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Towards Deepening Co-operative Identity III: Re-Thinking the Co-operative Taxonomy for Business Modelling Framework

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Abstract:
Background*: There are still complexities, paradoxes, and ambiguities in both co-operative business concepts and practices. Co-operatives will succeed only where people design the type of business that best meets their real needs. The question that remains then is, what the co-operative business models and classification are, and how to identify, select, design, and implement them successfully.*
Purpose and Methodology*: The purpose of this study paper was to help broadly understand various co-operative business taxonomies developed by various scholars and practitioners, their possible theoretical grounding, their attributes, and interconnections to establish and strengthen their business model propositions, which deepens the co-operative identity. The qualitative approach was used for this study to expand and synthesize the formerly introduced co-operative taxonomies and in the lens of Sub-Saharan Africa and Middle East.*
Results*: This study finds out that scholars' approaches to co-operative classifications can be clustered in four clusters. Classification by scope (of purpose, sector, and target coverage), system (of ownership rights and investment), structure (of membership, governance, and management), and strategy (of member participation and marketing). Additionally, the study finds out that the co-operative taxonomies have been largely based on a "linear" co-operative business modelling framework. No singular co-operative taxonomy can succeed and be sustainable in all contexts and at all times. The success and sustainability co-operatives in various contexts are determined by the hybridized models.*
Conclusion: *Hybridization of the co-operative business model is inevitable for co-operative success and sustainability. Multistakeholder (solidarity) co-operative is the model that can sustain and deepen the co-operative identity in the face of the present socio-economic and global complexities. The "circular" co-operative business modelling framework can help practitioners to develop successful and sustainable co-operative business models in different contexts and at different periodical phases of their life cycle. The originality of the study paper is (1) the introduction of "4S" clustering of co-operative taxonomies on basis of scope, systems, structure, and strategy; (2) reinforces the different co-operative classifications' conceptual frameworks and directions; (3) making an analogy of co-operative business models to the human anatomy; and (4) developing a concept of a "circular" co-operative business modelling framework to deepen the co-operative identity in different contexts and periodical phases*
Key Word*: Co-operative, Business, Taxonomy*

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Definition of Terms

Terms	**Definition**
Co-operative	According to ICA (1995) "a co-operative is an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise".
Co-operative Axiology	Is the branch of co-operative philosophy that study the co-operative principles and values
Co-operative Business Ontology	A set of co-operative concepts and categories in a business area or domain that shows their properties and the relations between them to create, deliver and capture value to members, other stakeholders, and the community.
Co-operative Epistemology	Co-operative epistemology is a branch of co-operative philosophy that deals with the sources of knowledge and beliefs, or cognitive states related to co-operative.
Co-operative	A process of combining two or more certain structural dimensions that are not easily

Terms	Definition
Hybridization	defined in the traditional co-operatives on both community focus and business orientation to form a co-operative business model to succeed in different contexts.
Co-operative principles	A set of rules that give guidance on what members and the co-operative organization are to do for each other
Co-operative Taxonomy	The practice of naming, describing, categorizing, or classification of co-operatives. It is a scheme of classification, especially a hierarchical classification, in which co-operatives are organized into groups or types.
Co-operative values	The moral principles or accepted norms of a person or a group of people. Co-operative values consist of values or norms inherent in the minds of the members
Degenerated Co-operative	The term comes from the game-theoretical literature and refers to any type of organizational decline from co-operative values and principles.
Entrepreneurial co-operatives	Co-operatives that have tradable residual rights, such as New Generation Co-operatives.
Governance	Governance describes a firm's system of decision-making, direction, and control.
Multistakeholder co-operative	A co-operative with multiple types of members (key stakeholders) engaged with the co-operative in different capacities. Any combination of types of stakeholders could be members and may include such constituents as producers, consumers, suppliers, workers, volunteers, among others. They are sometimes referred to as the solidarity co-operatives
New Generation Co-operative	A co-operative that considered the internal organization as an important determinant of collective action performance. NGC organizes to improve efficiency by eliminating or ameliorating property rights constraints.
Organizational complexity	The condition of having many diverse and autonomous but interrelated and interdependent components or parts linked through dense interconnections. In the framework of a co-operative organization, complexity is associated with interrelationships of the individuals, their effect on the organization, and the co-operatives' interrelationships with its external environment.
Stakeholder	Those groups without whose support the organization would cease to exist; or any group or individual who can affect or is affected by the achievement of the co-operative organization's objective. They are typically understood in the corporate literature to include shareholders, employees, customers, suppliers, government, society, and more. There are single-stakeholder co-operative (SSC) and Multi-stakeholder co-operative (MSC).
Traditional co-operative	A co-operative that is riddled with technical, allocative, and scale inefficiencies; and inherent problems of free-riding, horizon, portfolio, control, and influence costs.
Co-operative business ontology	A set of co-operative concepts and categories in a business area or domain that shows their properties and the relations between them to create, deliver and capture value to members, other stakeholders, and the community.

I. Introduction

Since their inception in 1498 (see Fairbairn, 2012; Williams, 2007), the importance of co-operative organizations across the world cannot be overemphasized or underestimated. Co-operatives are considered by development agents as grand instruments of development and redress of the socio-economic failures (ILO and ICA, 2015; Birchall, 2013; ICA, 2013; Develtere, et al, 2008,). They are immensely contributing to the realization of the United Nations' Sustainable Development Goals (SDGs) as postulated by the International Co-operative Alliance International Labour Organization and other related development agencies. According to the World Co-operative Monitor's (Exploring the Co-operative Economy, 2020) reports, co-operatives are among the largest ventures in the world with high capital bases, large market shares, and employers.

However, there have been cases where co-operatives have failed to stay put in the wake of the changing global trends. This poises the continuous debate on the viability and sustainability of the co-operative business models. People tend to have a very limited view of the kinds of activities co-operatives can perform. The process of properly grounding co-operatives in the economic and management theories is ongoing. This emanates from some studies in different contexts in which co-operatives have or are considered, according to Levi and Davis (2008), the *"enfants terribles"* of economics. Scholars have established (to some extent) that there are still complexities, paradoxes, and ambiguities in both co-operative business concepts and practices. Co-operatives will succeed only where people design the type of business that best meets their real needs. The question that remains then is, what the co-operative business models and classification are, and how to identify, select, design, and implement them successfully.

According to numerous scholastic discourses, co-operatives are still largely ignored within mainstream economics and management theory; and in some cases, discredited by development agents due to the malfunction potential in some contexts. Co-operative scholars are still trying to synthesize the co-operative framework and/or pathway to offer comprehensive guidance for the co-operative business modelling. Furthermore, identification, selection, designing, and implementation of co-operative business models for success seems to be a major concern among the co-operative practitioners.

In December 2021, the International Co-operative Alliance (ICA), organized the 33rd World Co-operative Congress in Seoul, South Korea; with a rallying call for "deepening our co-operative identity" to secure the future. Based on the current global crisis as a framework, the congress discussions were aimed to deepen the co-operative identity by (1) examining the co-operative values, (2) strengthening co-operative actions, (3) committing to co-operative principles, and (4) living the co-operative achievements. Behind these pertinent issues, is the centrality of and need for "co-operative business modelling" in various contexts across the world. This study would not have come at a better time than this.

II. Purpose and Methodology

This study paper was undertaken on the following premise and methodology.

Purpose: Generally, the purpose of this study paper was to help broadly understand various co-operative business taxonomy developed by various scholars and practitioners, their possible theoretical grounding, their attributes, and interconnections to establish and strengthen their business model propositions, which deepens the co-operative identity. Specifically, this study is to help the learner to (1) understand the existing body of knowledge including where an excess of co-operative taxonomy and business modelling research exists (i.e., what is already known?) and where new co-operative business modelling research is needed (i.e., what is needed to be known?) (2) understand a theoretical foundation for the co-operative business modelling framework study (related to "what is already known in the co-operative business model?") (3) appreciate the presence of the co-operative business modelling research problem - related to "what is needed to be known on co-operative business models?" (4) understand the justification for the proposed co-operative business modelling study as one that contributes something new to the body of knowledge (5) think through the frame of the valid research methodologies, approach, goals, and research questions for the subsequent co-operative business modelling studies.

Methodology/Approach: This has been qualitative research. A qualitative review has been carried out on the co-operative taxonomies to expand and synthesize the formerly introduced taxonomies. In doing so, to guarantee an even stronger reference to the co-operative business modelling concept, the focus has been narrowed down to only those articles that include co-operative typologies.

On this basis, several articles by varied scholars that strongly deal with the co-operative taxonomies as such and/or the research area; have been identified. The main scholars whose work is extensively revisited and referenced are Nilsson and colleagues (1999, 2001, 2007); Cook and colleagues (1999, 2000, 2004, 2009); Birchall and colleagues (2011, 2013, 2017); Iliopoulos and colleagues (2009, 2015, 2017). Bijman and colleagues (2012, 2013, 2014, 2019). The study is further braced by the work of such other scholars as Matabi (2018a, 2018b, 2017a, 2017b, 2017c, 2017d, 2017e); Mazzarol and colleagues (2009, 2011, 2018); and several co-operative theories, especially the institutional theory (Emelianoff, 1948/1995; Craig, 1993), neo-classical economic theory (Royer, 2014; LeVay, 2008), transactional theory (Williamson, 1985; Ollila, 1989; Fahlbeck, 1996), game theory (Sexton, 1986; Staatz, 1987), Property rights theory (Fulton, 1995, Jensen and Meckling, 1998, 1979), and agency theory (Hansmann, 1996). The several theories above explain the conditions under which co-operatives can emerge and thrive and the kinds of outcomes they predict.

