problem</u> | | | | |
| Non-members can patronise cooperative products and services | | | | |
| Farm input supply | Not applicable | No | Yes | Yes |
| Non-farm input supply | Yes | Not applicable | Yes | Yes |
| Farm output marketing | Yes | No | Yes | Yes |
| Machinery services | Yes | No | Yes | Yes |
| Financing services | No | No | Yes | No |
| Members and non-members patronise business on same terms | | | | |
| Farm input supply | No | No | Yes | Yes |
| Non-farm input supply | Yes | No | Yes | Yes |
| Farm output marketing | No | No | Yes | Yes |
| Machinery services | No | No | No | Yes |
| Financing services | No | No | No | No |
| <u>Internal free-riding problem</u> | | | | |
| Benefits claim is not proportional to investment | No, 50% proportional | No, 60% proportional | No, 60% proportional | No, 60% proportional |
| Members earn benefit claims without patronising | Yes | Yes | Yes | Yes |
| Investment is proportional to patronage | | | | |
| Farm input supply | Not applicable | Yes | No | No |
| Non-farm input supply | No | Not applicable | No | No |
| Farm output marketing | No | Yes | No | No |
| Machinery services | No | Yes | No | No |
| Financing services | Yes | Yes | Yes | Yes |

Note: Information obtained from articles of cooperation, amended bylaws, AGM minutes, and interviews with key informants of Cooperatives A, B, C, and D.

5.3.2 Horizon and portfolio problems

As shares are redeemable and therefore cannot be traded at market value, it can be surmised that horizon and portfolio problems are present in all four cooperatives. The dismal growth in the allocated equity and the lack of attempt to increase the retained earnings from the minimum (30%) required by the law indicate that members' investment appetite is dampened by the lack of capital gains. Members most likely prefer to maximise short-term benefits, in the form of annually distributed profits, than to retain their earnings. There is no incentive to retain and reinvest earnings into multi-year projects (Cook, 1995) because they will not receive capital gains when exiting the cooperative.

The absence of capital gains may also explain why members who no longer patronise the cooperative's businesses do not leave the cooperative. Non-patronising members prefer to retain membership, especially in the profitable cooperatives (Cooperatives A, B and C) because dividends on share capital are reliably distributed annually. Non-patronising members prefer to earn dividends on their shares than to redeem at their nominal (par) value.

Members who wish to leave the cooperative must redeem their shares at par value. This exposes the cooperative to redemption risk, a threat felt most acutely by cooperatives that are not performing well. Cooperative D imposed severe restrictions on share redemption; only one member can exit the cooperative in a year. Members who want to leave may do so only if they can find a non-member who is willing to take over their membership and buy their shares at par value. Cooperatives A, B and C allow members to exit and redeem shares at any time. Moreover, Cooperative C allows members to redeem some of their shares without exiting the cooperative, and regularly redeems shares held by members in excess of maximum levels specified by the cooperative.

All four cooperatives alleviate the portfolio problem by allowing members to use some services at levels that are not linked to their level of investment. They also allow members to continue investing even if their patronage does not warrant or require further investment. Voluntary investment is influenced by expectations about annual dividends, and not by expectations about patronage. Property rights affecting horizon and portfolio problems in the case studies are summarised in Table 5.8.

5.3.3 Control and influence problems

All four of the cooperatives studied separated ownership from control. Strategic business decisions are taken by directors elected by the cooperative's members (principal). These decisions are executed by the management team (agent). Leaving management in the hands of specialists is important, but it does expose organisations to a control problem. This problem is compounded in cooperatives where shares cannot be traded because there is no market price to signal management's performance (Cook, 1995), and shareholders cannot easily sanction poor management by disinvesting. In addition, cooperatives cannot reward good managers with shares to align their interests with those of patron-shareholders because the cooperatives do not have performance-based share options.

Like most other cooperatives, the four cases studied in this research assigned equal voting power to members (one-member, one-vote) and are therefore exposed to an influence problem because control resides with majority patrons rather than majority investors. Democratic control is a legal requirement of cooperatives in the Philippines (RA 9520 Philippine Cooperative Code, Chapter 1, Article 3, Item 2). Cooperative C, however, limits the maximum number of shares that members may own. This creates a degree of equality in member investment, which helps to align voting power with investment thereby alleviating the influence problem. The Code also prevents non-members from holding elected positions in the cooperative and from voting during the cooperative's decision processes. This rule was intended to prevent non-member patrons and other outsiders from influencing decisions made by the cooperative.

Influence costs are presumably higher in Cooperatives A, C and D than in Cooperative B because membership in the first three cooperatives is more heterogeneous (Cook, 1995). However, there is little evidence that the influence costs are actually more pronounced in the three cooperatives. Table 5.8 shows that the property rights affecting control and influence problems are the same in all four case studies. Despite this commonality, there were significant differences in governance arrangements that affected exposure to control and influence problems. These governance practices are discussed in Section 5.4.

Table 5.8*Property Rights that affect Horizon, Portfolio, Control and Influence Problems in Cooperatives A, B, C and D*

| Attributes | Cooperative A | Cooperative B | Cooperative C | Cooperative D |
|---|----------------------|----------------------|----------------------|----------------------|
| <u>Horizon and portfolio problems</u> | | | | |
| Membership is restricted to patrons | Yes | Yes | Yes | Yes |
| Shares are redeemable and not appreciable | Yes | Yes | Yes | Yes |
| Retained earnings share from net earnings is at minimum | Yes | Yes | Yes | Yes |
| Policies on share redemption | | | | |
| Members can readily exit and redeem all shares | Yes | Yes | Yes | No |
| Members can redeem some shares without exiting | No | No | Yes | No |
| Periodic redemption of excess member capital | No | No | Yes | No |
| <u>Control and influence problems</u> | | | | |
| BOD and management are independent of each other | Yes | Yes | Yes | Yes |
| Share-related performance rewards are absent | Yes | Yes | Yes | Yes |
| Voting rule is one-member, one-vote | Yes | Yes | Yes | Yes |
| Presence of interest group within the membership | No | No | No | No |
| Non-members can be elected/appointed as directors | No | No | No | No |

Note: Obtained from articles of cooperation, amended bylaws, AGM minutes, and interviews with key informants of Cooperatives A, B, C, and D.

5.4 Governance practices

The four cooperatives' governance practices are defined by the governing law and the standard procedures practiced by cooperatives in the country. The studied cooperatives adhere to the minimum required good practices. A cooperative's failure to comply with the required good practices will result in the revocation of their registration as a cooperative; a cooperative needs a valid certificate of registration in order to enjoy tax exemptions.

Governance practices that promote transparency are present in the four cooperatives. In all of the cooperatives, AGMs were regularly held for the last five years. Attendance exceeded the required number to constitute a quorum. The cooperatives introduced measures to ensure that attendance is satisfactory. All four cooperatives distributes gifts during the AGMs to reward attendees. Cooperative C also imposes a PhP1000.00 fine to absent members. Membership in Cooperative D will be revoked if a member misses three consecutive AGMs. Members interviewed for the four cooperatives had regularly attended AGMs. The members stated that they have adequate time to prepare for, and attend, the AGM because the meeting is advertised at least a week prior to the AGM. AGM announcements are primarily made through registered mail. Members were also reminded of the meeting through mobile messaging, through other forms of social media or via personal communications.

During the AGMs, the members receive copies of relevant reports. Except for a handful of members from Cooperative D, those interviewed said that the circulation time was sufficient for them to review the reports. The BOD and committees present their prepared reports during the AGM. Financial reports are prepared and presented by a government-registered independent auditor. Except for Cooperative A, AGM minutes indicate that the approval of an independent auditor's appointment rest upon the GA. Members find the reports easy to understand. Questions relating to the reports are promptly addressed; members can easily discuss reports and other cooperative matters with the BOD during the AGM. Members can also readily access the BOD meetings minutes and easily approach cooperative leaders to discuss BOD or management decisions. In the four cooperatives, decision-making is designed to be centralised. Amended bylaws required members to ratify the BOD's decisions and proposals during the AGM. If questions or contentions are raised, the decision is put on hold for review and further discussion by the BOD. AGM minutes of the Cooperatives A, C and D

showed that when the GA disagreed with a decision made by the BOD, the BOD put the decision aside for review and reconsideration. The BOD presented the results of their review and their final decision to the GA for ratification. However, AGM minutes of Cooperative B showed that the GA deliberated and voted to overturn some of the BOD's decisions. In short, Cooperative B displayed collective decision-making behaviour. This practice can exacerbate the influence problem because coordination costs imposed by collective decision-making are higher than those imposed by centralised decision-making (Chaddad & Iliopoulos, 2013; Cook & Iliopoulos, 2016).

BOD elections are held annually during the AGM. Candidates for elective positions file their candidacy at least a month prior to the AGM. Once candidacy is filed, Cooperative B educates the candidates about the expectations and responsibilities of the contested positions. Cooperative B officials explained that orientation is designed to prepare candidates for the role for which they are vying for. Only members can stand for elections. Likewise, only members can vote during the elections. All four cooperatives practice voting through secret ballot during the election of cooperative officials. In doing so, members vote in confidentiality and according to their preferences. This practice embraces good governance (Chibanda et al., 2009) and reduces influence problems (Rosairo et al., 2012). For other matters that require the GA's approval, members vote by raising their hands. Interviewed members felt that the current electoral procedures are fair. Although respondents from Cooperatives A, C, and D acknowledged that non-members' advice was sought during the AGMs, only members from Cooperative C said that their decisions were influenced by non-members' counsel. The minimal influence of non-members on cooperative affairs means that control of the cooperative's strategic direction rests with the GA and the BOD.

The cooperatives' amended bylaws indicate that the GA has the ultimate power to remove an underperforming director. Among the four cooperatives, only Cooperative C exercised this power. The BOD recommended that an underperforming director be removed and a special general assembly meeting was conducted for this specific reason. Cooperatives A and B claimed that they did not need to use this power. Underperforming directors were advised to resign and they did so voluntarily.

As the appointed representatives of the GA, the BOD plays a critical role in shaping the direction of the cooperatives' growth. For the four cooperatives, the BOD is the authority that screens and appoints the manager. Cooperative B formed a BOD sub-committee with the sole purpose of evaluating applicants for the manager position. The manager directly reports to the BOD. Unlike the other three cooperatives, Cooperative B does not require the hired manager to be a member of the cooperative. According to a cooperative official, imposing such a restriction would limit the pool of potential managers that the cooperative can recruit from. Cooperatives B and C requires that the manager should have tertiary qualifications in business or agriculture. Thus, the manager is expected to have the technical skills needed to manage an agricultural enterprise. Cooperative C also imposes the same requirement.

In all cases, the cooperatives' managers regularly attend monthly BOD meetings to report on the cooperative's performance and operations. The managers are also expected to provide inputs during BOD discussions on cooperative matters; however, the managers do not vote on policy and strategic decisions. As the appointing authority, the BOD can remove underperforming managers. Cooperative B did just that when members of the management team mismanaged the cooperative's funds. However, it appears that firing a manager whose interest conflicted with those of the cooperative was difficult for Cooperative D. When conflict arose between the manager and the BOD a decade ago, the BOD ended up taking over the management without officially firing the manager.

The studied cooperatives' amended bylaws discourage directors from managing the cooperative. However, Cooperative D had a history of appointing directors to manage the cooperative. Officials in Cooperatives A, B, and D felt that directors could and should intervene in the operations of the cooperative in times of crisis, as happened in Cooperatives A and D when they faced financial difficulties. However, Cooperative C's officials emphasised that the separation of authority between the BOD and management means that the BOD should not intervene in the management of the operations. In fact, the qualifying requirements for the manager's role is the absence of any relationship (by consanguinity or affinity) with any member of the BOD. Table 5.9 presents the governance practices observed in the four studied cooperatives while Table 5.10 summarises the property rights arrangements and governance practices that vary among the studied cooperatives.