To provide a differentiated overview of the state of research, the researcher manually assigned the related scholastic articles to the individual research areas. Due to different co-operative taxonomies emerging from the review, the conceptual clustering approach has been used (Fisher and Langley, 1986). According to scholars such as Levy and Ellis (2006), and Webster and Watson (2002); a quality and useful literature review should be based upon a concept-centric approach and not just an author-centric chronological approach. Using this approach, careful content analyses of the scholars' papers, and findings of their studies; have been grouped within the cluster of concept matrices (Klopper, et al., 2007). A substantial number of related conceptual articles, articles with case studies or basic empirical methods like descriptive statistics, interviews, surveys; and articles with multivariate analyses (e.g., causal analyses, multiple regressions, or structural equation modelling) have been conceptually reviewed and analysed (Levy and Ellis, 2006).

Conceptual clustering helps to generate a concept description for each generated class and can even help to generate hierarchical category structures. Conceptual clustering is not only the inherent structure of the data that drives cluster formation but also the description language that is available to the learner. The conceptual clustering is related to concept analysis, decision tree, and mixture model learnings. However, a strong grouping in the information would not have been extracted if the concept description language was incapable of describing the clusters of the co-operative taxonomies. The description language used may have been limited to feature the envisaged taxonomy combinations.

The limitations notwithstanding, in the course of this qualitative literature review, the socio-economic and political systems of different contexts influence how the co-operative identity is embraced by such a society. The co-operative identity is defined in terms of the understanding of the co-operative history, theoretical schools of thought; the upheld co-operative epistemology (i.e., truths on history, theories, schools of thoughts, trends, definition, and laws) and axiology (i.e., values and principles, perspectives, roles, and importance). Such socio-economic and political systems and co-operative identity concepts held, further determine how the co-operative taxonomies are likely to organically emerge, and how co-operative businesses are ontologized (designed and implemented or operated based on the epistemology and axiology). The co-operative business models symbiotically also determine the deepness of co-operatives identity and contribute to the socio-economic development in the society. This is conceptualized as in Figure 1.

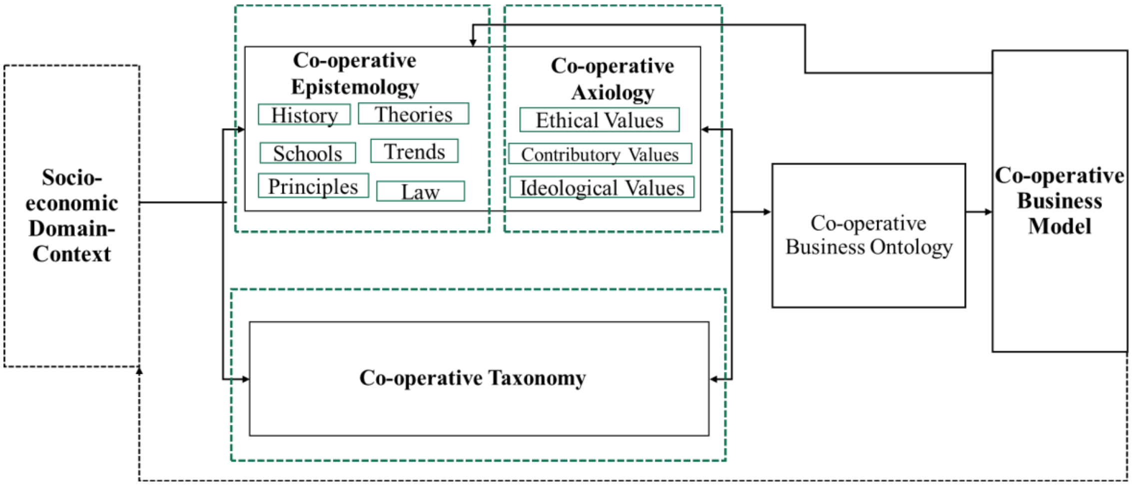

Figure 1: The conceptual framework of the study.
Source: Author

The framework indicates possible studies on three general concepts: Co-operative identity and related concepts; co-operative taxonomy, and the co-operative business ontology (based on the epistemology and axiology) to generate successful and sustainable co-operative business models that can deepen the co-operative identity in the contexts and periods of the society.

This study, therefore, focuses on the concept of co-operative taxonomy. From the qualitative analysis, four clusters of co-operative taxonomies have been identified (1) classifications by the ***scope*** of purpose, sector, and targets; (2) classifications by the ***system*** of ownership rights and investment; (3) classifications by the ***structure*** of membership, governance, and management; and (4) classifications by the ***strategy*** of member participation, and marketing. Adopting and borrowing 3S – structure, strategy, and system – the concept of "McKinsey 7S" Management Model (Jharotia, 2019); and, this could culminate to what is referenced in this study paper as "4S" Co-operative Business Modelling – of scope, system, structure, and strategy. The scope cluster in this paper implies the co-operative's extent or range of its purpose, sectors, and targets. The system cluster in this paper means how the co-operative is owned, and investments are allocated and claimed. The structure cluster in this paper implies how co-operative authority relationships are. The strategy cluster in this paper implies how the co-operative move forward while remaining adaptive.

III. The Discourse of Co-operative Business Taxonomies

The co-operatives are distinctly different from other forms of businesses. Generally, there are three fundamental properties inherent in co-operatives as member-owned organizations: (1) Humanism (people-centred approach) (Pirson and Turnbull, 2011), in which the organization assumes that people are intrinsically motivated social beings, balancing their personal and group interests per general moral principles. Thus, co-operatives embrace a balance of objectives, including financial, and tend to involve key stakeholders in their decision-making process; (2) Joint (distributed) ownership and control, which is the hallmark of co-operatives[1] - i.e., by operating under private property schemes, co-operatives distribute ownership rights equally among their

[1] This is in contrast to employee share ownership schemes, where ownership is distributed but employees do not control the company, except in rare cases where they own majority shares

members while holding a part of their assets in non-divisible reserves[2]; and (3) Democracy (self-governance), which is the underlying engine of autonomous co-operative enterprises, with democratic decision-making by their members as its vital component. These three properties, when operationalized, form the building blocks of co-operative governance advantage in the context of increased complexity (ICA, 2015).

In the above respect, co-operatives are considered to take different formations (Krivokapic-Skoko, 2002). The reviews of literature indicate that scholars have delved into the development of several co-operative classifications. This study paper goes further to identify and cluster the classifications by various scholars, showing juxtaposition that could build the case of a successful co-operative business modelling framework for deepening the co-operative identity. The clusters are under (1) classifications by the scope of purpose, sector, and targets; (2) classifications by the system of ownership rights and financing; (3) classifications by the structure of membership, governance, and management; and (4) classifications by the strategy of member participation, and marketing. The clusters are also reinforced by some possible co-operative theories.

The co-operative classification by the scope of sector, purpose, and targets

In most cases, especially among the practitioners, co-operatives classes are based on their scope of sector, purpose, and geographical and demographic targets. This cluster of classification is attributable to several co-operative theories such as theories of social history, Economic History, Economics[3], Sociology, Mutual incentives, and Supportive environment (Birchall, 2011, p.32-33). In this regard, co-operatives are named and described by the scope of sector, purpose, and target in terms of geographical and demographic coverage.

Classification by sector: First, co-operatives have been classified based on the sector they are focussed on – agriculture, services, social development, transport, financial, housing, manufacturing, tourism, consumptive, etc. As such, co-operatives have been named based on the single product/sector or multiple products/sectors such as agricultural co-operatives or simple Agricultural Credit Co-operative or multipurpose co-operatives that take over some products and functions from production to services to marketing.

Classification by purpose: Secondly, co-operatives have also been classified based on their direct engagement activities such as joint production co-operative, and joint nature conservation (environmental) co-operative. Others have been classified based on their involvement in services that enhance substantial economies of scale and scope, such as supply co-operative (providing farm inputs); credit co-operative (providing credit); insurance co-operative (providing insurance); farm machinery co-operative (providing farm machinery services); farm help co-operatives (providing temporary labour); plant or animal breeding co-operative (providing starting material); irrigation/water users co-operative (providing water). Moreover, co-operatives have been classified that have taken over the sales activities of the producer such as providing a market (e.g., auction co-operative), collective bargaining (e.g., bargaining association), collecting farm products (including transport and storage), marketing commodities, and branded products (bulk products; private label products), wholesaling (this implies the co-operative is selling member products and other products, to supply a full assortment to the retail); and retailing (i.e., directly selling to consumers). Furthermore, co-operatives have been classified based on the processing activities either primary processing (producing intermediary products for the food industry) or secondary processing (producing final consumer products). By delegating the processing and marketing of the farm products to the joint co-operative, farmers can specialize in on-farm activities. (See Plunkett and Kingswell, 2001; Bijman and Hanisch, 2012).