Table 5.9*Governance Practices that affect Transparency and Accountability in Cooperatives A, B, C and D*

| Practices | Cooperative A | Cooperative B | Cooperative C | Cooperative D |
|---|----------------------|----------------------|----------------------|----------------------|
| <u>Transparency</u> | | | | |
| AGMs held regularly | Yes | Yes | Yes | Yes |
| Adequate notification of upcoming AGMs | Yes | Yes | Yes | Yes |
| GA can readily access BOD meeting minutes | Yes | Yes | Yes | Yes |
| Annual financial statements are independently audited | Yes | Yes | Yes | Yes |
| Members have sufficient time to review reports | Yes | Yes | Yes | No |
| <u>The BOD and management accountability</u> | | | | |
| The BOD elections held regularly | Yes | Yes | Yes | Yes |
| Only members nominated and elected directors | Yes | Yes | Yes | Yes |
| Directors are elected via secret ballot | Yes | Yes | Yes | Yes |
| Members consider election to be fair | Yes | Yes | Yes | Yes |
| The GA can remove director from office | Yes | Yes | Yes | Yes |
| The GA removed an underperforming director from office | No | No | Yes | No |
| The BOD selected and appointed the manager | Yes | Yes | Yes | Yes |
| Manager reports directly to the BOD | Yes | Yes | Yes | Yes |
| Manager attends BOD meetings | Yes | Yes | Yes | Yes |
| The BOD can fire manager or member of management team | Yes | Yes | Yes | Yes |
| The BOD failed to fire an unsuitable manager | No | No | No | Yes |
| <u>The BOD and management qualities and processes</u> | | | | |
| Members participate in policy & strategic decision-making | No | Yes | No | No |
| Non-members advise during AGMs | Yes | No | Yes | Yes |
| Non-members' advice influences members | No | No | Yes | No |
| Directors can be appointed to management positions | No | No | No | Yes |
| Directors can participate in management decisions | Yes | Yes | No | Yes |
| Directors intervened in daily operations | Yes | No | No | Yes |
| Manager must be an active member | Yes | No | Yes | Yes |
| Manager must have tertiary qualification | No | Yes | Yes | No |
| Current manager has a university degree | Yes | Yes | Yes | Yes |

Note: Information obtained from articles of cooperation, bylaws, audited financial statements, AGM minutes, and interviews with key informants of Cooperatives A, B, C, and D.

Table 5.10*Summary of Institutional Arrangements that differ between Cooperatives A, B, C and D*

| Attributes | Cooperative A | Cooperative B | Cooperative C | Cooperative D |
|--|----------------------|----------------------|----------------------|----------------------|
| <u>Property rights structure</u> | | | | |
| Only members can patronise the cooperative | No | Yes | No | No |
| Members patronise the cooperative on better terms than non-members | Yes | Yes | No | No |
| Investment is proportional to patronage | No | Yes | No | No |
| Members can readily exit and redeem all shares | Yes | Yes | Yes | No |
| Members can redeem some shares without exiting the cooperative | No | No | Yes | No |
| Periodic redemption of excess member capital | No | No | Yes | No |
| <u>Governance practices</u> | | | | |
| Members have sufficient time to review reports | Yes | Yes | Yes | No |
| GA removed a director from office | No | No | Yes | No |
| Members do not participate in policy & strategic decision-making | Yes | No | Yes | Yes |
| Only members advise during AGMs | No | Yes | No | No |
| Non-members' advice did not influence members | Yes | Yes | No | Yes |
| The BOD fired a manager | No | Yes | No | No |
| Directors should not be appointed to a managerial position | Yes | Yes | Yes | No |
| Directors are not allowed to participate in management decisions | No | No | Yes | No |
| Director did not intervene in daily operations | No | Yes | Yes | No |
| Manager does not have to be a member | No | Yes | No | No |
| Manager must have tertiary qualification | No | Yes | Yes | No |

Note: Adapted from Tables 5.7-5.9.

5.5 Quantitative analysis of determinants of cooperative performance

Sections 5.3 and 5.4 reported a qualitative comparative analysis of financial performance and institutional arrangements (property rights structure and governance practices) observed in the four cooperatives studied. Apart from providing evidence supporting NIE propositions that weak institutional arrangements undermine an organisation's financial performance; this qualitative analysis generated a set of performance and institutional indicators suitable for quantitative analysis, providing an opportunity to triangulate the qualitative findings and to identify relationships not revealed by the qualitative analysis.

Table 5.11 summarises a subset of the observed indicators after eliminating those that did not vary across the four cases, and one indicator (*infagm*) that correlated perfectly with another, less subjective, indicator of good governance (*rmvebod*). All of the performance indicators presented in Table 5.11 are reported as dummy variables, with a score of one indicating the presence of relatively good financial performance, and zero otherwise. Likewise, all indicators of property rights and governance practices underpinning financial performance are reported as dummy variables with a score of one indicating a good institutional arrangement, and zero otherwise.

This section presents the results of a hierarchical cluster analysis of the performance and institutional indicators presented in Table 5.11. Hierarchical cluster analysis offers a suitable method of detecting positive relationships between binary variables when the number of cases is small, as the technique can be applied to variables rather than cases. Broadly speaking, the objective of cluster analysis is to classify a set of observations into mutually exclusive clusters based on a measure of their similarities (Chatfield & Collins, 1980, pp. 212-214). A hierarchical cluster analysis of variables starts with a single cluster containing all of the variables and, at each successive step, merges the variables into fewer and fewer groups such that homogeneity within the groups, or heterogeneity between the groups, is maximised (Norusis, 1994, p. 100). Although there is no objective way of choosing an optimum number of groups, the decision is usually guided by a substantial increase in a measure of proximity showing the loss of homogeneity (heterogeneity) within (between) groups.

In this study, the (N=25) dummy variables listed in Table 5.11 were grouped into clusters by minimising the squared Euclidean distance within clusters. Variables within clusters are positively related, with the strength of these positive relationships weakening as the number of clusters diminishes. The results presented in Appendices 9 and 10 show that positive relationships between variables within clusters remained strong until the number of clusters dropped below four. At this stage, the agglomeration coefficient measuring the loss of homogeneity increased sharply from 0.679 to 1.051.

Table 5.11
Determinants of Rice Farmer Cooperative's Performance

| Constructs | Attributes | Variable |
|----------------------------|--|------------|
| Performance indicators | Positive net equity growth | neg |
| | Positive asset growth | ag |
| | Less than -10% contraction in book value of shares | bookval |
| | Within range profitability (2019 ROE) | proe2019 |
| | Profitability growth (ROE trend) | pgroetrend |
| | Within range leverage (2019 debt-to-equity ratio) | der2019 |
| | Within range liquidity (2019 current ratio) | cr2019 |
| | Low level of government support | lowgovsup |
| | Presence of intangible assets (reputation) and significant markets | prerepu |
| Property rights indicators | Only members can patronise the cooperative | mempatr |
| | Members patronise the cooperative on better terms than non-members | memadv |
| | Investment is proportional to patronage | invpatr |
| | Members can readily exit and redeem all shares | rdmall |
| | Members can redeem some shares without exiting the cooperative | rdmpart |
| | Periodic redemption of excess member capital | rdmperd |
| Governance indicators | Members have sufficient time to review reports | sufrevw |
| | GA removed a director from office | rmvebod |
| | Members do not participate in policy & strategic decision-making | prtcpol |
| | Only members advise during AGMs | advagm |
| | Non-members' advice did not influence members | infagm |
| | The BOD fired a manager | firemgr |
| | Directors should not be appointed to a managerial position | rstrmngt |
| | Directors are not allowed to participate in management decisions | nalwintv |
| | Directors did not intervene in daily operations | intvday |
| | Manager does not have to be member | mgrmem |
| | Manager must have tertiary qualification | mstter |

Note: Adapted from Tables 5.6 and 5.10.

Separation of the performance and institutional indicators into different clusters would not support the NIE argument that good financial performance is more likely found in organisations that have good institutional arrangements. Conversely, a healthy mix of performance and institutional indicators within each cluster lends support to the NIE theory. Figure 5.1 shows the mix of indicators in each of the four homogenous clusters identified in this study. All of the clusters combine performance indicators with institutional indicators. This is consistent with NIE theory and lends credibility to the results of the qualitative analysis. The mix of indicators in each cluster also provides more nuanced information about relationships between particular aspects of financial performance, property rights and governance practices. These relationships are explored in the remaining sections of this chapter.

Figure 5.1

Inter-relationship between Performance, Property Rights and Governance Indicators

| Performance indicators Institutional indicators | Cluster | neg | ag | prerepu | proe2019 | cr2019 | pgroetrend | bookval | der2019 | lowgovsup |
|--|---------|---------|----|---------|----------|--------|------------|---------|---------|-----------|
| | | mempatr | 1 | | | | | | | |
| invpatr | | | | | | | | | | |
| advagm | | | | | | | | | | |
| firemgr | | | | | | | | | | |
| mgrmem | | | | | | | | | | |
| memadv | 2 | | | | | | | | | |
| rdmall | | | | | | | | | | |
| sufrevw | | | | | | | | | | |
| rstrmngt | | | | | | | | | | |
| rdmpart | 3 | | | | | | | | | |
| rdmperd | | | | | | | | | | |
| rmvebod | | | | | | | | | | |
| prtcpol | | | | | | | | | | |
| nalwintv | | | | | | | | | | |
| intvday | 4 | | | | | | | | | |
| mstter | | | | | | | | | | |

Legend



Property rights indicators

Governance indicators

5.5.1 Cluster 1

Three performance indicators were included in Cluster 1 – positive net equity growth (*neg*), positive asset growth (*ag*), and presence of reputation and significant markets (*prerepu*). This signals a positive relationship between growth in equity, assets and market recognition. These performance indicators correlated positively with two indicators of property rights (*invpatr* and *mempatr*) that strengthen proportionality between investment and patronage. Proportionality between investment and patronage addresses internal and external free-rider problems, encouraging both investment and patronage by aligning the interests of members as investors on the one hand, and as patrons on the other hand. This alignment of interests also reduces the cost of negotiating and enforcing supply contracts with patrons, which helps the cooperative to establish a good reputation for meeting the quantity and quality requirements of its buyers, and to establish long-term trading relationships that reduce uncertainty in investment plans and inefficiency in operations and resource use.

The performance indicators in Cluster 1 also correlated positively with three governance indicators. Growth in equity, assets and market recognition combined with governance arrangements that curtail external influence problems (*advagm*), improve the quality of managers (*mgrmem*), and strengthen accountability (*firemgr*). The first of these governance indicators emphasises the importance of preventing external agencies from influencing the selection of directors and appointment of managers – a problem observed in development settings where producer organisations tend to be treated as a public good (Rosairo et al., 2012). Conversely, the second indicator signals the importance of recruiting managers on merit from a pool of candidates that is not restricted to members of the cooperative. The last of these governance indicators measures the ability and willingness of directors to dismiss managers who perform poorly in growing the cooperative's business.

5.5.2 Cluster 2

Cluster 2 included two indicators of current performance, one a measure of profitability (*proe2019*) and the other a measure of liquidity (*cr2019*). These performance indicators correlated positively with two indicators of property rights, *rdmall* and *memadv*. Cooperatives that respect decisions made by members to exit and redeem all of their shares (*rdmall*) need to maintain relatively high levels of liquidity to cope with redemption risk. Profitability is likely

to be higher in cooperatives that alleviate the external free-rider problem by offering price rebates only to shareholding patrons (*memadv*), particularly if a substantial part of their business is transacted with customers who are not members.

Current profitability and liquidity also correlated positively with two governance indicators, *sufrevw* and *rstrmngt*. Giving members sufficient time to review their cooperative's financial statements ahead of the AGM promotes transparency and signals competent management - a characteristic more likely found in profitable cooperatives. Acceptance of the view that directors should not be appointed to managerial positions (*rstrmngt*) is necessary (but not sufficient) to separate ownership from control, a practice that promotes accountability in management and which also attenuates the damaging effects of influence problems.

5.5.3 Cluster 3

Cluster 3 combined one performance indicator, *pgroetrend* – which signals on-going profitability, with two indicators of property rights (*rdmpart* and *rdmperd*) and three governance attributes (*nalwintv*, *prtcpol* and *rmvebod*). Both property rights indicators reflect the ability of members to realise the nominal value of some part of their shareholding before they exit the cooperative. While this does not resolve the horizon problem, it does encourage members to buy shares or at least to accept retentions imposed by the cooperative to grow its equity capital. Regular redemption of 'excess' shares (as in Cooperative C) also helps to align voting power with investment, thereby alleviating influence problems and reducing conflicts of interest that raise transaction costs and decrease profits.

Two of the three governance indicators in Cluster 3, *nalwintv* and *prtcpol*, relate to effective separation of ownership from control, first by excluding directors from management decisions, and second by preventing members from participating in BOD decisions. This does not imply that directors should not consult members. Rather it means that board decisions should be centralised in the hands of accountable directors to promote efficiency in decision-making and to curtail influence problems that lead to a misallocation of resources. The remaining governance indicator, *rmvebod*, measures the ability and willingness of members to hold directors accountable for BOD decisions by exercising their voice and voting power at a general meeting of the cooperative.

5.5.4 Cluster 4

Cluster 4 included three highly correlated performance indicators, with better growth in the imputed value of shares (*bookval*) showing up in acceptable debt/equity ratios (*der2019*) and a relatively low share of assets attributed to donations (*lowgovsup*). These performance indicators combined with two governance indicators. The first of these, *intvday*, refers to the absence of any interference by directors in the cooperative's day-to-day operations, even in cooperatives that did not explicitly forbid directors from participating in management decisions. This signals effective separation of ownership from control, and a high degree of trust in management. Cornforth (2004) notes that confidence in management also inspires managers to act decisively. Not surprising, the second governance indicator in Cluster 4, *mstter*, reflects the quality of the cooperative's lead manager. In essence, Cluster 4 highlights the importance of decisive, high quality management to a cooperative's financial sustainability.