Classification by geographical and demographic targets: Thirdly, co-operatives have been classified by the target "area of domicile" or geographical area of operations. They can base be classified as rural/local co-operative (strongly embedded in rural communities that often provide social services for the members of the community) or urban co-operative (based in urban areas). Some have been clarified to be subnational (operating in combined jurisdictions within a country), national (operating in the whole country, especially the apex co-operative bodies), and transnational (which operate in multiple countries in the region such as those in European Union). Co-operatives have equally been classified by the "demographic" coverage such as women, youth, farmers, fishermen, workers, professionals, and so on.

Discussion

The discussion of this "scope" cluster is advanced by Birchall (2011). The scholar, using a scientific way of identifying individual *genera* within a class, and species within a genus, develops classification to demonstrate the wide range of different organizational forms that the co-operative can take depending on its purpose and

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[2] In some cases, such as land ownership, co-operative members may have usufruct rights – they can freely use the asset and its products but cannot sell (dispose of) the land.

[3] The most common economic theoretical tool for vertical integration is the "transaction cost theory", which was relevant to traditional co-operatives; then "neo-classical economic theory" combined with "game theory" is more instrumental and states that when the average cost curve of the processing activities is constantly declining and the price is independent of the volume supplied, the firm (or rather its owners) has an incentive to increase the volume as much as possible. Then finally the "property rights theoretical perspective is appropriate; the best owners of a firm are those whose inputs to the firm's operations are the most uncertain ones (See Nilsson, 1999 p. 458-460).

membership. Each is part of the co-operative business family, is distinctly different from the IOF and other organizational forms, and has specific advantages both to members and the community (Birchall, 2013, p.7).

Table 1: A suggested classification of co-operative businesses

Class	Genus	Advantage to members	Advantage to community
Consumer-owned	General retailing Co-operatives	Pure food, opportunity for fair trade, local food sourcing, dividend on purchases, consumer voice.	Community engagement, social role, campaigning, ensuring competition and local presence.
Consumer-owned	Specialist retailing Co-operatives	As above but varying between sectors.	As above.
Consumer-owned	Insurance Co-operatives	Long term trust, especially in pensions. Low cost. Reliability, ability to insure the less insurable	Ensuring competition, preventing cream skimming.
Consumer-owned	Housing Co-operatives	Equity co-operatives enable control over multi-occupied blocks, while non-equity co-operative enable tenant control over social housing.	Spill over effects into the wider environment. Demonstration effects for social housing tenants. Prevention of homelessness
Consumer-owned	Utilities (social) co-operatives	Spread of utilities to rural areas that IOFs are not interested in. Consumer monopoly ensures low prices.	Prevention of monopolies by IOFs. Can be more efficient than public/government agencies. Health and educational benefits.
Consumer-owned	Education Co-operatives	Responsiveness to parents' preferences.	Higher educational attainment.
Consumer and producer owned	Banking (finance) co-operatives	Availability of credit for business development. Safe-haven for savings. Avoidance of loan sharks.	Low risk banks that can stabilise the wider banking system. Credit available to develop local economy
Producer owned	Primary producer co-operatives	Raising of incomes of primary producers through lower price and better quality of inputs; effective marketing of produce; processing to add value.	Delivery of farm extension services, strengthening of rural economies, increase in income impacting on education, child and maternal health
Producer owned	Retailer-owned Wholesaler co-operatives	Ability to provide competitive advantage against multiple chains. Provides access to poorer, less mobile consumers.	Ensures competition among different types of providers, preventing cartels/monopoly. Stabilises local economies.
Producer owned	Shared services for self-employed, small business and professionals' co-operatives	Provision of at-cost services to businesses that give a competitive advantage, and ability to grow.	Helps local economies to grow, provides employment.
Producer owned	Worker co-operatives on a continuum: simple labour co-operative to co-operative group	Availability of jobs, and job security.	Increased employment rates

Source: Adapted from Birchall, (2013).

From these classifications, there are broadly three classes including producer-owned co-operatives, consumer-owned co-operatives, and worker-owned co-operatives (sometimes viewed as a subset of producers' co-operative). It is pointed out that these classes derive their advantage in the three key co-operative elements of "ownership", "control" and "benefits".

Table 2: Advantages of the broad class of co-operatives

Class	Advantage derived from ownership	Advantage derived from control	Advantage derived from benefit
Producer-owned Co-operatives	Prevents cartels or monopolies that damage consumer interests. Enables trust in long term relationships under uncertain contracts	Focuses the business on what matters to consumer members. Enables ethical choices to be made. Manages risk effectively.	Patronage refund acts as a 'cost price' mechanism providing producers with input and services at lowest possible cost; and payment for goods marketed adjusting to cost of providing the service.
Consumer-owned Co-operatives	Prevents cartels or monopolies that damage consumer interests. Enables trust in long term relationships under uncertain contracts	Focuses the business on what matters to consumer members. Enables ethical choices to be made. Manages risk effectively.	Patronage refund acts as a 'cost price' mechanism providing consumers with goods at lowest possible cost.
Employee – owned Co-operatives (as a subset of producer co-operative)	Prevents employers from exploiting workers when labour is in a weak bargaining position.	Prevents asset stripping, hostile takeovers. Provides choice over working conditions, prevents redundancy.	Enables workers to capture all the net added value from their labour

Source: Adapted from Birchall, (2013)

Essentially, co-operatives operate in several sectors based on production and/or consumption. The class of co-operatives by the scope of producer or worker or consumer purpose is to address the market failure. The small producers, consumers, and partners seek to address at least the following market failures: (1) A monopoly in which one supplier dominates, or an oligopoly (cartel) in which several suppliers collude; (2) A monopsony in which one buyer dominates or a buyers' oligopoly in which several buyers collude; (3) A situation in which there may be many suppliers or buyers but each can lock purchasers or sellers in through supplying credit; and (4) A lack of markets which means the goods are not supplied. The co-operatives classification by scope of purpose and targets can be illustrated as in Figure 2 below.

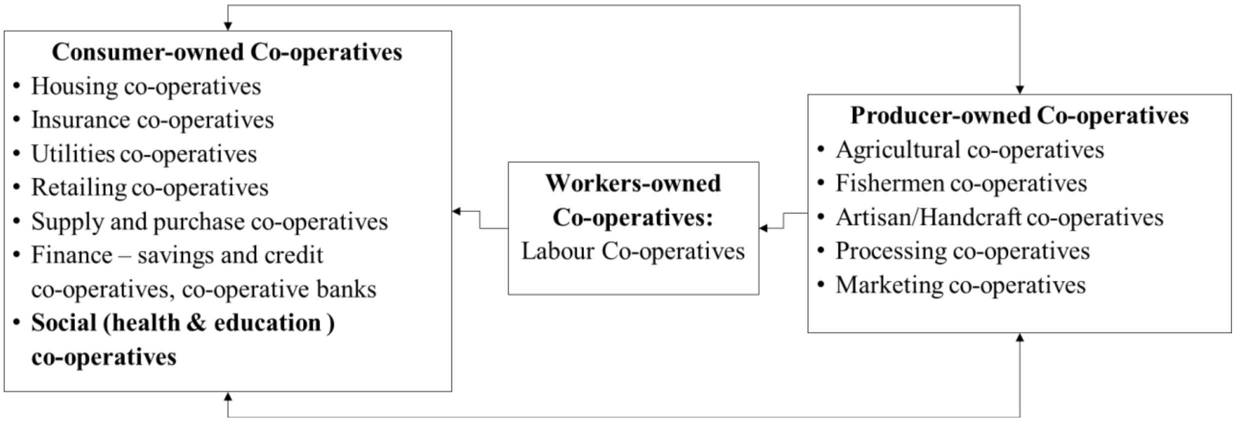

Figure 2: Co-operatives classifications by the scope of purpose and target
Source: A Construct by Author

Reports by World Co-operative Monitor (Exploring the Co-operative Economy, 2020) and ILO, imply that consumer-owned co-operatives are large enterprises with high asset bases, and have a greater presence in the developed economies of Europe and America. The producer-owned co-operatives have larger membership and employment numbers and have a high presence in Asia, Latin America, and Africa. The worker-owned co-operatives are considered as part of the producer-owned co-operatives, as employees buy of enterprise and own them collectively, to service the other producer-owned and consumer-owned co-operatives.

Recognizing their individual development, Johnston Birchall (Birchall, 2011), considers that co-operatives are likely to undergo several growth stages, He summarises co-operatives development cycle in terms of the periods of foundation, growth, consolidation, decline, death of the sector, demutualization, and renewal (see Birchall, 2011, p. 39-40). Table 5 highlights this cycle in terms of main features and main challenges faced.