5.6 Summary

This chapter compared the property rights and governance practices between the four cooperatives. Though all four cooperatives share similar institutional arrangements, one cooperative stood out. This cooperative introduced policies that significantly mitigated the effects of the free-riding problem. Results of the hierarchical cluster analysis showed that better performance correlated positively with property rights and institutional arrangements that mitigated the free-rider, horizon and influence problems.

The governance practices between the four cooperatives are also very similar as a result of the restrictions imposed by the Philippine Cooperative Code. However, Section 5.4 highlighted variations in their governance practices. Better performance correlated positively with quality management and the adoption of governance practices that promoted accountability and transparency, and which clearly separated ownership from control. Chapter 6 concludes the research and provides recommendations for cooperative leaders, scholar and policymakers.

Chapter 6 Conclusions and Recommendations

The primary purpose of the research was to examine the institutional arrangements of rice farmer cooperatives in the Davao del Norte province and to establish whether, as NIE literature suggests, these arrangements affect cooperative performance.

6.1 Summary of research

This research used multiple case studies to gather data and test these propositions. Four rice farmer cooperatives from the Davao del Norte province were purposefully selected. These cooperatives were studied and compared in-depth. Likewise, the cooperatives' managers, the BOD, and members were purposefully selected and interviewed for the study. Members were selected using snowball sampling. To enhance the quality of the research design, semi-structured interview schedules were developed and used during the interviews. The research reviewed relevant cooperative documents, including articles of cooperation, bylaws, AGM minutes, financial statements, and cooperative profile. All of these were used to triangulate the information gathered from the interviews. This technique further strengthens the research's validity.

The research assessed the four cooperatives' levels of performance using financial and non-financial measures. The measures revealed variations in the cooperatives' levels of performance. This is despite the fact that all four cooperatives access similar levels of government support and operate in similar agricultural, climatic, and market conditions. Differences in the cooperatives' performance could be attributed to their individual institutional arrangements.

The research provides up-to-date information about the property rights structure and governance practices in rice farmer cooperatives in the Davao del Norte province. More specifically, the research tested theory-based propositions about the relationships between these arrangements and indicators of cooperative performance. Section 6.2 summarises the key observations and analysis made in Chapters Chapter 4 and Chapter 5, respectively, and offers recommendations to improve the cooperatives' performance. The chapter ends with the research's contribution to knowledge, its limitations, and recommendations for future study.

6.2 Key findings and recommendations

The existing cooperative code in the Philippines encourages the formation of traditional cooperatives. The law restricts cooperative membership to patrons. It also does not encourage cooperatives to provide for appreciable shares and to align patronage with investments. As a result, cooperatives will most likely face institutional problems typical in most traditional cooperatives. This situation is unlikely to change much unless policymakers relax the Cooperative Code to legalise less traditional cooperative models such as New Generation Cooperatives (NGCs) or hybrid cooperatives. The four cooperatives studied confront almost all of the institutional problems identified in the literature in varying degrees. This is attributed to the presence of property rights arrangements that create these problems. However, the studied cooperatives' practices and policies reveal that Philippine cooperatives have adapted and instituted mechanisms that complements the current law and alleviates the effects of these institutional problems.

For the studied cooperatives, and presumably all cooperatives in the Philippines, benefits are partly proportional to patronage and partly proportional to investment. This somehow mitigates the horizon and portfolio problems because members receive short-term returns on their investments. However, the conservative Cooperative Code prevents cooperatives from issuing a class of non-redeemable shares that can be traded at market prices. Measures that allow share appreciation and, consequently, share trading, better address the horizon and portfolio problems because the share value reflects the share's current and potential earning potential of the shares. When shares are appreciable, members as investors realise not only short-term benefits, in the form of dividends on share capital, on their investments but also long-term benefits, in the form of capital gains. Share appreciation would entice risky and affluent members to invest more in the cooperative as share value would reflect the actual value of the cooperative's equity. Without these, members are discouraged from investing in their cooperative and most Philippine cooperatives rely heavily on assets donated by the government. Given the restrictions imposed by the Philippine Cooperative Code, the studied cooperatives could also introduce non-voting, transferable and appreciable transaction rights. These rights operate similarly to delivery rights issued by NGCs that limits the quantity a member can deliver based on the rights they purchased upfront (Coltrain et al., 2000, p. 4). Since these rights are tradable and appreciable, members can opt to sell their

rights within the membership when they are unable to meet the transaction requirements attached to the rights. This solution will allow the cooperative to generate equity, reliably predict its operational throughput, and meet downstream contracts. Moreover, this solution could encourage inactive members, members who stopped patronising the cooperative's businesses, to leave the cooperative and redeem their shares.

The research reveals that the free-riding problem – both internal and external – is attenuated when members' investments are aligned to their level of patronage. When investment is proportional to patronage, members are compelled to invest in the cooperative's assets according to their level of usage (Cook & Iliopoulos, 1998). Thus, those who use more are compelled to contribute more than those who use the assets less. As shown by the most successful cooperative and substantiated by the cluster analysis, the alignment of investment with patronage, through its per-unit retaining mechanism, promoted stable and reliable net equity and asset growths. Proportionality is more manageable when the cooperative's business is homogenous (as in Cooperative B) than when the cooperative offers unrelated products and services as it is more tedious to proportionate patronage levels to investment for each product and service. Loan retention policies of the other three cooperatives, that is, retaining a percentage of a member's borrowed money and adding it to that member's share capital contributions, somehow allows these cooperatives to align a portion of members' investment to patronage. However, these cooperatives could introduce more measures to further promote alignment of investments to patronage for their other business segments. For example, the service fees and interest rates charged to patrons when they transact with the machinery and financial services, respectively, could be differentiated based on the level of usage. The higher the level of usage, the lesser the fees and rates charged will be. As a result, members are enticed to patronise more the cooperative's business because of the incremental increase in benefits. This could be implemented through the issuance of personalised discount cards to members.

Analysis of the most successful cooperative's property rights structure revealed the absence of the external free-riding problem. Non-members cannot access the cooperative's businesses. Only members, who contributed to the cooperative's capital, can enjoy the benefits from the use of the cooperative's assets. As the cooperative only transacts with its

members, they can monitor and control the quality and quantity of the products delivered by the members. This close monitoring and control results in efficient operations, reliable downstream market relationships, better market performance and, consequently, improved cooperative standing. This finding is supported by the results of the hierarchical cluster analysis which revealed a positive relationship between the presence of intangible assets, market recognition, and the absence of an external free-riding problem. As a cooperative strives to establish and maintain its reputation, there is an increased need to control and monitor the quality and quantity of its operations' throughput. The most efficient means to do this is by regulating those who access the cooperative's assets, that is, by limiting access to members only. Cook and Iliopoulos (1998) identified a number of similar strategies designed to increase members' loyalty and give the cooperative greater control of its supply channels.

Cooperatives that choose to cater to both members and non-members face external free-riding. As seen in the least successful cooperative in the study, the free-riding problem disincentivised members from staying and investing in the cooperative. Members do not feel any benefit from membership since they can still make use of the cooperative's assets without registering. This affects the cooperative's ability to encourage patronage and investment from its members which, in turn, affects its performance. As the cooperative's performance declines, members become more inclined to leave. The situation is made worse when policies that further restrict share redemption are introduced. These policies only provide temporary relief to the current high redemption faced by the cooperative. However, it does not address the cause as to why members are exiting the cooperative. In fact, such policies are likely to further discourage members from investing because they cannot withdraw their investment at their discretion. To mitigate the effects of external free-riding, these cooperatives must provide members with transactional advantages (Giannakas et al., 2016). The hierarchical cluster analysis showed a positive relationship between good performance and the presence of transactional benefits for members. Transactional advantages such as better value through a higher buying price, cheaper service fees and lower interest rates, and preferential treatment for members over non-members will entice non-members to join and remain to the cooperative.

As earlier discussed, when a cooperative is performing badly, members tend to withdraw their equity to reduce their exposure to risks. When capital redemption rates climb, a cooperative further loses capital and struggles more in recovering from their losses. This will further dampen the cooperative's performance. Underperforming cooperatives are likely to institute measures that will discourage redemption. The research revealed that the most equity-strapped cooperative has two policies that restricts equity redemption. One, members are prohibited from redeeming a part of their shareholding. Second, only one member is allowed to leave the cooperative and redeem their shares each year. While the second policy is designed to protect the cooperative's current capital base from sudden and large withdrawals, it can alienate members from investing more in the cooperative's equity due to the uncertainty of future redemptions. The cooperative would be better off if equity redemption policies are designed to reduce the risks of sudden and large redemptions. Periodic redemption of equity is one such policy. The policy, adopted by one of the studied cooperatives, mandates the cooperative to redeem share capital in excess of a specified threshold. The primary objective of the policy is to balance out the members' shareholding base. This policy reduces the effect of the influence problem by ensuring that no individual or group of members hold a disproportionately large share of the cooperative's equity. The policy also cushions the cooperative from sudden shocks in its equity base whenever a member exits the cooperative. However, periodic redemption is more appealing if the cooperative's mutual equity is growing through either share revaluation or issuance of bonus shares.

The laws that regulates the cooperative movement in the Philippines was designed to address identified causes of cooperative failure. Thus, the Philippine Cooperative Code is very specific on what governance structures a cooperative can adopt. The cooperative structure is composed of the GA, the BOD and the management team. This provision recognises the importance of separating ownership from control. All four cooperatives regularly hold AGMs. The BOD is elected by the members during the AGM. Further, only members can stand for elections. These processes promote accountability, as members select their representatives from amongst themselves. The law and the cooperatives' amended bylaws provides members a proper mechanism to remove underperforming BODs. This mechanism further improves accountability. In addition, the election of the BOD and other

officials are conducted via secret ballot. This practice reduces the effects of the influence problem as members can vote free from pressure or coercion. The Philippine Cooperative Code also mandates that financial statements must be audited annually by a government-registered external auditor and presented to and ratified by the GA during the AGM. This provision of the code is designed to promote accountability and transparency in the country's cooperatives.

Despite the specificity of the Code on a cooperative's governance arrangements, this research found that the studied cooperatives' interpretation of some provisions of the Code are different. These differences resulted in a variation in some of the practices adopted by the cooperatives. Though the Code aimed to encourage member education by requiring adequate time for members to be able to review annual reports, some members of the least performing cooperative felt that they were not given sufficient time to review the said reports. This is because the decision on the time period to distribute the reports is dependent on the cooperative officials. In addition, information dissemination varies between the cooperatives. One cooperative holds quarterly meeting to keep members up-to-date while some distribute reports during AGMs. This variation greatly affects the information that a member receives, and, in turn, affects a member's ability to make informed decisions.

Further, even though the Code does not restrict the candidate pool of potential managers in terms of their membership to the cooperative, only the most successful cooperative hired an outside manager. It appears that most cooperatives select their manager from their membership base only. However, requiring a potential manager to be a member limits the cooperative's ability to recruit professional managers who have adequate training in overseeing agricultural enterprises. As a cooperative grows and becomes more market-oriented, there is a need to hire professional managers. This shift in the management qualification is one of the observed changes among cooperatives in developed economies (Bijman et al., 2014).

The research also found variations in the levels of participation of the members in the decision control processes, and of the BODs in the decision management process. In the most successful cooperative, influence of external actors in the decision-making are minimised

during the AGMs. However, they allow the GA to have greater participation in the decision-making processes. The GA can put into deliberation and vote on the strategic and policy decisions already decided upon by the BOD. This means that decision-making is not centralised but collective. Collective decision-making aggravates the influence problem because coordination costs are incurred to distribute information and influence members (Chaddad & Iliopoulos, 2013). Meanwhile, the least successful cooperative allowed directors to take on a managerial role, when the situation required. They also allow directors to intervene in the cooperative's daily operations. This practice could degrade managerial independence and could discourage the manager from acting responsibly. The practice also jeopardises accountability as a result of unclear boundaries in authority.

The success of a Philippine cooperative is dependent on its ability to formulate and implement policies that alleviates the effects of institutional problems brought about by conservative cooperative legislation. However, in order for these mechanisms to effectively contribute to the growth and sustainability of the cooperative, cooperative leaders must first identify the primary causes, not the symptoms, of cooperative failure and address them. Notwithstanding, Philippine cooperatives would benefit tremendously if the existing cooperative code is amended to allow hybrid forms of cooperatives. This will provide cooperatives more options in the design and development of their cooperatives.