Table 3: Possible lifecycle of a co-operative given the trends and perspectives

Period	**Main features**	**Challenges faced**
Founding period	• Unmet needs, not met by other forms of business • Specific social capital: common bonds and Networks • Leadership with a wide range of skills and experience • A viable business model	To overcome the collective action problem
Period of growth	• A replicable business mode that can be emulated • Economic prosperity • Long-term social capital and widespread basic education • Supportive political leadership • Being first in the market • Ability to break up cartels, defend v political opposition	To replicate the business model as far as it will go
Period of consolidation	• Favourable government legislation and regulation • Inertia setting in, with problems of poor and oligarchic governance • Growth falling off, but market share rising	To avoid inertia and complacency
Period of decline	• Inheritance of an outdated asset base and technology • Inability to compete with the competitors, or attract good managers • Loss of market share and sale of assets to cover losses • Merger of weak societies • Isomorphism, loss of rewards to members • Defensive boards, manager takeover, corruption • Loss of social capital	To refocus the business and redeploy assets, reconnect with members
Death of the sector	• Societies are sold off or go bankrupt and the federal (government) is unable to prevent this, or • Whole sector reorganises as one unit, then goes bankrupt or • The state nationalises or destroys it	Too late
Demutualisation	• Negative narrative: attempt to asset strip and pursue self-interested short-term gain • Positive narrative: attempt to gain comparative advantage • Conversion as a strategy to avoid bankruptcy	To see the best business case without short-term self-interest and to defend viable mutuals
Renewal	• New leaders who see the potential comparative advantages renew the norms, values, traditions of the past • New ways are found to reward member loyalty e.g., bringing back the dividend • New ways found to connect members with social issues • Alignment with social movements brings influx of new leaders and members • Consolidation/reorganising of the asset base leads to ability to hire good managers and invest in new products, markets • Concentration on markets where there is an increase in market share	To find a mutual comparative advantage, align the sector with social movements.

However, the mere classification of co-operative by scope, growth stages, and sometimes the deluded advantages; has not been able to settle the case for the viability, success, and sustainability of co-operatives. This is because, like other business forms, they operate in a complex business environment. Economists (e.g., Porter and Scully, 1987) have always criticized co-operatives as inefficient business forms and labelled them as *"enfants terribles"* of economics (Levi and Davis, 2008) on the ground of unclear property rights and high agency costs. The three inefficiencies that co-operatives exhibit (see Nilsson, 2001) include:

Technical inefficiency, where a co-operative has higher control costs and is more likely to have principal-agent problems. The argument states that the co-operative is technically less efficient than its non-co-operative counterpart if (1) there is less incentive for co-operative directors to control and shirk when the benefits of these efforts are a public good for all members, and (2) it is not possible to concentrate ownership, reducing the incentive to innovate.

Allocative inefficiency, where it is argued that the co-operative member's claim to the return on long-term investments is truncated at its horizon of patronage (i.e., the full value of the marginal product of an investment is not realized by the decision-maker); and because of their inability to diversify to avoid risk or to concentrate ownership among the lowest-cost risk-takers (i.e., the risk-adjusted cost of capital is higher), co-operatives are considered "allocatively" inefficient-as they tend to underutilize capital and intangible assets.

Scale inefficiency, where it is argued that co-operatives do not have enough customers to achieve a cost-minimizing level of output. Because the cost of control increases with the number of clients (members and patrons in a co-operative) and because legal restrictions on the amount of business the co-operative can do with non-members prevent expansion, the co-operative is likely to be scale inefficient (This is discussed in this section).

This conclusion has led scholars to expand the debate on the taxonomy of co-operatives from the sector, purpose, and objective dimensions to other dimensions, including (1) the structure of ownership, investment, benefit allocation, and entitlements; (2) the system of membership, governance, and management; and (3) the strategy of member participation and marketing.

The co-operative classification by system of ownership-rights, investment and benefit allocation, and claim

According to Alchian and Demsetz (1972), Jensen and Meckling (1979), and Fama and Jensen (2009), for example, co-operative enterprises cannot be efficient because the owners (members) have only vaguely defined property rights in the co-operative firm. The control possessed by members is insufficient, the organization's use of financial resources is suboptimal, raising equity is problematic, etc.

This cluster of classification is attributable to several co-operative theories such as theories of economic history, economics[4], mutual incentives, and ownership (see Birchall, 2011, p.32-33). In this regard, co-operatives are named and described by a system of ownership rights, investment and benefit allocation, and claim.

Ownership rights, investment, and the allocation and use of benefits are among the most elusive aspects of co-operatives, especially in today's free-market economy – what Nilsson (1999) called an entrepreneurial environment. It becomes even more complicated in large co-operatives, which invariably pool many assets; and it may be unclear who has what decision-making and/or implementation and monitoring rights or control. Uncertainty can also make it difficult to allocate and claim benefits, as ownership rights are not clearly defined (as co-operatives are likely to have members, patrons/clients/employees, and investors, all of whom have a stake in some or all). Figure 3 shows the uncertainty and complexity of these ownership issues that obscure the benefits of the co-operative.

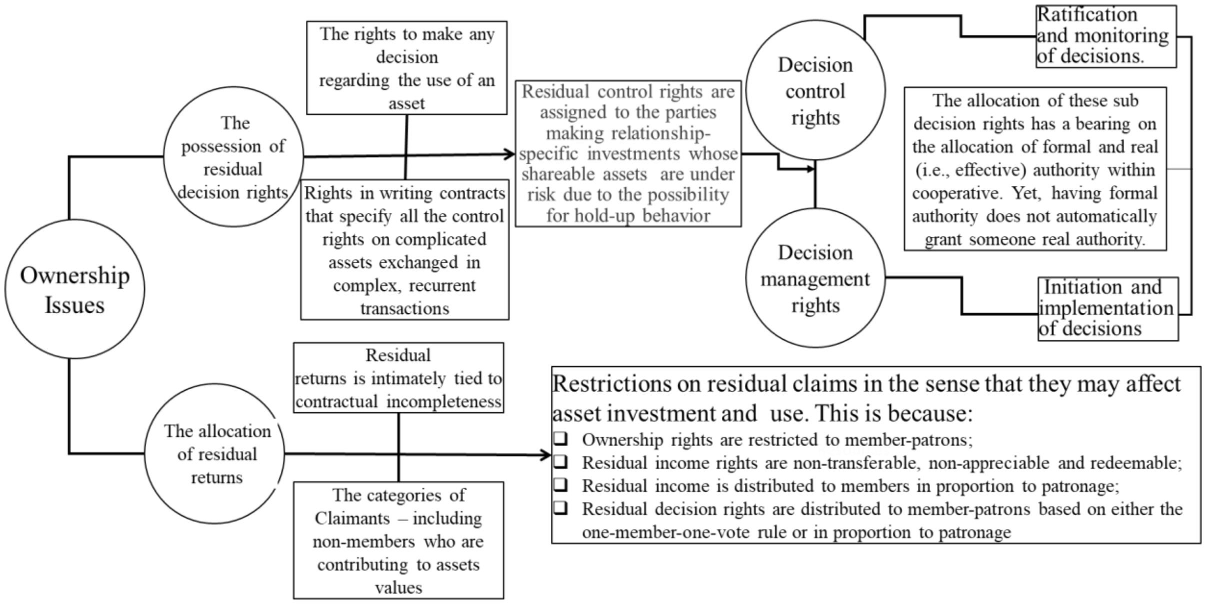

Figure 3: The path of ownership issues in co-operatives.

Source: A construct of the author

[4] The most common economic theoretical tool for vertical integration is the "transaction cost theory", which was relevant to traditional co-operatives; then "neo-classical economic theory" combined with "game theory" is more instrumental and states that when the average cost curve of the processing activities is constantly declining and the price is independent of the volume supplied, the firm (or rather its owners) has an incentive to increase the volume as much as possible. Then finally the "property rights theoretical perspective is appropriate; the best owners of a firm are those whose inputs to the firm's operations are the most uncertain ones (See Nilsson, 1999 p. 458-460).

Due to the ambiguities, uncertainties, and vaguely defined ownership rights in the light of the dual function of the co-operative as reflected in the dual function of its members as patrons and investors, five inherent problems have consistently bedevilled co-operatives (members and managers), especially producer co-operatives. These include free-riding, short-term horizons, a misalignment of member and co-operative interests that affect the portfolio, conflicts over shareholder control rights, and the investment costs associated with managing a complex network of a co-operative (Cook and Iliopoulos, 2000).

Table 4: *Scenarios for the rising of the inherent co-operative problems*

Inherent Problem	Scenarios for the inherent problem in the co-operative
Free rider problem	▪ **Generally:** This problem emerges in co-operatives when ownership rights are non-tradable, insecure, unassigned, or vaguely defined. Members engage less actively in patronage than others who still gain similar benefits from their membership. ▪ **Specifically,** there are two types of free-rider problems: external and insider free-rider constraints. ▪ **The external free-rider constraint:** This is a general resource problem. Co-operative ownership rights are not well suited and enforced to ensure that current member-patrons, or current non-member-patrons, bear the full costs of their actions and/or receive the full benefits they create. This situation occurs, particularly in open-membership co-operatives. ▪ **The insider free-rider problem:** This is a more complex type of problem. It occurs when there are issues of common ownership. It occurs when new members receive the same patronage and residual rights as existing members and are entitled to the same payment per patronage unit. These equally distributed rights, combined with the lack of a market to set a price for residual rights that reflects the accrued and present equivalents of future earning potential, create generational conflict. By diluting the return for existing members, a negative incentive is created for them to invest in their co-operative.
Horizon problem	▪ **Generally,** this is when the members' residual claims over the assets of the co-operatives are shorter than the life of the asset. It is a disincentive for co-operative members to invest in long-term projects. This problem is also caused by the benefits that flow to the patron instead of the investor. ▪ Specifically, this problem occurs when a member's residual claim on the net income generated by an asset is shorter than the productive life of that asset. This problem also emanates from restrictions placed on the transferability of residual claimant rights, and the lack of liquidity through a secondary market for the transfer of such rights. ▪ This problem creates an environment where members are disincentivized to contribute to available co-operative growth opportunities. ▪ The severity of this problem intensifies when considering an investment in research and development, advertisement, and other intangible assets. Consequently, there is pressure on the board of directors and management to: o Increase the proportion of the co-operative's cash flow devoted to current payments to members relative to investment; and, o Accelerate equity redemptions at the expense of retained earnings, which in turn causes intense problems of raising risk capital from the members.
Portfolio problem	▪ **Generally**, this is another equity acquisition constraint for the co-operatives. Lack of transferability, liquidity, and appreciation mechanisms for the exchange of residual claims prevents members from adjusting their co-operative asset portfolios to match their personal-risk preferences. ▪ This problem is also caused by the tied-equity issue, i.e., – the close correlation between investment decisions and the patronage decision. Therefore, members hold suboptimal portfolios, and those who are forced to accept more risk than they prefer will pressure co-operative decision-makers to rearrange the co-operative's investment portfolio, even if the reduced-risk portfolio means lower expected returns
Control problem	▪ **Generally**, the divergence of interests between members and the co-operative's management causes this problem. There are multiple types of agency costs associated with the divergence of interests between the principals (members) and the agent (professional management). ▪ The lack of a secondary market for co-operative residual claims makes monitoring of agents a difficult task. This task is further complicated by the fact that subgroups of member-patrons tend over time to have very heterogeneous preferences and thus the co-operative's objective function may become ambiguous. ▪ Conversely, member-patrons, at least in some types of co-operatives, may be well-positioned to monitor management. This may also be enhanced today with good technology systems developed and run by the co-operative.
Influence cost problem	▪ **Generally**, this is a problem associated with a class of costs that inevitably arise in the co-operative when decisions affect the distribution of wealth or other benefits among members or constituent groups of the co-operative, and, in pursuit of their selfish interests, the affected individuals or groups attempt to influence the decision to their benefit. The strategic focus of the co-operative becomes uncertain as the co-operative seeks to balance the returns to the enterprise and the members. ▪ **Legally**, this might lead to cases of minority oppression. The influence cost problem may become a major source of inefficiencies in agricultural co-operatives. Several critical decisions involve the distribution of wealth among member-patrons and thus may provoke and influence efforts by members. The allocation of overhead costs, the assessment of members' product/services quality, and the geographical location of new investment are but a few examples of such decisions.

Source: Adapted from Iliopoulos and Cook (2015), Cook and Burress (2009), Hansmann (2002)

The effect of these inherent problems on co-operatives is in two ways: (1) The disincentives facing members of traditional co-operatives to contribute significant amounts of risk capital to their co-operative due to the vaguely defined property rights of these organizations, especially where there are Free rider problem, Horizon problem, and Portfolio problem; and (2) The costs of monitoring non-member management and the costs of collective decision-making – where there are Control problem and Influence cost problem (Nilsson,

1999; Cook and Iliopoulos, 2000; Iliopoulos and Hendrikse, 2009). To create incentives for members to contribute risk capital and combat the negative consequences of diachronically increased member interest heterogeneity, co-operatives may spend a considerable amount of time experimenting with minor changes in bylaws and internal policies. (Iliopoulos, 2015, p.8).
To define and distribute ownership rights, the co-operative has two objectives: (1) to provide their members with powerful incentives to contribute risk capital and (2) to ameliorate the negative externalities of frictions due to increased preference/interest heterogeneity. Studies are done mainly in Europe (see Nilsson, 1999) and North America and Europe (Chaddad and Cook, 2004), have led to further classifications of co-operatives on basis of other dimensions including ownership rights, control, and investment structure. In these studies, ownership rights and distribution in co-operatives are clearly defined and manifested as one move away from the traditional co-operative model to the proportional investment, to the member investor, and the new-generation ownership models.

Nilsson's Classifications
The initial studies in this spectrum were in Europe by scholars like Frank van Bekkum and Gert van Dijk (1997), and Jerker Nilsson (1999). Five classes (from an agricultural co-operative perspective) were introduced and characterized (1) Traditional co-operative, (2) Participation-share co-operative, (3) Co-operative with the subsidiary, (4) Proportional tradeable share co-operatives, and (5) PLC co-operatives.

Table 5: Co-operatives classification by various attributes including ownership rights and investment

Attributes	Traditional co-operative	Participation-share co-operative	Co-operative with subsidiary	Proportional tradeable share co-operatives	PLC co-operatives
Categorization	Countervailing power co-operative	Entrepreneurial co-operative			
Core investors	None	Non-members	Members		
Business in operation	Society	Society	PLC	Society	PLC
The theoretical rationale for the co-operative business	Neoclassical theory, Game theory, Transaction cost theory, Property rights theory	Neoclassical theory, Game theory, Transaction cost theory, Property rights theory, Agency theory		Transaction cost theory	Property rights theory, Agency theory
Co-operative ideology/identity	Yes	Less, and only in the co-operative society		No	
Success factor	Economies of scale	Economies of scale and scope		Economies of scope – streamlining	
Focus	Trade conditions	Patrons focus on trade conditions; while investors focus on Return on Investment (ROI)		Return on Investment	
Mission	Defensive	Offensive			
The best strategy (based on Michael Porter)	Cost leadership	Product differentiation		Focus	
Member roles	Patron	Patron and eventually investor		Patron and investor	
Investments/product units	Small investments/product units	Large investments/product units			
Type of business operation	Low value-added; Primary processing; Domestic and exports; Member related	Also value-added; Diversified processing; international; non-member-related business		Value-added; Advanced processing; Domestic and exports; non-member-related business	
Technology	Simple, well-known	Also advanced technology		Advanced technology	
Orientation	Production orientation	Market orientation with production restriction		Market orientation	
Market type	A stable market	Turbulent markets			
Market signals	Product markets	Product market; Risk capital market		Risk capital market	Product market

Source: Adapted from Nilsson (1999).

Chaddad and Cook's Classifications
This classification was later advanced by scholars mainly in North America and parts of Europe (Chaddad and Cook, 2004). The scholars observed the organizational variations of co-operatives in terms of ownership rights. In so doing, they refined the property right analysis of alternative organizations and identified

five new types of co-operatives with innovation districts from traditional co-operatives that are usually ridden with inherent problems.

The classified seven co-operatives in whose (1) ownership rights are restricted to member-patrons (i.e., traditional co-operative, proportional investment co-operative, member investor co-operative, new generation co-operative); and (2) those ownership rights are not restricted member-patrons (co-operative with capital seeking entities, investor share co-operative, and conversion to owner-investor firm (IOF)). In the latter case, co-operatives can acquire capital from non-member sources. This means the co-operatives need to share profits and eventually the control rights with the outside investors who are no patrons and who may have divergent changing interests. As a result, there are conflicting goals of maximining the profits for investors and serving patron members effectively. The extreme form in conversion to IOF; otherwise, the co-operative may only stop at seeking to acquire risk capital from outside investors with capital seeking entities or investor shares (Chaddad and Cook, 2004).

Table 6: Description of the co-operative typologies by ownership rights, control, and investment structure

Type of co-operative	Basic Description
Traditional co-operative	Assignment of residual reruns to member-patrons. There is no separation of ownership from the function. In terms of control rights, there are nonproportional voting rights; simply one member-one vote. The horizon of the residual claim is as long as one is a member. There is no transferability of residual claims, and the redeemability of these residual claims is only at the discretion of the board of directors.
Proportional investment co-operative	Ownership rights are restricted to members, non-transferable, nonappreciable, and redeemable. A variation of this model is the vertical investment, in which members are expected to invest in the co-operative in proportion to patronage. As membership heterogeneity increases, proportional investment co-operative tends to operate more like traditional co-operatives and, after realizing that, they are likely to adopt capital management policies to ensure proportionality of the capital that is generated internally including the separate capital pools and base capital plans.
Member investor co-operative	Returns to members are in proportion to shareholding in addition to patronage. Two approaches can be applied, dividends distribution in proportion to shares and/or allowing appreciation of co-operative share value. A variation of the basic member-investor co-operative is the member-investor co-operative with vertical investment.
New Generation co-operative	Ownership rights are in form of tradeable and tradeable delivery rights restricted to member patrons. Therefore, the member patrons are required to acquire delivery rights based on the expected patronage so that their usage and capital investment are proportionally aligned. This model may have vertical investments and co-operatives adopting the collaborative new-generation model.
Co-operative with capital seeking entities	Investors acquire ownership rights in a separate legal entity owned in whole or part by the co-operative. Essentially, the outside investors' capital is not directly introduced in the co-operative, but rather in a trust-company, strategic alliance, or subsidiaries.
Investor-share co-operative	Investors received ownership rights in the co-operative in addition to the traditional co-operative rights held by member-patrons. Investor shares may bundle different ownership rights in terms of returns, risk-bearing, control, redeemability, and transferability. Therefore, the co-operative is obliged to issue more than one share type to different "owner" groups. This is where the co-operative may have common shares and preferred shares or nonvoting common shares or investor participation shares.
Conversion to Owner-Investor Firm (IOF)	The more radical is the conversion to IOF, which simply may be like an exit strategy of a co-operative that may choose not to continue as a user-owned and controlled organization.