6.3 Contributions, limitations, and future research

The research contributes significantly to the literature on Philippine cooperatives. To date, there have been no prior studies on the prevailing institutional arrangements of cooperatives in the Philippines. This research has provided in-depth information about the institutional arrangements of four rice farmer cooperatives in the Davao del Norte province. This research has shown that the cooperatives' institutional arrangements are largely restricted by the existing cooperative law. As such, the property rights structure observed in the four cooperatives studied are likely to be present in most cooperatives in the country. However, the research has also shown that the studied cooperatives have been able to introduce a variety of mechanisms to mitigate the institutional problems that they face. This indicates that Philippine cooperatives adopt different strategies, with varying effects on performance, to address the similar institutional problems that they face.

For policymakers, this research provides up-to-date information on how the current law can be amended to provide cooperatives with more options when designing their institutional arrangements. Additionally, this research provides policymakers with better insight into the kind of interventions suited for specific cooperatives. As cooperatives addressed institutional problems differently with different outcomes, policymakers must be able to introduce customised interventions that will help a specific cooperative address the causes, rather than the symptoms, of its institutional problems. Current government support and interventions are focused on input, facility, and machinery support, and on leadership and management capacity-building. This research has shown that cooperatives need additional capacity-building in defining and specifying their property rights.

The results of this research is equally useful to cooperative leaders. As highlighted by this research, existing institutional arrangements affect the performance of a cooperative. A clear understanding of their property rights and how these aggravate or mitigate institutional problems will help cooperative leaders in formulating more appropriate strategies that focuses on the problems that significantly affect their performance. Thus, the solutions introduced by the BOD are less likely to provide temporary relief and more likely to sustain the cooperative.

While this research was able to examine the institutional arrangements of rice farmer cooperatives, it is not without limitations. The Covid-19 pandemic meant that data had to be collected by research assistants living in the Philippines. As a result, information is not as detailed or in-depth as what the researcher would have liked. A significant amount of time was also needed to explain the research and its objectives to the research assistants. Although experienced, the research assistants also needed specific training on collecting data using the semi-structured interview schedules developed for the research to ensure that the interviews were conducted objectively and appropriately. This resulted in the research taking up more time than intended.

Further research could examine farmer cooperatives in other parts of the country and in other sectors of the agriculture industry to determine whether the observed institutional

arrangements are unique to the province, or can be generalised to the whole country, and whether they are also unique to the rice sector, or can be generalised to the agriculture industry. In addition, further research could also unravel other strategies employed by other cooperatives to address the institutional problems they face and the effects of these strategies in mitigating these problems. Moreover, as cooperatives are required to report their financial statements to regulatory bodies, a time-series analysis using data from each cooperative's financial statements covering their lifetime could reveal more accurate trends in the studied cooperatives financial performance. Such a study could identify periods of growth and decline and identify events during these times that could have significantly contributed to the cooperative's financial position.

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Appendices
Appendix 1
Interview schedule
Board of Directors
 Davao del Norte Rice Cooperative

This research is:

- Completely voluntary in nature.
- Respondent is free to decide not to participate at any time during or after the interview. Provide contact details (Brenda.Dimas@lincolnuni.ac.nz or +63 905 305 9424) for queries or expression of withdrawal.
- Responses will be aggregated for analysis only, and no personal details will be reported.
- A summary of findings will be provided to the organisation.
- Interview might be recorded to ease transcription (if respondent allows).

We are immensely grateful to you for participating in the study.

 PART I. ORGANISATIONAL PROFILE (Pre-filled up prior to interview).

| | | |
|---------------------------------------|---|---|
| Name of organisation | | |
| Date of registration | | |
| Number of founding members | | |
| Current number of members | | |
| In the register | | |
| Are there inactive members? | Y | N |
| If yes, how many and why? | | |
| Geographical coverage of organisation | | |
| Barangay, specify: | | |
| Municipality/City, specify: | | |
| Provincial, specify: | | |
| Others, specify: | | |

PART II. INSTITUTIONAL AND GOVERNANCE ARRANGEMENTS

| 1 ASSETS HELD BY THE COOPERATIVE | | | | | |
|---|----------------------------|---|--|------------------------------|-----------------|
| Assets | Quantity (units area) | Ownership status ^a (If not OC , proceed to <i>Usage Status</i>) | Means of acquisition ^b (Refer to Table 4.14) | Usage status ^b | Remarks, if any |
| Land | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Buildings, facilities & machinery | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Others | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

a. **OC** Owned by cooperative | **L** Leased to cooperative | **B** Borrowed by cooperative | **OT** Others
 b. **PC** Purchased by cooperative | **MD** Member donated physical assets (in kind) | **GA** Granted by an external agency | **O** Others
 c. **O** Operational/utilised | **NO** Non-operational/unutilised

| 2 CURRENT BUSINESS OPERATIONS | | | | | |
|--------------------------------------|-------------|---|--|---|--|
| Business Operations | Particulars | Who can patronise the specific business? ^a (If MO , proceed to Table 3) | Do members have advantages? Y Yes N No | If yes, what is the advantage? ^b | If O , what are the other advantages? |
| Products | | | | | |
| Sale of farm inputs | | | | | |
| | | | | | |
| Sale of non-farm inputs | | | | | |
| | | | | | |
| Marketing of farm outputs | | | | | |
| | | | | | |
| Marketing of non-farm outputs | | | | | |
| | | | | | |
| Services | | | | | |
| Provision of machinery services | | | | | |
| Provision of farm labour services | | | | | |
| Provision of technical advice | | | | | |
| Lending | | | | | |
| | | | | | |
| | | | | | |
| Processing | | | | | |
| | | | | | |
| | | | | | |
| Others | | | | | |
| | | | | | |
| | | | | | |

^a. **MO** Members only | **MN** Members and non-members

^b. **BP** Better prices | **PR** Patronage refund | **D** Dividend | **SA** Priority on service access or produce delivery | **O** Others

| 3 BUSINESS STRATEGY | | | |
|--|--------------|--|---|
| 3.1 Does the cooperative want to expand operation on some of its products/services in the next five years? | Y | If yes, answer 3.2-3.4 | |
| | N | If no, proceed to 4 | |
| If yes, what products/services? | | | |
| 3.2 Who identifies what products/services are for expansion? ^a | | | |
| 3.3 Who approves what products/services are for expansion? ^a | | | |
| 3.4 What are the reasons that might prevent or delay possible expansions? (Tick all that apply.) | | Insufficient capital | |
| | | Insufficient member support | |
| | | Insufficient operational knowledge | |
| | | Other reasons, specify: | |
| 4 CAPITAL ACQUISITION | | | |
| 4.1 How do the cooperative raise capital? (Rank from highest (from 1) to lowest (up to 5)) | | Retained earnings (If selected, answer 4.2) | |
| | | Additional member contribution (If selected, answer 4.3) | |
| | | Borrowing from external financiers (If selected, answer 4.4) | |
| | | Donor assistance (If selected, answer 4.5-4.6) | |
| | | Others, specify: | |
| 4.2 Retained earnings | | | |
| Who determines the value of earnings retained for the last fiscal year? ^a | | | |
| Who approves the value of earnings retained for the last fiscal year? ^a | | | |
| Did the cooperative increase the percentage of retained earnings in the last three fiscal years? | Y | | |
| | N | | |
| 4.3 Additional member contribution | | | |
| Is the additional member contribution voluntary? | Y | If yes, proceed to 4.4 | |
| | N | | |
| Who determines the value of additional member contribution? ^a | | | |
| Who approves the value of additional member contribution? ^a | | | |
| How is additional member contribution allocated? | | Proportional to member's patronage | |
| | | Proportional to member's shareholding | |
| | | Allocated equally to all members | |
| | | Others, specify: | |
| 4.4 Borrowing from external financiers | | | |
| What percentage of the cooperative's capital requirement last year was acquired from external financiers? | Institution | Individual | |
| | % | % | Lender |
| | % | % | Investors |
| | % | % | Donors |
| | % | % | Others, specify: |
| Are external financiers represented during board meetings or AGMs? (Tick all that apply.) | BOD meetings | AGM | |
| | | | No |
| | | | Yes, they attend meetings as observers |
| | | | Yes, they attend meetings as advisors |
| | | | Yes, they attend meetings as participants |

^a MA Manager | BOD Board of Director | GA General Assembly

| | | | |
|---|-----------------------------------|--|---|
| 4.5 Donor assistance | | | |
| Was the cooperative established by a facilitating organisation? | | Y | |
| | | N | |
| If yes, what organisation facilitated its establishment? | | | |
| What percentage of the cooperative's initial financial capital was provided by the facilitating organisation? | | % | Grant, loan or shareholding? |
| Did the facilitating organisation provide the cooperative with any physical assets? | Y | If yes, what assets were donated or lent to the cooperative? | |
| | N | | |
| 4.6 Other external organisations who provided capital | | | |
| Can you disclose the external organisations who provided capital assistance to the cooperative? | Kind of organisation ^a | Kind of support provided ^b | Influence of organisation ^c |
| | | | |
| | | | |
| | | | |
| 5 MEMBERSHIP QUALIFICATIONS AND BENEFITS | | | |
| 5.1 Can a member of the cooperative be a: | | natural person? | |
| | | household? | |
| | | legal entity? | |
| 5.2 What financial contribution must be made to be a full member: | | pay an initial fee to join? | |
| | | pay an annual subscription fee? | |
| | | buy shares? | |
| | | other, specify: | |
| 5.3 Does the cooperative provide services to: | | members who are not fully paid up? | |
| | | non-members? | |
| If yes, do members who are fully paid-up get these services at a better price than other users? | | Y | |
| | | N | |
| 5.4 Are members required to satisfy a minimum patronage requirement to continue enjoying membership benefits? | | Y | |
| | | N | |
| 5.5 What percentage of the membership did not patronise the business last year? | | | % |
| 5.6 Are members entitled to exercise: (Tick all the apply.) | Fully paid up | Not fully paid up | |
| | | | one vote each at a general assembly meeting? |
| | | | more votes than other members who make less use of the cooperative? |
| | | | more votes than other members who contribute less capital to the cooperative? |

^{a.} **G** National Government Agency | **L** Local Government Unit | **N** Non-government Organisation

^{b.} **FS** Financial subsidy | **TA** Tangible assets | **CB** Capacity building | **SL** Supply chain linkage

^{c.} **PM** Participation in management | **PD** Participation in the BOD decision-making | **AC** Advisory capacity only | **O** Others | **N** None

| 6 SHAREHOLDING OWNED IN THE COOPERATIVE | | | | |
|--|---|------------------------------------|---------|---------|
| 6.1 Do members own shares in the cooperative? | Y | If yes, answer the rest of Table 6 | | |
| | N | If no, proceed to Table 7 | | |
| If yes, does the cooperative issue: | | just one type of share? | | |
| | | more than one type of share? | | |
| Complete the table below. (Y for Yes N for No D for Don't know.) | | Share A | Share B | Share C |
| 6.2 What name(s) do you give to these shares? | | | | |
| 6.3 Are these shares recorded in a register (list of members with corresponding number of shares)? | | | | |
| 6.4 Did members pay for these shares? | | | | |
| If yes, must the cooperative redeem (i.e., buy) these shares if the shareholder leaves the cooperative? | | | | |
| If yes, must the cooperative redeem these shares if the shareholder wants to withdraw <u>part</u> of his/her shares? | | | | |
| If shares <u>are</u> redeemable, has the cooperative ever increased their share price or issued bonus shares? | | | | |
| If shares <u>are</u> redeemable, did the cooperative redeem any shares in the past year or two? | | | | |
| If shares <u>were</u> redeemed in the past year or two, was it at nominal price? | | | | |
| If shares <u>are not</u> redeemable, are members allowed to trade them with other members? | | | | |
| If shares <u>are not</u> redeemable, does the cooperative facilitate trading of shares among members? | | | | |
| 6.5 Is the number of shares held by a member linked to the amount of business they do with the cooperative? | | | | |
| 6.6 Is there some minimum number of shares a member must buy? | | | | |
| 6.7 Is there some maximum number of shares a member can buy? | | | | |
| 6.8 Can firms or individuals who do not use the cooperative's services buy any of these shares? | | | | |
| If yes, are these non-patrons allowed to vote at a general assembly meeting? | | | | |
| If yes, is there any limit on non-patron voting rights to ensure that patrons stay in control of the cooperative? | | | | |
| Complete the rest of this table indicating amounts where possible. | | | | |
| 6.9 What is the nominal share price (PhP/share)? | | | | |
| 6.10 How many shares does the typical patron member own? | | | | |
| 6.11 If a dividend was paid, what was the size of the most recent dividend paid (PhP/share)? | | | | |

| | | | | |
|---|--|---|----------------------------|---|
| 6.12 How were the dividends paid? ^a | | | | |
| 6.13 If the cooperative sold shares to non-patrons, what percentage of its total shareholding is owned by these non-patrons? | | | | % |
| 6.14 If the cooperative sold shares to a non-patron who is also a business partner, what key service does this partner provide? | | | | |
| 6.15 What percentage of the cooperative's total shareholding does this partner own? | | | | |
| 7 ANNUAL GENERAL ASSEMBLY (AGM) | | | | |
| 7.1 Was the Annual General Assembly meeting consistently conducted over the last five years? | | Y | | |
| | | N | | |
| 7.2 When was the last Annual General Assembly meeting? | | | | |
| 7.3 Did non-members attend the last Annual General Assembly meeting? | | Y | If yes, complete Table 7.4 | |
| | | N | If no, proceed to 7.5 | |
| 7.4 Non-Member attendance at the last Annual General Assembly meeting | | | | |
| Who are the non-members that attended? | | What is their role in the meeting? ^a | | Did they perform their expected role? ^b |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| 7.5 How many members came along during the last Annual General Assembly meeting? | | | | |
| 7.6 Did the members received prior notice of the last Annual General Assembly meeting? | | Y | If yes, answer 7.7-7.8 | |
| | | N | If no, proceed to 7.9 | |
| 7.7 How many days was the notice circulated prior to the last Annual General Assembly meeting? | | | Less than 14 days | |
| | | | Between 15–30 days | |
| | | | Between 31–60 days | |
| 7.8 How was the notice circulated? | | Written notice | | |
| | | Mobile communication device | | |
| | | Word of mouth through cluster leaders | | |
| | | Others, specify: | | |
| 7.9 Circulation of Reports | | | | |
| Kind of reports | | Are reports circulated prior to the Annual General Assembly meeting? Y Yes N No | | Is the report externally reviewed? Y Yes N No |
| Minutes of Previous AGM | | | | |
| Annual reports | | | | |
| Financial statements | | | | |
| Others, specify: | | | | |