Source: Adapted from Chaddad and Cook, 2004).

Discussion

From these perspectives by Chaddad and Cook (2004), there seems to be a trajectory of development from Nilsson (1999). As much as the traditional co-operatives remain the same in both perspectives, the former advances the latter's typologies as follows.

Table 7: Possible juxtaposition of Chaddad and Cook (2004), and Nilsson (1999) Typology of Co-operatives

<table>
<tr><th>Model</th><th>Co-operative Typology by Chaddad and Cook (2004)</th><th>Model</th><th>Co-operative Typology by Nilsson (1999).</th></tr>
<tr><td>1.</td><td>Traditional co-operative</td><td>1.</td><td>Traditional co-operative</td></tr>
<tr><td>2.</td><td>Proportional investment co-operative</td><td rowspan="2">2.</td><td rowspan="2">Participation-share co-operative</td></tr>
<tr><td>3.</td><td>Member investor co-operative</td></tr>
<tr><td rowspan="2">4.</td><td rowspan="2">New Generation co-operative</td><td>3.</td><td>Proportional tradeable share co-operatives</td></tr>
<tr><td rowspan="2">4.</td><td rowspan="2">PLC co-operatives</td></tr>
<tr><td>6.</td><td>Investor share co-operative</td></tr>
<tr><td>5.</td><td>Co-operative with capital seeking entities</td><td>5.</td><td>Co-operative with subsidiary</td></tr>
<tr><td>7.</td><td>Conversion to Owner-Investor Firm (IOF)</td><td></td><td>Not Applicable</td></tr>
</table>

Source: Author

These typologies reflect differing co-operative development theories (especially the property rights, agency theories), trends, and perspectives; and have been influenced by the co-operative law in different countries. Moreover, the typologies are to some extent seem to reflect the life cycle of co-operatives, as postulated by Professor Johnston Birchall such as period of foundation, growth, consolidation, demutualization, and possible renewal (see Birchall, 2011). The author has used these thoughts to improve on the co-operative classifications' conceptual frameworks by the previous scholars.

Furthermore, most of these proposed co-operative typologies with ownership rights that are restricted to member-patrons, are single-stakeholder types (SSC). To build on the thesis, therefore, this paper proposes the addition of the multi-stakeholders (also called solidarity) co-operative (MSC) in the improvement of this typology cluster. MSC can be between the "Member-Investor" Co-operatives and New Generation Co-operative (NGC); since MSC has similar characteristics with member-investor co-operatives except for the presence of more than one type of stakeholder represented in the co-operative's membership; and that before the members in the "Member-Investor" co-operatives considering, to transform to NGC, they can explore MSCs. MSCs are considered to explicitly address the internalization of externalities into the mission of the enterprise (Novkovic, 2019; Novkovic and Golja, 2015; Vezina and Girard, 2014). Additionally, MSC can apply to or simply mix both producer-owned and consumer-owned co-operatives scopes, in what Henry (2018) refers to as "*con-pro-sumers*" co-operatives; while NGCs are largely producer-owned scope (see Cook and Iliopoulos, 1999).

MSCs, when well-established and managed, can maintain the member-ownership, and dissuade investor ownership (see Nilsson, 1999), to advance co-operative identity. This is because, the ownership rights in MSC can still be restricted to member-patrons but now the would-be "outside investors" form part of membership with ownership rights, and the co-operative can fully own every business activity that meet the need for different membership categories (Chaddad and Cook, 2004). MSCs could enrich this typology as it links the scope, structure, system, and strategy for the co-operative business, whether producer or consumer-owned co-operatives. But more importantly, it would counterbalance demutualization (Battilani and Schröter, 2011) and degeneration or decline of co-operatives, hence continuously deepening the co-operative identity in every context and environment.

To adequately understand these classifications, therefore, the following configuration is adopted from, improved by the introduction of MSCs, and proposed (See Figure 4).

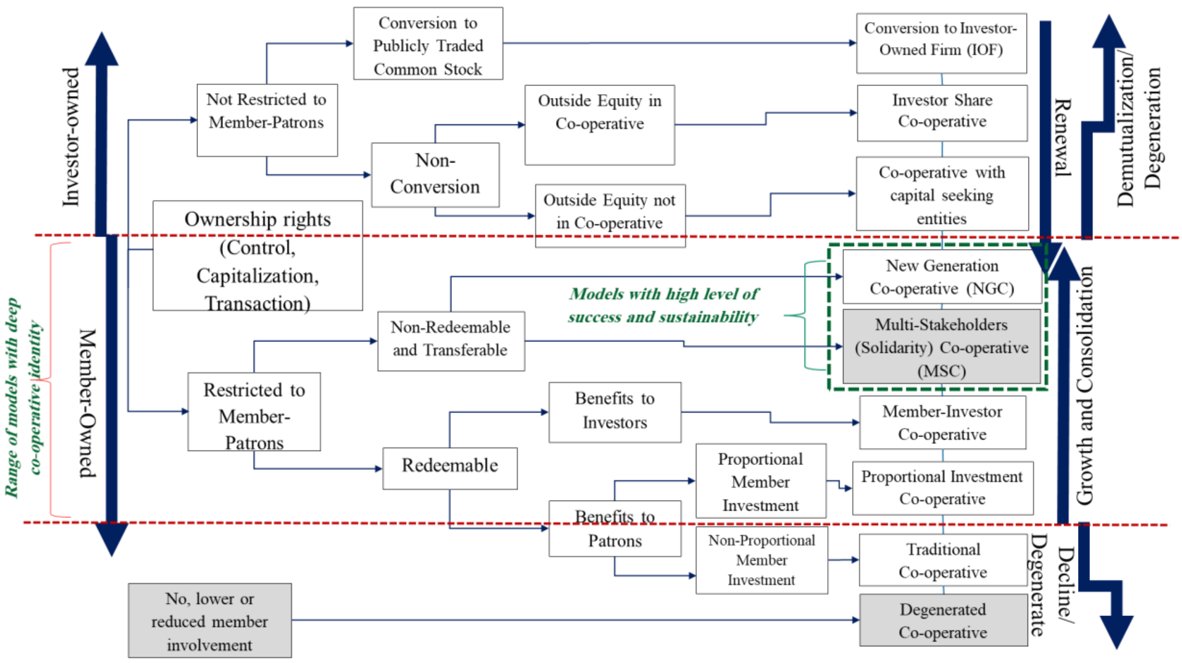

Figure 4: Proposed Typology of co-operatives by ownership-rights, control, and investment structure (with MSC added to typology)

Source: Adapted from Chaddad and Cook (2004), Nilsson, (1999), Birchall (2011), Birchall (2013).

These co-operatives differ or are similar in the aspects of membership, equity, investment and risk, transferable shares, appreciable shares, share redemption, and recipients of returns (See Table 11). From the study of attributes, four models will be at the centre of the deep co-operative identity – i.e., Proportional Investment Co-operative, Member-Investor Co-operative, Multi-Stakeholders (Solidarity) Co-operative (MSC), and New Generation Co-operative (NGC). Any model below or above these four models will compromise the co-operative identity. Moreover, MSC and NGC models by attributes, are possibly the models that can have a high level of success and sustainability given a high definition of ownership and investment rights. Furthermore, MSC will be better model inclusivity of actors with the specific (production and/or service) sector value-chain.