^a. **CA** Cash | **USC** Payment for unpaid share capital | **ASC** Subscription for additional share capital | **O** Others, specify

^b. **VD** Voted in decision-making | **AB** Served as an advisor to the GA | **AO** Acted as an observer

^c. **Y** Yes | **NM** No, perform more than their role | **NL** No, perform less than their role

| 8 ELECTORAL PROCEDURE | | | |
|------------------------------|---|---|-------------------------|
| 8.1 | Were there any elections held during the last AGM? | Y | If yes, proceed to 8.3 |
| | | N | If no, answer 8.2 first |
| 8.2 | Why not? (Tick all that apply.) | No position is up for elections | |
| | | There is no contest to the incumbent official(s) | |
| | | There is only one candidate for the vacant position(s) | |
| | | Others, specify: | |
| 8.3 | How many director positions were up for elections during the last AGM? | | |
| 8.4 | Who nominated the candidates for director positions during the last AGM? (Tick all that apply.) | Members | |
| | | External support (GO/NGO): | |
| | | Strategic partner/investor: | |
| | | Others, specify: | |
| 8.5 | When were the candidates nominated? | A member can raise hand to nominate during AGM | |
| | | A member/cluster group nominated a candidate prior to AGM | |
| | | Others, specify: | |
| 8.6 | During the AGM, how did the members vote for: | the director positions? | other concerns? |
| | | Via show of hands | |
| | | Via secret ballot | |
| | | Both above, as the need arises | |
| | | Others, specify: | |
| 9 BOARD OF DIRECTORS | | | |
| 9.1 | How many directors does the BOD have? | | |
| 9.2 | How many years is a director's term of office? | | |
| 9.3 | How many terms can an individual serve as a director? | | |
| 9.4 | What are the qualifications to become a director? | Minimum years being an active member: | |
| | | Minimum years of formal training: | |
| | | Minimum years of actual experience in business: | |
| | | Others, specify: | |
| 9.5 | Are there non-members acting as advisory directors? | Y | If yes, who are they? |
| | | N | |
| 9.6 | Who can remove a director from office? ^a | | |
| | Was there an instance that a director was removed from office? | Y | If yes, answer 9.7 |
| | | N | If no, proceed to 9.8 |
| 9.7 | Why? | | |
| 9.8 | How do the directors settle disagreements during meetings? | Majority vote | |
| | | Chairperson has veto power | |
| | | Other, specify: | |
| 9.8 | Were the directors remunerated last year? | No | |
| | | Yes, some: | |
| | | Yes, all of them | |
| 9.9 | Who determines the value of the remuneration given to the directors? ^a | | |
| 9.10 | Who approves the value of the remuneration given to the directors? ^a | | |

^a. **MA** Manager | **BOD** Board of Director | **GA** General Assembly | **O** Others

| 10 MANAGEMENT TEAM | | | | | |
|---|---------|-------------------------------------|---|-------------------------|-------------------------|
| 10.1 How many members does the management team have? | | | | | |
| 10.2 What are the qualifications to become a manager? | | | Minimum years being an active member: | | |
| | | | Minimum years of formal training: | | |
| | | | Minimum years of actual experience in business: | | |
| | | | Others, specify: | | |
| 10.3 How is the manager's salary calculated? | | | As determined by BOD | | |
| | | | As determined by GA | | |
| | | | As prescribed by local & national laws | | |
| | | | As determined by previous years' earnings | | |
| | | | Others, specify: | | |
| 10.4 Who selected the current manager? ^a | | | | | |
| 10.5 Who appointed the current manager? ^a | | | | | |
| 10.6 Can a current director be appointed as member of the management team? | | | Y | | |
| | | | N | | |
| 10.7 Do any of the directors engage in the cooperative's day-to-day operations? | Y | If yes, in what capacity? | | | |
| | N | | | | |
| 10.8 Who can remove a manager from the management team? ^a | | | | | |
| Is there an instance that a member of the management team was removed? | | | Y | If yes, answer 10.9 | |
| | | | N | If no, proceed to 10.10 | |
| 10.9 Does the manager (or member of the management team) attend board meetings? | | | Regularly | | |
| | | | Only when requested by the BOD | | |
| | | | No | | |
| 10.10 To whom does the manager directly report to? ^a | | | | | |
| 10.11 Can members and non-members readily access the minutes of board meetings? | Members | Non-members | | | |
| | | | Yes | | |
| | | | No, must secure approval of Chairperson | | |
| | | | No, must secure approval of BOD | | |
| | | No, must secure approval of Manager | | | |
| 11 DISTRIBUTION OF DECISION-MAKING | | | | | |
| Who makes the FINAL decision on the following? (Tick all that apply) | | General Assembly | Board of Directors | Manager | Remarks (Cut-off value) |
| Amendment to constitution and bylaws | | | | | |
| Formulation and modification of policies | | | | | |
| Purchase of assets | | | | | |
| Expansion of current or new strategies | | | | | |
| Contracting with external parties | | | | | |
| Day-to-day business operations | | | | | |

^a. C Chairperson | BOD Board of Director | GA General Assembly | O Others

PART III. RESPONDENT'S PROFILE

| | | |
|--|---|---|
| Questionnaire identification number | | |
| RESPONDENT PROFILE | | |
| Name | | |
| Contact information | | |
| Years in farming | | |
| Type of farming ^a | | |
| Farm area in hectare | | |
| Farm ownership ^b | | |
| Distance of farm to nearest coop facilities | | |
| Years registered as member | | |
| Are you a founding member? | Y | N |
| Years as holding office in the cooperative | | |
| Other positions held | Inclusive years | |
| | | |
| | | |
| | | |
| | | |
| | | |
| What other farmer organisations are you a member of? | Have you been or currently are an official of this other organisation? Y Yes N No | |
| | | |
| | | |
| | | |
| | | |

^{a.} **F** Full-time | **P** Part-time

^{b.} **OW** Owned | **LO** Leased out | **LI** Leased in | **ST** Share tenancy | **OT** Others

We are immensely grateful to you for taking the time to answer the survey. Thank you.

Appendix 2
Interview schedule
Manager
 Davao del Norte Rice Cooperative

This research is:

- Completely voluntary in nature.
- Respondent is free to decide not to participate at any time during or after the interview. Provide contact details (Brenda.Dimas@lincolnuni.ac.nz or +63 905 305 9424) for queries or expression of withdrawal.
- Responses will be aggregated for analysis only, and no personal details will be reported.
- A summary of findings will be provided to the organisation.
- Interview might be recorded to ease transcription (if respondent allows).

We are immensely grateful to you for participating in the study.

 PART I. ORGANISATIONAL PROFILE (Pre-filled up prior to interview).

| | | |
|---------------------------------------|---|---|
| Name of organisation | | |
| Date of registration | | |
| Number of founding members | | |
| Current number of members | | |
| In the register | | |
| Are there inactive members? | Y | N |
| If yes, how many and why? | | |
| Geographical coverage of organisation | | |
| Barangay, specify: | | |
| Municipality/City, specify: | | |
| Provincial, specify: | | |
| Others, specify: | | |

PART II. INSTITUTIONAL AND GOVERNANCE ARRANGEMENTS

| 1 ASSETS HELD BY THE COOPERATIVE | | | | | |
|---|----------------------------|---|--|------------------------------|-----------------|
| Assets | Quantity (units area) | Ownership status ^a (If not OC , proceed to <i>Usage Status</i>) | Means of acquisition ^b (Refer to Table 4.14) | Usage status ^b | Remarks, if any |
| Land | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Buildings, facilities & machinery | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Others | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

- ^{a.} **OC** Owned by cooperative | **L** Leased to cooperative | **B** Borrowed by cooperative | **OT** Others
- ^{b.} **PC** Purchased by cooperative | **MD** Member donated physical assets (in kind) | **GA** Granted by an external agency | **O** Others
- ^{c.} **O** Operational/utilised | **NO** Non-operational/unutilised

| 2 CURRENT BUSINESS OPERATIONS | | | | | |
|--------------------------------------|-------------|---|---|---|--|
| Business Operations | Particulars | Who can patronise the specific business? ^a (If MO , proceed to Table 3) | Do members have advantages? Y Yes N No | If yes, what is the advantage? ^b | If O , what are the other advantages? |
| Products | | | | | |
| Sale of farm inputs | | | | | |
| Sale of non-farm inputs | | | | | |
| Marketing of farm outputs | | | | | |
| Marketing of non-farm outputs | | | | | |
| Services | | | | | |
| Provision of machinery services | | | | | |
| Provision of farm labour services | | | | | |
| Provision of technical advice | | | | | |
| Lending | | | | | |
| | | | | | |
| Processing | | | | | |
| | | | | | |
| | | | | | |
| Others | | | | | |
| | | | | | |
| | | | | | |

a. **MO** Members only | **MN** Members and non-members

b. **BP** Better prices | **PR** Patronage refund | **D** Dividend | **SA** Priority on service access or produce delivery | **O** Other

| 3 BUSINESS STRATEGY | | | | | |
|--|--|--|------------------------|---------|-------------------------|
| 3.1 Does the cooperative want to expand operation on some of its products/services in the next five years? | | Y | If yes, answer 3.2-3.7 | | |
| | | N | If no, proceed to 4 | | |
| If yes, what products/services? | | | | | |
| If yes, are the potential expansion/s achievable during the proposed time frame (5 years)? | | Y | | | |
| | | N | | | |
| 3.2 Who identifies what products/services are for expansion? ^a | | | | | |
| 3.3 Who approves what products/services are for expansion? ^a | | | | | |
| 3.4 Were you consulted in any stages of the development of potential expansion(s)? | | Yes, through informal discussions with the directors | | | |
| | | Yes, through formal discussions with the directors | | | |
| | | Yes, through formal discussions during the AGM | | | |
| | | No | | | |
| 3.5 Are the desired expansion(s): (Tick all that apply) | | Cater to the farming interests of farming members? | | | |
| | | Suited to the current business environment? | | | |
| | | Adaptable to the business operations of the cooperative? | | | |
| | | Aligned with the vision, mission and goals of the cooperative? | | | |
| 3.6 What are the reasons that might prevent or delay possible expansions? (Tick all that apply.) | | Insufficient capital | | | |
| | | Insufficient member support | | | |
| | | Insufficient operational knowledge | | | |
| | | Other reasons, specify: | | | |
| 3.7 How difficult or easy is it to: | | Difficult | Moderate | Easy | |
| discuss current business strategies with directors? | | | | | |
| make recommendations about business strategies to directors? | | | | | |
| access minutes of the board meetings? | | | | | |
| 4 DISTRIBUTION OF DECISION-MAKING | | | | | |
| Who makes the FINAL decision on the following? (Tick all that apply) | | General Assembly | Board of Directors | Manager | Remarks (Cut-off value) |
| Amendment to constitution and bylaws | | | | | |
| Formulation and modification of policies | | | | | |
| Purchase of assets | | | | | |
| Expansion of current or new strategies | | | | | |
| Contracting with external parties | | | | | |
| Day-to-day business operations | | | | | |
| Operational expenditures | | | | | |
| 5 CAPITAL ACQUISITION | | | | | |
| 5.1 How do the cooperative raise capital? (Rank from highest (from 1) to lowest (up to 5)) | | Retained earnings (If selected, answer 5.2) | | | |
| | | Additional member contribution (If selected, answer 5.3) | | | |
| | | Borrowing from external financiers (If selected, answer 5.4) | | | |
| | | Donor assistance (If selected, answer 5.5-5.6) | | | |
| | | Others, specify: | | | |
| 5.2 Retained earnings | | | | | |
| Who determines the value of earnings retained for the last fiscal year? ^a | | | | | |