Table 8: Comparison of the co-operatives by their ownership-rights and investment system

Co-operative Comparison Features	**Traditional Co-operative**	**Proportional Investment Co-operative**	**Member-Investment Co-operative**	**Multi-stakeholders Co-operatives**	**New Generation Co-operative**	**Co-operative with capital entities**	**Investor-share co-operative**
Membership	Open membership and generally, no contractual use requirement. Only patrons are members.	Open membership and generally, there is contractual use requirement. Only patrons are members.	Open or closed membership; non patrons may also become members.	Open or closed to multiple membership categories; non patrons may also become members.	Closed membership and ownership are linked to product delivery contracts. Only patrons are members.	Closed membership is limited to the number of jobs in the co-operative, only workers are members.	Closed membership is limited to the number of shares.
Equity	Membership certificates or common (par value) stock for patrons; preferred (non-voting) stock for non-patrons. (i.e., collective type of equity; and members are the providers of the equity capital)	Common share with two different membership classes: patron and investor. (i.e., collective, and individual type of equity; and members are the providers of the equity capital)	Common share with two different membership classes: patron and investor (i.e., collective, and individual type of equity; and members and non-members are the providers of the equity capital)	Common share with two different membership classes: patron and investor. (i.e., collective, and individual type of equity; and members and non-members are the providers of the equity capital)	Common share, but membership shares have "market value", members sell their stock to other patrons when leaving co-operative. (i.e., individual type of equity; and members are the providers of the equity capital)	Membership certificates or common share. Equity is generally generated through "sweat" equity. (i.e., individual type of equity; and members and investors are the providers of the equity capital)	Membership certificates or common share. Equity is generally generated common shares and preferred shares or nonvoting common shares or investor participation shares.
Investment and Risk	Generally low upfront investment; relatively low financial risk to members.	Low or high upfront investment; mixed financial risk.	Low or high upfront investment; mixed financial risk.	Low or high upfront investment; mixed financial risk.	Generally high upfront investment; increased financial risk for members.	Low or high upfront investment; mixed financial risk.	High upfront investment; mixed financial risk.
Transferable Shares	No	No	No	No	Yes	Yes	Yes
Appreciable Shares	No	No	Yes	Yes	Yes	Yes	Yes
Share redemption	On leaving the co-operative	On leaving or to adjust members' patronage and investment ratios	Various	Various	Not applicable	Not Applicable	Various
Recipients of returns	Members based on patronage	Members based on patronage	Members based on patronage and investment	Members based on patronage and investment	Members based on patronage	Members based on patronage	Members based on investment

The framework puts into greater limelight two types of co-operatives under this cluster – the New Generation Co-operatives (NGCs) and Multi-Stakeholders or Solidarity Co-operatives (MSCs). The two typologies are at the centre of the scholars and practitioners work in deepening (growing, consolidating, renewing) the co-operative identity, in the face of complexities (ICA, 2015).

New Generation Co-operatives

The New Generation Co-operative (NGC) is a type of co-operative that emerged in the USA during the 1990s (Mazzarol, 2009). NGC was founded on the proposition that; the internal organization of a co-operative is an important determinant of collective action performance. Therefore, improving a co-operative organization's efficiency by eliminating or ameliorating property rights constraints might be the first step in designing more efficient, offensive, rent-seeking collective organization structures, and strategies. It is argued that resolution of hold-ups defined the success of traditionally structured agricultural co-operatives in the USA. The emergence of the new generation co-operative (NGC) model has offered the potential to redefine the co-operative theory and business model.

NGC is a co-operative business structure that reduces the efficiency-robbing effects of vaguely defined property rights would possess some of the following characteristics: (1) Transferable equity shares, (2) Appreciable equity shares, (3) Defined membership (4) Legally binding delivery contract or a uniform grower agreement, and (5) Minimum up-front equity investment requirement (Cook and Iliopoulos, 1999).

In this model the membership is not open; it is membership is closed and requires significantly higher levels of investment compared to traditional co-operatives. The membership is restricted to individuals who have bought trading rights with the co-operative. There is a strict proportional relationship exists between the member's investment and their patronage as specified in membership and marketing contracts. These co-operatives require their members to purchase delivery rights and thereby create a two-way obligation between the member and the co-operative for a specific amount of patronage each year. However, delivery rights are marketable, and prices fluctuate according to the performance of the co-operative and its earnings potential (Hardesty and Suter, 2005). In NGC, all shares are fully tradable and can realize capital gains over time. Voting is equally distributed but also can be based on equity control. Members make the key decisions but there can be some limited involvement by minority external shareholders. Profits are distributed as patronage refunds but work like conventional shares with returns based on level of investment. Member contract rights and shares are fully tradable and individual in ownership. Such co-operatives have fully professional management teams.

The unique ownership patterns in the NGC not only contribute to an understanding of the importance of clearly defined property rights in designing efficient organizational structures but also inform debates on agency problems, transfer of knowledge difficulties, and market monitoring benefits – the main activity is to process and market members' raw products. Level of product commitment - Each purchased delivery share commits a member to a specific quantity each year. The capital requirement is typically involving a significant start-up cost and requires regular reinvestment to upgrade equipment and expand marketing. In terms of capital structure, it has a limited number of preferred shares sold to qualifying farmers at a price that reflects overall capital needs. Return on equity – it trades shares to other or new members. Share value reflects the co-operative's performance. (Plunkett and Kingswell, 2001). However, the emergence of the NGC may be a recognition that co-operative firms are more than a new means to deal with the hold-up problem faced by members in an increasingly complex and dynamic global economic environment.

Multistakeholder Co-operatives

Generally, the co-operative movement chose the single stakeholder category of co-operative (producers, consumers/users, workers) to focus mainly, but not always, on one area of activity (e.g., finance, agriculture, housing). Within this structure, the co-operative focuses on the satisfaction of member needs in terms of price, quality, access, or other, instead of maximizing the return on investment. The democratic structure of the co-operative – general assembly, board of directors, active member participation – must keep the notion of member satisfaction as a mantra. (Girard, 2015). Today, co-operative movements are opting for muti stakeholder co-operatives.

The multi-stakeholder co-operative is used to describe a co-operative with multiple types of members (key stakeholders) engaged with the co-operative in different capacities. Any combination of types of stakeholders could be members and may include such constituents as producers, consumers, suppliers, workers, volunteers, among others. These co-operatives are also called solidarity co-operatives (ICA, 2015).

MSC have their roots in the Italian experience with social co-operatives (See Birchall, (2013), on classification by scope on the genus of the consumer-owned co-operatives class) in the 1960s and 1970s. When there was a growing expectation for civil society's participation in organizing services, coupled with the inability of the welfare state to meet the needs of people (e.g., with handicaps or addictions, the homeless, or minors with difficulties reintegrating into the job market), social co-operatives were developed (see Girard, 2015). The social co-operative then introduces a different definition for the co-operative stakeholder and could have user members, worker members, volunteer members, financing members, legal entities, and public or legal persons involved in the development and funding of the social co-operative. It is observed in ICA publication (2015), that most of the more than 10,000 social co-operatives in Italy use the multi-stakeholder model.

Several countries have since followed the Italian example in promoting MSCs and enacting relevant laws to support them. They include Portugal, France, Greece, Croatia, Canada (in the provinces of Quebec and Manitoba), Mexico, Venezuela, Vietnam, Uruguay (Novkovic and Golja, 2015). Notably, across these countries, MSC has illustrated considerable complexities in the equally complex environment: (1) in some countries we could have multiple categories of members while board members may be limited to a single category; (2) in other countries, the number of board members by member category is specified (all member categories are present on the board, at least with one member representative); (3) in some cases Canada (in Quebec province), the MSC legal framework determines the possible member categories without any flexibility for additional categories, for instance, limiting membership categories to users, workers and supporting members; and (4) in others still, MSCs function informally or, in many countries, under the general legislation that applies to all co-operatives and does not preclude multiple member types. In such cases, MSCs should define their member categories or voting rights for each class of members.

Furthermore, in some countries like Italy, MSCs may also be restricted to a particular functional area. They can be involved in social, health, and education services or work reintegration of disadvantaged persons or can be a combination of both. In some other cases, MSC can function in a great variety of activities, including multipurpose or multi-functionality, combining, for instance, agriculture and financial services, a general store, and health. In the Italian example, there are often contractual relationships between the co-operative and a para-public or public agency, as well as the option of government membership in the co-operative (ICA, 2015). Therefore, it is important to uphold the Co-operative Principle 4 on autonomy and independence of an MSC.

MSCs are advantageous and gaining traction in many countries, in the face of emerging and complex societal claims. At the intersection of social and economic issues, a complex multi-stakeholder co-operative form can create fruitful partnerships in civil society. Different members of societies users, workers, volunteers, financial partners, or supporting members are jointly forming solidarity co-operatives. This is with the mission to benefit from networking, shared knowledge, or funding.

However, the MSC that is a project of an isolated group of persons without a connection to other resources, such as governance training, cannot be sustainable. This is compounded by the fact of the inherent challenges, nuances, and complexities MSCs have (1) defining the power, roles, responsibilities, and respect of the area of activity; (2) transparency and communication amid conflicting interests; (3) preparation and leadership of board members; and (4) governance and management skills. The antidote to these challenges and possible simmering tensions is a clear common purpose and solidarity among stakeholder groups. Furthermore, the co-operative should have a properly integrated digital system that can support member-self services and board and management's decision-making processes.

In conclusion, MSCs are relatively new in the co-operative legal landscape, but they are facing a bright future in dealing with important societal challenges, including social exclusion, the capacity to merge various resources for a superior interest, etc. There are various ways to conceive an MSC in terms of numbers of member categories, voting rights, and other characteristics, but what they have in common is the presence of at least two types of members. MSCs and other co-operative models must strive to retain their original commitment to members and be economically viable and sustainable by effective governance and management structures.

The co-operative classification by structure of membership, governance, and management

Concerning both the cluster of the scope of purpose and membership and the clusters of the system of ownership-rights, control, and investment; this section identifies another co-operative classifications' cluster by the structure of membership, governance, and management. This cluster of classification is attributable to several co-operative theories such as theories of social history, sociology, political science, and voice (see Birchall, 2011, p.32-33). In this regard, co-operatives are named and described by structure of membership, governance, and management.