^a. **MA** Manager | **BOD** Board of Director | **GA** General Assembly

| | | | |
|---|-----------------------------------|--|---|
| Who approves the value of earnings retained for the last fiscal year? ^a | | | |
| Did the cooperative increase the percentage of retained earnings in the last three fiscal years? | Y | | |
| | N | | |
| 5.3 Additional member contribution | | | |
| Is the additional member contribution voluntary? | Y | If yes, proceed to 5.4 | |
| | N | | |
| Who determines the value of additional member contribution? ^a | | | |
| Who approves the value of additional member contribution? ^a | | | |
| How is additional member contribution allocated? | | Proportional to member's patronage | |
| | | Proportional to member's shareholding | |
| | | Allocated equally to all members | |
| | | Others, specify: | |
| 5.4 Borrowing from external financiers | | | |
| What percentage of the cooperative's capital requirement last year was acquired from external financiers? | Institution | Individual | |
| | % | % | Lender |
| | % | % | Investors |
| | % | % | Donors |
| | % | % | Others, specify: |
| Are external financiers represented during board meetings or AGMs? (Tick all that apply.) | BOD meetings | AGM | |
| | | | No |
| | | | Yes, they attend meetings as observers |
| | | | Yes, they attend meetings as advisors |
| | | | Yes, they attend meetings as participants |
| 5.5 Donor assistance | | | |
| Was the cooperative established by a facilitating organisation? | Y | | |
| | N | | |
| If yes, what organisation facilitated its establishment? | | | |
| What percentage of the cooperative's initial financial capital was provided by the facilitating organisation? | | % | Grant, loan or shareholding? |
| Did the facilitating organisation provide the cooperative with any physical assets? | Y | If yes, what assets were donated or lent to the cooperative? | |
| | N | | |
| 5.6 Other external organisations who provided capital | | | |
| Can you disclose the organisations who provided capital assistance to the cooperative? | Kind of organisation ^b | Kind of support provided ^c | Influence of organisation ^d |
| | | | |
| | | | |
| | | | |

^{a.} **MA** Manager | **BOD** Board of Director | **GA** General Assembly

^{b.} **G** National Government Agency | **L** Local Government Unit | **N** Non-government Organisation

^{c.} **FS** Financial subsidy | **TA** Tangible assets | **CB** Capacity building | **SL** Supply chain linkage

^{d.} **PM** Participation in management | **PD** Participation in the BOD decision-making | **AC** Advisory capacity only | **O** Others | **N** None

| 6 MEMBERSHIP QUALIFICATIONS AND BENEFITS | | | |
|--|---------------|------------------------------------|---|
| 6.1 Can a member of the cooperative be a: | | natural person? | |
| | | household? | |
| | | legal entity? | |
| 6.2 What financial contribution must be made to be a full member: | | pay an initial fee to join? | |
| | | pay an annual subscription fee? | |
| | | buy shares? | |
| | | other, specify: | |
| 6.3 Does the cooperative provide services to: | | members who are not fully paid up? | |
| | | non-members? | |
| If yes, do members who are fully paid-up get these services at a better price than other users? | | Y | |
| | | N | |
| 6.4 Are members required to satisfy a minimum patronage requirement to continue enjoying membership benefits? | | Y | |
| | | N | |
| 6.5 What percentage of the membership did not patronise the business last year? | | | % |
| 6.6 Are members entitled to exercise: (Tick all the apply.) | Fully paid up | Not fully paid up | |
| | | | one vote each at a general assembly meeting? |
| | | | more votes than other members who make less use of the cooperative? |
| | | | more votes than other members who contribute less capital to the cooperative? |
| 7 SHAREHOLDING OWNED IN THE COOPERATIVE | | | |
| 7.1 Do members own shares in the cooperative? | Y | If yes, answer the rest of Table 7 | |
| | N | If no, proceed to Table 8 | |
| If yes, how many types of shares do you own? | | Just one type of share | |
| | | More than one type of share | |
| Complete the table below. (Y for Yes N for No D for Don't know.) | | Share A | Share B |
| 7.2 What name(s) do you give to these shares? | | | |
| 7.3 Are these shares recorded in a register (list of members with corresponding number of shares)? | | | |
| 7.4 Did members pay for these shares? | | | |
| If yes, must the cooperative redeem (i.e., buy) these shares if the shareholder leaves the cooperative? | | | |
| If yes, must the cooperative redeem these shares if the shareholder wants to withdraw <u>part</u> of his/her shares? | | | |
| If shares <u>are</u> redeemable, has the cooperative ever increased their share price or issued bonus shares? | | | |
| If shares <u>are</u> redeemable, did the cooperative redeem any shares in the past year or two? | | | |
| If shares <u>were</u> redeemed in the past year or two, was it at nominal price? | | | |

| | | | |
|---|---|--|---|
| If shares <u>are not</u> redeemable, are members allowed to trade them with other members? | | | |
| If shares <u>are not</u> redeemable, does the cooperative facilitate trading of shares among members? | | | |
| 7.5 Is the number of shares held by a member linked to the amount of business they do with the cooperative? | | | |
| 7.6 Is there some minimum number of shares a member must buy? | | | |
| 7.7 Is there some maximum number of shares a member can buy? | | | |
| 7.8 Can firms or individuals who do not use the cooperative's services buy any of these shares? | | | |
| If yes, are these non-patrons allowed to vote at a general assembly meeting? | | | |
| If yes, is there any limit on non-patron voting rights to ensure that patrons stay in control of the cooperative? | | | |
| Complete the rest of this table indicating amounts where possible. | | | |
| 7.9 What is the nominal share price (PhP/share)? | | | |
| 7.10 How many shares does the typical patron member own? | | | |
| 7.11 If a dividend was paid, what was the size of the most recent dividend paid (PhP/share)? | | | |
| 7.12 How were the dividends paid? ^a | | | |
| 7.13 If the cooperative sold shares to non-patrons, what percentage of its total shareholding is owned by these non-patrons? | | | % |
| 7.14 If the cooperative sold shares to a non-patron who is also a business partner, what key service does this partner provide? | | | |
| 7.15 What percentage of the cooperative's total shareholding does this partner own? | | | % |
| 8 ANNUAL GENERAL ASSEMBLY (AGM) | | | |
| 8.1 Was the Annual General Assembly meeting consistently conducted over the last five years? | Y | | |
| | N | | |
| 8.2 When was the last Annual General Assembly meeting? | | | |
| 8.3 Did non-members attend the last Annual General Assembly meeting? | Y | If yes, complete Table 8.4 | |
| | N | If no, proceed to 8.5 | |
| 8.4 Non-Member attendance at the last Annual General Assembly meeting | | | |
| Who are the non-members that attended? | What is their role in the meeting? ^b | Did they perform their expected role? ^c | |
| | | | |
| | | | |
| | | | |
| | | | |

^{a.} **CA** Cash | **USC** Payment for unpaid share capital | **ASC** Subscription for additional share capital | **O** Others, specify

^{b.} **VD** Voted in decision-making | **AB** Served as an advisor to the GA | **AO** Acted as an observer

^{c.} **Y** Yes | **NM** No, perform more than their role | **NL** No, perform less than their role

| | | | | |
|---|-------------------------|--|--------------------------------|----------------------|
| 8.5 Presence of informal interest subgroups | | (Y Yes N No) | | |
| Are you aware of informal subgroups within the cooperative? | | | | |
| Do informal subgroups affect decision-making in the cooperative? | | | | |
| Do informal subgroups affect your ability to manage the business? | | | | |
| 8.6 How many members came along during the last AGM? | | | | |
| 8.7 Did the members received prior notice of the last Annual General Assembly meeting? | Y | If yes, answer 8.8-8.10 | | |
| | N | If no, proceed to 8.11 | | |
| 8.8 How many days was the notice circulated prior to the last Annual General Assembly meeting? | | Less than 14 days | | |
| | | Between 15–30 days | | |
| | | Between 31–60 days | | |
| 11.9 Was the notice period long enough for you to prepare for the AGM? | | Enough time | | |
| | | Not enough time | | |
| 11.10 How was the notice circulated? | | Written notice | | |
| | | Mobile communication device | | |
| | | Word of mouth through cluster leaders | | |
| | | Others, specify: | | |
| 11.11 Circulation of Reports | | Y Yes N No | | |
| Kind of reports | | Minutes of Previous AGM | Annual reports | Financial statements |
| Are reports circulated prior to the AGM? | | | | |
| Was the circulation time enough for members to review the report? | | | | |
| Is the report externally reviewed? | | | | |
| 9 ELECTORAL PROCEDURE | | | | |
| 9.1 Were there any elections held during the last AGM? | Y | If yes, answer the rest of Table 9 | | |
| | N | If no, proceed to Table 10 | | |
| 9.2 Why not? (Tick all that apply.) | | No position is up for elections | | |
| | | There is no contest to the incumbent official(s) | | |
| | | There is only one candidate for the vacant position(s) | | |
| | | Others, specify: | | |
| 9.3 How many director positions were up for elections during the last AGM? | | | | |
| 9.4 Who nominated the candidates for director positions during the last AGM? (Tick all that apply.) | | Members | | |
| | | External support (GO/NGO): | | |
| | | Strategic partner/investor: | | |
| | | Others, specify: | | |
| 9.5 When were the candidates nominated? | | A candidate is nominated during AGM | | |
| | | A candidate is nominated prior to the AGM | | |
| | | Others, specify: | | |
| 9.6 During the AGM, how did the members vote for: | the director positions? | other concerns? | | |
| | | | Via show of hands | |
| | | | Via secret ballot | |
| | | | Both above, as the need arises | |
| | | | Others, specify: | |

| 10 BOARD OF DIRECTORS | | | |
|--|------------------|---|--|
| 10.1 How many directors does the BOD have? | | | |
| 10.2 How many years is a director's term of office? | | | |
| 10.3 How many terms can an individual serve as a director? | | | |
| 10.4 What are the qualifications to become a director? | | Minimum years being an active member: | |
| | | Minimum years of formal training: | |
| | | Minimum years of actual experience in business: | |
| | | Others, specify: | |
| 10.5 Are there non-members acting as advisory directors? | Y | If yes, who are they? | |
| | N | | |
| 10.6 Who can remove a director from office? ^a | | | |
| Was there an instance that a director was removed from office? | Y | | |
| | N | | |
| 11 MANAGEMENT TEAM | | | |
| 11.1 How many members does the management team have? | | | |
| 11.2 What are the qualifications to become a manager? | | Minimum years being an active member: | |
| | | Minimum years of formal education: | |
| | | Minimum years of formal training: | |
| | | Minimum years of actual experience in business: | |
| | Others, specify: | | |
| 11.3 How is the value of the manager's salary calculated? | | As determined by BOD | |
| | | As determined by GA | |
| | | As prescribed by local & national laws | |
| | | As determined by previous years' earnings | |
| | | Others, specify: | |
| 11.4 Who appointed the current manager? ^a | | | |
| 11.5 To whom does the manager directly report to? ^a | | | |
| Complete the table below. (Y for Yes N for No D for Don't know) | | | |
| 11.6 Can a current director be appointed as member of the management team? | | | |
| 11.7 Do any of the directors engage in the cooperative's day-to-day operations? | | | |
| If no, can directors intervene in the management of the cooperative's day-to-day operations? | | | |
| 11.8 Who can remove a manager from the management team? ^a | | | |
| Was there an instance that a member of the management team was removed? | | | |
| 11.9 Does the manager (or member of the management team) attend board meetings? | | Regularly | |
| | | Only when requested by the BOD | |
| | | No | |

^a. **MA** Manager | **BOD** Board of Director | **GA** General Assembly | **O** Others

^b. **C** Chairperson | **BOD** Board of Director | **GA** General Assembly | **O** Others

PART III. RESPONDENT'S PROFILE

| | | |
|--|--|---|
| Questionnaire identification number | | |
| RESPONDENT PROFILE | | |
| Name | | |
| Contact information | | |
| Years in farming | | |
| Type of farming ^a | | |
| Farm area in hectare | | |
| Farm ownership ^b | | |
| Distance of farm to nearest coop facilities | | |
| Years registered as member | | |
| Are you a founding member? | Y | N |
| Years as holding office in the cooperative | | |
| Other positions held | Inclusive years | |
| | | |
| | | |
| | | |
| | | |
| Are you a member of other farmer organisations? | Y | N |
| If yes, what other farmer organisations are you a member of? | Have you been or currently is an official of this other organisation? Y Yes N No | |
| | | |
| | | |
| | | |
| | | |
| | | |

a. **F** Full-time | **P** Part-time

b. **OW** Owned | **LO** Leased out | **LI** Leased in | **ST** Share tenancy | **OT** Others

We are immensely grateful to you for taking the time to answer the survey. Thank you.

Appendix 3
Interview schedule
Members

Davao del Norte Rice Cooperative

This research is:

- Completely voluntary in nature.
- Respondent is free to decide not to participate at any time during or after the interview.
Provide contact details (Brenda.Dimas@lincolnuni.ac.nz or +63 905 305 9424) for queries or expression of withdrawal.
- Responses will be aggregated for analysis only, and no personal details will be reported.
- A summary of findings will be provided to the organisation.
- Interview might be recorded to ease transcription (if respondent allows).

We are immensely grateful to you for participating in the study.

PART I. RESPONDENT'S RELATIONSHIP WITH THE COOPERATIVE

| | | |
|--|--------------------------|--|
| Name of organisation | | |
| Distance of farm to nearest coop facilities | | |
| Years registered as member | | |
| Are you a founding member? | | Y N |
| What are your main reasons for joining the cooperative? (Select and rank only four with 1 being the highest and 4 the lowest.) | <input type="checkbox"/> | To market farm outputs |
| | <input type="checkbox"/> | To market non-farm outputs |
| | <input type="checkbox"/> | To access farm inputs at favourable prices |
| | <input type="checkbox"/> | To access non-farm inputs at favourable prices |
| | <input type="checkbox"/> | To access farm-related services (e.g. provision of machinery & labour) |
| | <input type="checkbox"/> | To access financing service for farm (e.g. lending) |
| | <input type="checkbox"/> | To access non-farm related services |
| | <input type="checkbox"/> | To access investment opportunities |
| | <input type="checkbox"/> | To access employment opportunities (work in operations) |
| | <input type="checkbox"/> | To help fellow farmers improve income |
| | | Others, specify: |
| Have you held any position in the cooperative? | | Y N |
| If yes, what were the positions you held? | | |
| | | |
| | | |
| | | |
| | | |

PART II. INSTITUTIONAL AND GOVERNANCE RELATIONSHIP

| 1 USE OF COOPERATIVE SERVICES | | | | | | | |
|--------------------------------------|-------------|--|--|--|---|---|--|
| Farm products and inputs | Particulars | Which service(s) do you use? (Tick all that apply) | What share (%) of your farming expenses/sales is transacted through the cooperative? | Is patronage size dependent on shareholding size? Y Yes N No | Why do you transact this farming operation with the cooperative? ^a | How satisfied are you with the quality of service provided by the cooperative? ^b | How do you rank your patronage compared to other members? ^c |
| Purchase of farm inputs | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Purchase of non-farm inputs | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Marketing of farm outputs | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Marketing of non-farm outputs | | | | | | | |
| | | | | | | | |
| | | | | | | | |

a. **D** Distance of cooperative facilities is nearest to the business | **P** Price offered by the cooperative is better | **N** No competitor provides the product/services |

S Support the business operations of the cooperative | **O** Others

b. **E** Excellent | **VS** Very satisfactory | **S** Satisfactory | **US** Unsatisfactory | **P** Poor | **NR** No response | **NA** Not applicable

c. **HU** High user | **AU** Average user | **LU** Low user | **NR** No response

| 1 USE OF COOPERATIVE SERVICES (continuation) | | | | | | | |
|---|-------------|--|--|---|---|---|--|
| Other farm services | Particulars | Which service(s) do you use? (Tick all that apply) | What share (%) of your farming expenses/sales is transacted through the cooperative? | Is patronage size dependent on shareholding size? Y Yes N No | Why do you transact this farming operation with the cooperative? ^a | How satisfied are you on the quality of service provided by the cooperative? ^b | How do you rank your patronage compared to other members? ^c |
| Provision of machinery services | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Provision of farm labour services | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Provision of technical advice | | | | | | | |
| | | | | | | | |
| Lending | | | | | | | |
| Others | | | | | | | |
| | | | | | | | |
| | | | | | | | |

a. **D** Distance of cooperative facilities is nearest to the business | **P** Price offered by the cooperative is better | **N** No competitor provides the product/services |

S Support the business operations of the cooperative | **O** Others

b. **E** Excellent | **VS** Very satisfactory | **S** Satisfactory | **US** Unsatisfactory | **P** Poor | **NR** No response | **NA** Not applicable

c. **HU** High user | **AU** Average user | **LU** Low user | **NR** No response

| 2 PARTICIPATION IN BUSINESS STRATEGY | | | | |
|---|---|--|-------------------------------------|---------|
| 2.1 Are you familiar with the vision, mission, and goals of the cooperative? | Y | | | |
| | N | | | |
| If yes, are the vision, mission, and goals of the cooperative aligned with your farming goals and interests? | Y | | | |
| | N | | | |
| 2.2 Are you aware if the cooperative wants to expand operation on some of its products/services in the next five years? | Y | | | |
| | N | If no, proceed to 2.3 | | |
| If yes, what products/services? | | | | |
| Were you consulted in any stages of the development of potential expansion(s)? | | Yes, through informal discussions with manager | | |
| | | Yes, through informal discussions with the directors | | |
| | | Yes, through formal discussions in the AGM | | |
| | | No | | |
| Are the desired expansion(s) aligned with your farming goals and interest? | Y | | | |
| | N | | | |
| 2.3 How difficult or easy is it to: | | Difficult | Moderate | Easy |
| discuss current business strategies with directors? | | | | |
| make recommendations about business strategies to directors? | | | | |
| access minutes of the board meetings? | | | | |
| get clarification about decisions made during board meetings? | | | | |
| discuss business operations with the manager? | | | | |
| make recommendations about business operations to the manager? | | | | |
| access documents about the current financial position of the cooperative? | | | | |
| 3 PARTICIPATION IN DECISION-MAKING PROCESSES (Y Yes N No) | | | | |
| Have you participated in: | | deliberation and consultation of: | voting for approval/disapproval of: | |
| amendments to constitution and bylaws? | | | | |
| formulation and modification of policies? | | | | |
| purchase of assets by the cooperative? | | | | |
| expansion of current or new strategies? | | | | |
| contracting with the cooperative's business partners? | | | | |
| day-to-day business operations of the cooperative? | | | | |
| 4 SHAREHOLDING OWNED IN THE COOPERATIVE | | | | |
| 4.1 Do you own shares in the cooperative? | Y | If yes, answer the rest of Table 4 | | |
| | N | If no, proceed to Table 5 | | |
| If yes, how many types of shares do you own? | | Just one type of share | | |
| | | More than one type of share | | |
| Complete the table below. (Where applicable, Y for Yes N for No D for Don't know. Indicate amounts if possible) | | Share A | Share B | Share C |
| 4.2 What type of shares do you own? | | | | |
| 4.3 Are these shares recorded in a register? | | | | |
| 4.4 Is the number of shares you own linked to the amount of business you do with the cooperative? | | | | |

| | | | | |
|--|--|---|---|--|
| 4.5 | Have you fully paid up the required minimum shareholding? (If yes, answer 4.6 – 4.9; if no, proceed to 4.10) | | | |
| 4.6 | Will the cooperative redeem (i.e., buy back) these shares if you leave the cooperative? | | | |
| 4.7 | Will the cooperative pay you more than the nominal share price if they buy back the share? | | | |
| | What is your total shareholding for FY 2019? | | | |
| 4.8 | Can you sell your shares to another member? | | | |
| | If yes, do you negotiate your own price? | | | |
| 4.9 | Do you want to increase the number of shares you currently own? | | | |
| | Do you want to reduce the number of shares you currently own? | | | |
| 4.10 | Did the cooperative declare dividends during the last AGM? | | | |
| | If a dividend was paid, what was the size of your FY 2019 payout? | | | |
| | How was your dividends paid? ^a | | | |
| 4.11 | How do you rank your shareholding compared to other members? ^b | | | |
| 4.12 | Are new members paying the same share price as you did when you registered? | | | |
| 4.13 | Should new members pay the same share price as you did? | | | |
| 5 ANNUAL GENERAL ASSEMBLY (AGM) | | | | |
| 5.1 | Was the Annual General Assembly meeting consistently held over the last five years? | Y | | |
| | | N | | |
| 5.2 | When was the last Annual General Assembly meeting? (Year) | | | |
| 5.3 | Did you (or your proxy) attend the last Annual General Assembly meeting? | Y | If yes, proceed to 5.5 | |
| | | N | If no, answer 5.4 then proceed to Table 7 | |
| 5.4 | Why not? (Tick all that apply.) | | Member of the minority | |
| | | | No faith in the processes of the AGM | |
| | | | No time or resources to attend the AGM | |
| | | | Others, specify: | |
| 5.5 | Presence of informal interest subgroups (Y Yes N No D Don't know) | | | |
| | Are you aware of informal subgroups within the cooperative? | | | |
| | If yes, are you a member of any informal subgroup? | | | |
| | If yes, are your farming interests addressed better through the informal subgroup? | | | |
| 5.6 | Attendance of non-members (Y Yes N No D Don't know) | | | |
| | Did non-members attend the last AGM meeting? | | | |
| | Did non-members advise on cooperative matters during the last AGM? | | | |
| | If yes, did the advice of these non-members affected your decision in votes? | | | |
| 5.7 | Did you receive prior notice of the last Annual General Assembly meeting? | Y | If yes, answer 5.8-5.9 | |
| | | N | If no, proceed to 5.10 | |

^a **CA** Cash | **USC** Payment for unpaid share capital | **ASC** Subscription for additional share capital | **O** Others, specify

^b **MAS** Major shareholder | **AS** Average shareholder | **MIS** Minor shareholder | **NR** No response

| | | | | |
|---|---|---|---|----------------------|
| 5.8 | Was the notice period long enough for you to prepare for the AGM? | | Enough time | |
| | | | Not enough time | |
| 5.9 | How was the notice circulated? | | Written notice | |
| | | | Mobile communication device | |
| | | | Word of mouth through cluster leaders | |
| | | | Others, specify: | |
| 5.10 Circulation of Reports (Y Yes N No D Don't know) | | | | |
| Kind of reports | | Minutes of Previous AGM | Annual reports | Financial statements |
| Did you receive a copy of the report prior the AGM? | | | | |
| If yes, was the circulation time enough for you to review the report? | | | | |
| If yes, did you find the report easy to understand? | | | | |
| If yes, did the report reflect your current perception of the cooperative's performance? ^a | | | | |
| If yes, did the report influence your decisions during the AGM? | | | | |
| 6 ELECTORAL PROCEDURE | | | | |
| 6.1 | Were any elections held during the last AGM? | Y | If yes, proceed to 6.2 | |
| | | N | | |
| If no, why not? (Tick all that apply?) Then go to Table 7 | | No position was up for election | | |
| | | There was only one candidate for the vacant position(s) | | |
| | | Others, specify: | | |
| 6.2 | How many director positions were up for elections during the last AGM? | | | |
| 6.3 | Who nominated the candidates for director positions during the last AGM? (Tick all that apply.) | | Members | |
| | | | External support agency (GO/NGO): | |
| | | | Strategic partner/investor: | |
| | | | Others, specify: | |
| 6.4 | When were the candidates nominated? | | A candidate was nominated during AGM | |
| | | | A candidate was nominated prior to the AGM | |
| | | | Others, specify: | |
| 6.5 | Was the nomination process fair? | Y | If yes, proceed to 6.7 | |
| | | N | If no, answer 6.6 | |
| 6.6 | Why not? (Tick all that apply.) | | Nomination process is complex | |
| | | | Incumbent(s) dominate the nomination | |
| | | | Influential groups within the cooperative dominate the nomination | |
| | | | External agencies influence the nomination | |
| | | | Others, specify: | |
| 6.7 | During the AGM, how did the members vote for: | the director positions? | other business concerns? | |
| | | | | Via show of hands |
| | | | | Via secret ballot |
| | | | | Others, specify: |

^a. **YA** Yes, accurately | **NB** No, below perception | **NA** No, above perception

| 7 BOARD OF DIRECTORS (Indicate D for Don't know) | | |
|---|--|---|
| 7.1 | How many directors does the BOD have? | |
| 7.2 | How many years is a director's term of office? | |
| 7.3 | How many terms can an individual serve as a director? | |
| 7.4 | What are the qualifications to become a director? | Minimum years being an active member: |
| | | Minimum years of formal training: |
| | | Minimum years of actual experience in business: |
| | | Others, specify: |
| Complete the table below. (Y for Yes N for No D for Don't know) | | |
| 7.5 | Do the directors have adequate qualifications to direct the cooperative? | |
| 7.6 | Do the current directors represent your interests in the cooperative? | |
| 7.7 | Are there non-members acting as advisory directors? | |
| | If yes, what organisation(s) do they represent? | |
| | If yes, do the advisory directors represent your interests in the cooperative? | |
| 7.8 | Who can remove a director from office? ^a | |
| | Was there an instance that a director was removed from office? | |
| 7.9 | Can members readily access the minutes of board meetings? | Yes |
| | | No, must secure approval |
| 8 MANAGEMENT TEAM (Indicate D for Don't know) | | |
| 8.1 | How many members does the management team have? | |
| 8.2 | What are the qualifications to become a manager? | Minimum years being an active member: |
| | | Minimum years of formal training: |
| | | Minimum years of actual experience in business: |
| | | Others, specify: |
| Complete the table below. (Y for Yes N for No D for Don't know) | | |
| 8.3 | Does the current manager have adequate expertise to manage the cooperative? | |
| 8.4 | Who appointed the current manager? ^b | |
| 8.5 | To whom does the manager directly report to? ^b | |
| 8.6 | Can a current director be appointed as a member of the management team? | |
| 8.7 | Do any of the directors manage the cooperative's day-to-day operations? | |
| | If no, can directors intervene in the management of the cooperative's day-to-day operations? | |
| 8.8 | Who can remove a manager from the management team? ^b | |
| | Was there an instance that a member of the management team was removed? | |
| 8.9 | Does the manager (or member of the management team) attend board meetings? | Yes |
| | | Only when requested by the BOD |
| | | Don't know |

a. **MA** Manager | **BOD** Board of Director | **GA** General Assembly | **O** Others, specify

b. **C** Chairperson | **BOD** Board of Director | **GA** General Assembly | **O** Others, specify | **D** Don't know

PART III. RESPONDENT'S PROFILE

| | | |
|---|--|--|
| Questionnaire identification number | | |
| RESPONDENT PROFILE | | |
| Name | | |
| Contact information | | |
| Years in farming | | |
| Type of farming ^a | | |
| Farm area in hectare | | |
| Farm ownership ^b | | |
| What are the sources of your household income? (Rank from highest (from 1) to lowest (up to 6)) | | Farming (with farm under cooperative operations) |
| | | Own off-farm business |
| | | Employment in the cooperative |
| | | Employment in government sector |
| | | Employment in private sector |
| | | Others, specify: |
| Are you a member of other farmer organisations? | | Y N |
| If yes, what other farmer organisations are you a member of? | | Have you been or currently is an official of this other organisation? Y Yes N No |
| | | |
| | | |
| | | |
| | | |
| | | |

^{a.} **F** Full-time | **P** Part-time

^{b.} **O** Owned | **LO** Leased out | **LI** Leased in | **ST** Share tenancy | **O** Others

We are immensely grateful to you for taking the time to answer the survey. Thank you.

Appendix 4
Letter request for assistance and information

Department of Land Management and Systems

Date

Head of Office

Name of Government Office
Province of Davao del Norte

Dear Mr. Head of Office,

Request for Assistance and Information

Brenda Dimas is currently a student at Lincoln University in New Zealand. She has a scholarship administered by the NZ Ministry for Foreign Affairs and Trade. The scholarship provides funding for two years of study. During her two years of study, she undertakes a one-year taught programme followed by one year of research. A requirement of the scholarship is that the research she undertakes should be in her home country.

She is now in the second year of her programme conducting research on the 'Factors influencing the performance of rice farmer organisations in Davao del Norte, Philippines'. To assist her in the collection of data, she has a team of survey assistants, led by Charissa Mae Palma-Sharp, to conduct the interviews with the study respondents from the farmer organisations in the attached.

Dependent on the information collected, she, and her team of survey assistants, may wish to ask for further information and assistance from your office. The help that you could provide in terms of advising on the information that is available and the provision of the assistance would be invaluable and greatly appreciated. Please be assured that any information relating to individuals, including farmers, will be treated as strictly confidential and will remain anonymous in her thesis and in any other publications resulting from her research.

The purpose of the research study is to be of benefit to both individuals and organisations within the rice industry of the Philippines, to facilitate improving their performance and thus production and trade opportunities that may be available.

We thank you for your help in this matter,

Dr Alison Bailey

Professor of Farm Management

T: (64) 3 423 0226, E: alison.bailey@lincoln.ac.nz

Appendix 5

Letter invitation to cooperative to participate in the study

Department of Land Management and Systems

Date

Chairperson

Name of Cooperative

Municipality or City of Main Office

Province of Davao del Norte

Dear Mr. Chairperson,

Invitation to Participate in Study

Brenda Dimas is currently a student at Lincoln University in New Zealand. She has a scholarship administered by the NZ Ministry for Foreign Affairs and Trade. The scholarship provides funding for two years of study. During her two years of study, she undertakes a one-year taught programme followed by one year of research. A requirement of the scholarship is that the research she undertakes should be in her home country.

She is now in the second year of her programme conducting research on the 'Factors influencing the performance of rice farmer organisations in Davao del Norte, Philippines'. To assist her in the collection of data, she has a team of survey assistants, led by Charissa Mae Palma-Sharp, to conduct interviews with selected farmer-organisations.

She would like to invite your organisation to participate in the study. Your organisation's participation would contribute invaluable to the achievement of the objectives of the study and would be greatly appreciated. In participating in the study, she would like to access information about the organisation such as the Constitutions and Bylaws, Vision, Mission and Goals, Profile, Minutes of the last 3 AGM, Financial Statements for the last 3 years, Organisational Chart and List of Members. Her team of survey assistants will also conduct interviews with selected officials and members.

Please be assured that any information relating to the organisation and individuals will be treated as strictly confidential and will remain anonymous in her thesis and in any other publications resulting from her research.

The purpose of the research study is to be of benefit to both individuals and organisations within the rice industry of the Philippines, to facilitate improving their performance and thus production and trade opportunities that may be available.

We thank you for your help in this matter,

Dr Alison Bailey

Professor of Farm Management

T: (64) 3 423 0226, E: alison.bailey@lincoln.ac.nz

Appendix 6
Letter invitation to respondents to participate in the study

Department of Land Management and Systems

Date

Dear Sir/Ma'am,

Invitation to Participate in Study

Brenda Dimas is currently a student at Lincoln University in New Zealand. She has a scholarship for two years of study administered by the NZ Ministry for Foreign Affairs and Trade. During her two years of study, she undertakes a one-year taught programme followed by one year of research. She is now in the second year of her programme conducting research on the 'Factors influencing the performance of rice farmer organisations in Davao del Norte, Philippines'. The purpose of the research is to investigate the internal factors that affect the success or failure of farmer organisations and the degree of effect on their performance. To assist her in the collection of data, she has a team of survey assistants, led by Charissa Mae Palma-Sharp, to conduct interviews on selected farmer-organisations.

You are invited to participate in the study. This research is completely voluntary and you are free to decide not to participate at any time either during or after the interview. All responses will be aggregated for analysis only, and no personal details will be reported in any resulting publications. Further, a summary of findings will be provided to your organisation.

If you have any question about the survey or the study, feel free to contact Brenda Dimas by email at Brenda.dimas@lincolnuni.ac.nz or the principal survey assistant, Charissa Mae Palma-Sharp, at 0905 305 9424.

We are immensely grateful to you for participating in the study.

We thank you for your help in this matter,

Dr Alison Bailey

Professor of Farm Management

T: (64) 3 423 0226, E: alison.bailey@lincoln.ac.nz

Appendix 7
Data table for cluster analysis of variables

| Construct | Variable | Coop A | Coop B | Coop C | Coop D |
|----------------------------|------------|--------|--------|--------|--------|
| Performance indicators | neg | 0 | 1 | 0 | 1 |
| | ag | 1 | 1 | 0 | 1 |
| | bookval | 0 | 1 | 1 | 1 |
| | proe2019 | 1 | 1 | 1 | 0 |
| | pgroetrend | 1 | 0 | 0 | 0 |
| | der2019 | 0 | 1 | 1 | 0 |
| | cr2019 | 1 | 1 | 0 | 0 |
| | lowgovsup | 0 | 1 | 1 | 0 |
| | prerepu | 0 | 1 | 0 | 0 |
| Property rights indicators | mempatr | 0 | 1 | 0 | 0 |
| | memadv | 1 | 1 | 0 | 0 |
| | invpatr | 0 | 1 | 0 | 0 |
| | rdmall | 1 | 1 | 1 | 0 |
| | rdmpart | 0 | 0 | 1 | 0 |
| | rdmperd | 0 | 0 | 1 | 0 |
| Governance indicators | sufrevw | 1 | 1 | 1 | 0 |
| | rmvebod | 0 | 0 | 1 | 0 |
| | prtcpol | 0 | 0 | 1 | 0 |
| | advagm | 0 | 1 | 0 | 0 |
| | infagm | 1 | 1 | 0 | 1 |
| | firemgr | 0 | 1 | 0 | 0 |
| | rstrmngt | 1 | 1 | 1 | 0 |
| | nalwintv | 0 | 0 | 1 | 0 |
| | intvday | 0 | 1 | 1 | 0 |
| | mgrmem | 0 | 1 | 0 | 0 |
| | mstter | 0 | 1 | 1 | 0 |

Appendix 8
Variables by cluster

| Cluster | Variable | Attribute |
|----------------|-----------------|--|
| 1 | neg | Positive net equity growth |
| | ag | Positive asset growth |
| | prerepu | Presence of intangible assets (reputation) and significant markets |
| | mempatr | Only members can patronise the cooperative |
| | invpatr | Investment is proportional to patronage |
| | advagm | Only members advise during AGMs |
| | firemgr | The BOD fired a manager |
| | mgrmem | Manager does not have to be member |
| 2 | proe2019 | Within range profitability (2019 ROE) |
| | cr2019 | Within range liquidity (2019 current ratio) |
| | memadv | Members patronise the cooperative on better terms than non-members |
| | rdmall | Members can readily exit and redeem all shares |
| | sufrevw | Members had sufficient time to review reports |
| | rstrmngt | Directors should not be appointed to a managerial position |
| 3 | pgroetrend | Profitability growth (ROE trend) |
| | rdmpart | Members can redeem some shares without exiting the cooperative |
| | rdmperd | Periodic redemption of excess member capital |
| | rmvebod | GA removed a director from office |
| | prtcpol | Members did not participate in policy & strategic decision-making |
| | nalwintv | Directors are not allowed to participate in management decisions |
| 4 | bookval | Less than -10% contraction in book value of shares |
| | der2019 | Within range leverage (2019 debt-to-equity ratio) |
| | lowgovsup | Low level of government support |
| | intvday | Directors did not intervene in daily operations |
| | mstter | Manager must have tertiary qualification |

Appendix 9
Agglomeration schedule of the cluster analysis

| Agglomeration Schedule | | | | | | |
|-------------------------------|------------------|-----------|--------------|-----------------------------|-----------|------------|
| Stage | Cluster Combined | | Coefficients | Stage Cluster First Appears | | Next Stage |
| | Cluster 1 | Cluster 2 | | Cluster 1 | Cluster 2 | |
| 24 | 1 | 4 | 1.567 | 23 | 20 | 0 |
| 23 | 1 | 3 | 1.298 | 22 | 19 | 24 |
| 22 | 1 | 5 | 1.051 | 21 | 18 | 23 |
| 21 | 1 | 2 | .679 | 17 | 0 | 22 |
| 20 | 4 | 13 | .667 | 0 | 11 | 24 |
| 19 | 3 | 6 | .533 | 12 | 14 | 23 |
| 18 | 5 | 25 | .400 | 16 | 0 | 22 |
| 17 | 1 | 8 | .286 | 0 | 15 | 21 |
| 16 | 5 | 7 | .000 | 0 | 3 | 18 |
| 15 | 8 | 9 | .000 | 0 | 13 | 17 |
| 14 | 6 | 10 | .000 | 0 | 0 | 19 |
| 13 | 9 | 11 | .000 | 0 | 7 | 15 |
| 12 | 3 | 12 | .000 | 0 | 10 | 19 |
| 11 | 13 | 14 | .000 | 0 | 9 | 20 |
| 10 | 12 | 15 | .000 | 0 | 5 | 12 |
| 9 | 14 | 16 | .000 | 0 | 8 | 11 |
| 8 | 16 | 17 | .000 | 0 | 4 | 9 |
| 7 | 11 | 18 | .000 | 0 | 6 | 13 |
| 6 | 18 | 19 | .000 | 0 | 2 | 7 |
| 5 | 15 | 20 | .000 | 0 | 0 | 10 |
| 4 | 17 | 21 | .000 | 0 | 0 | 8 |
| 3 | 7 | 22 | .000 | 0 | 1 | 16 |
| 2 | 19 | 23 | .000 | 0 | 0 | 6 |
| 1 | 22 | 24 | .000 | 0 | 0 | 3 |

Appendix 10
Dendrogram of the cluster analysis