Membership structure:

From the cluster of the scope of purpose and membership, co-operatives can be classified under three structures of membership –centralized, mixed, and federated.

Centralized co-operative: This is a co-operative in which the individual members (women, youth, farmers, etc.) make up the membership. A centralized region may serve members in a large geographical area and have one central office, one board of directors, and a manager (chief executive officer) who supervises the entire operation. The co-operative business may be conducted through several branch offices.

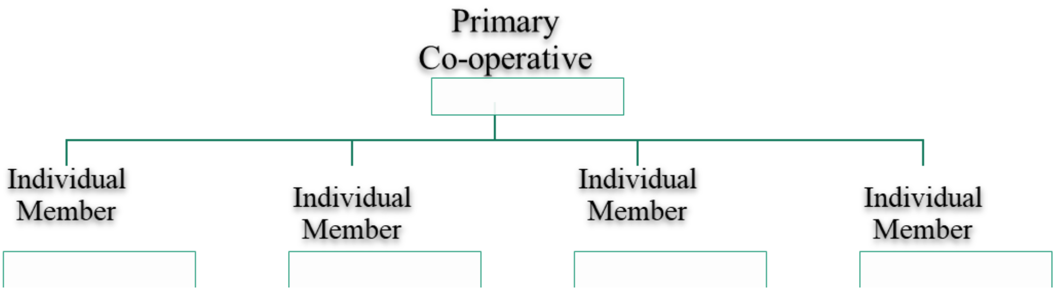

Figure 5: Centralized Co-operative

Control and product volume flow from producers directly to the co-operative. Patronage refunds flow from the co-operative back to the producer. These co-operatives usually serve a local area or community. Key functions are of these types of co-operatives are often limited to the first few steps in marketing, such as collecting and grading. A few centralized co-operatives are larger, operate in several areas, and provide more complex functions, such as food manufacturing. Most primary co-operatives are centralized.

Mixed Co-operative: This is a combination of the two — their members may be individual producers or consumers as well as local co-operatives and other legal persons such as small and medium enterprises (SMEs).

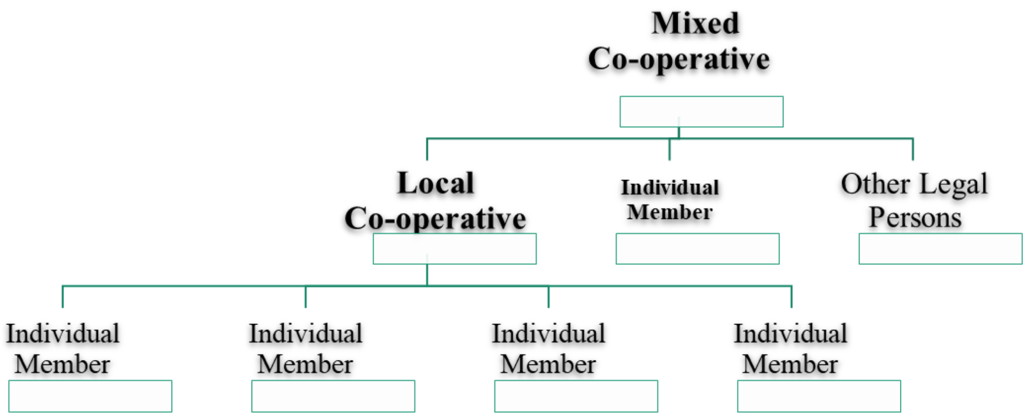

Figure 6: Mixed Co-operative

They can also be referred to as a co-maker co-operative that is characterized by joint ownership between the co-operative, the members individually, and often also external investors (see Nilsson, 2001, p.350). These are usually large co-operative organizations structured to fit unique situations in their specific industry. The MSCs or solidarity co-operatives by their description fit in this co-operative organizational system.

Federated Co-operative: This means a corporation of co-operatives. The members of a federated co-operative are local co-operatives, each operated by a manager responsible to a board of directors. The local co-operative work together with each other in a federated co-operative as a separate business entity. Each local co-operative owns a membership share entitling it to voting rights in the affairs of that federated co-operative. The federated co-operative has its own hired management and staff, and a board of directors elected by and representing the local associations. The power rests with the local co-operatives that make up the federation.

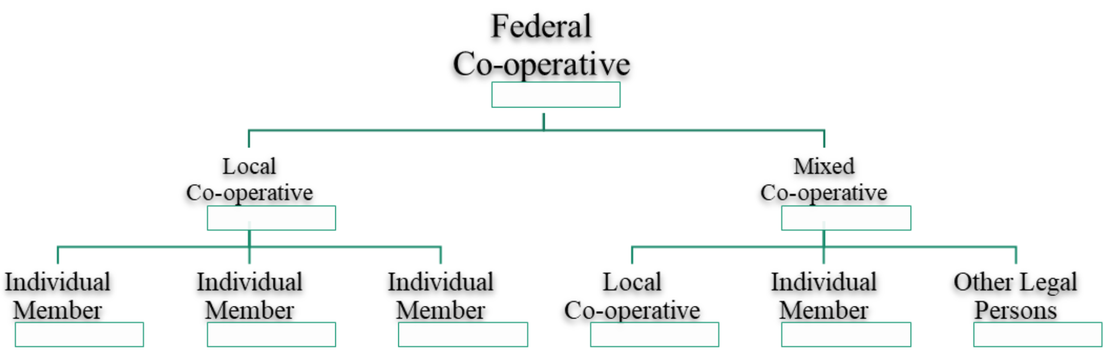

Figure 7: Federated Co-operative

Generally, federated co-operatives are often quite large and cover wide geographic areas and may perform one or more of the following functions: acting as a sales agent, marketing products, purchasing supplies, providing products/services in a wholesale arrangement, and/or providing other types of support services to their members (e.g., accounting, advocacy, or consulting). In some cases, co-operatives provide more complex manufacturing functions. Ultimately, the federated co-operative contributes to improving the circumstances of every local centralized or mixed co-operative member through collaborative action.

A federation, then, is the epitome of the 6th principle, co-operation among co-operatives. However, when the members of a federation become overly concerned with exercising their independence from the federation – as opposed to being independent of outside influences that could weaken the democratic nature of the co-operative enterprise – various tensions can result. A misunderstanding of the 4th principle, autonomy, and independence may be the culprit. To address such tensions, co-operators need to gain a better understanding of the true meaning of these Co-operative Principles and recommit to them (ICA, 2015).

Federations have both benefits and risks. According to Fairbairn (2012), federated co-operatives are beneficial in terms of (1) economies of scale; (2) centralization benefits without losing advantages of distinct, local identities for the federation members; and (3) minimized risk of failure to the federated enterprise when one or more local members fail. The federal idea becomes a fundamental feature of the co-operative movement; as it combines both commercial efficiency and local autonomy. This idea and the 6th Co-operative Principle evolve and are realized as the co-operative movement grows. (See Fairbairn, 2012, p.14).

However, large federations present unique governance tensions and challenges. While there is no magic solution or "one size fits all" approach to resolving these tensions, there are touchstones that can provide guidance, specifically, the seven co-operative principles, a well-informed board attuned to the needs of the local consumer, and belief in and continued commitment to the importance of the local member. Boards must continually ask themselves if board structure, composition, expertise, and engagement are adequate to meet the challenges faced by the federation. Furthermore, apex co-operative boards should take the lead in cooperating with co-operators worldwide to acknowledge, discuss and navigate today's emerging issues. Co-operatives should be established to succeed sustainably.

Governance and Management Structure

Based on the co-operative definition, a co-operative is not only an association of persons (natural or legal) but also an enterprise. The association is where democratic decision-making takes place, while the enterprise conducts the business activities in support of the members. Shifting from the cluster of the system of ownership – rights, investment, and benefit allocation, co-operatives can be classified in terms of governance and management structure. The term governance has its root from the Latin verb *'Goubernare'* which derives from the Greek *'Kybernan'*, meaning "to lead, to steer, to be the head of, to set rules, to be in charge of the power". Governance is linked to vision, power dynamics, decision-making processes, and accountability practices. Governance simply describes a co-operative's structure of decision-making, direction, and control (see Bijman, et., al., 2014).

Co-operatives are member-owned and democratically controlled organizations. Additionally, they are value-based businesses whose governance and management principles and practices need to reflect and safeguard their values. The ultimate goal of co-operative governance is to effectively fulfil a co-operative's goals in a way consistent with the co-operative's purpose and objectives, protect member interests and maintain member control (ICA, 2015).

Co-operatives' governance is very diverse as it reflects an evolutionary path determined by a co-operative movement dating back hundreds of years, combined with different legal environments, industry standards in sectors in which co-operatives operate, the size and type of membership, life cycle, and maturity. The success of a co-operative depends on the degree of participation, trust, and commitment of its members in governance (Barraud-Didiera, et., al., 2012). In terms of co-operative governance effectiveness, small co-operatives seem to be doing better than large (O¨ Sternberg and Nilsson, 2009); worker and producer co-operatives better than the consumer-owned (Birchall, 2017).

The governance practice, particularly in large co-operatives, is often marked by the "state of the art" in hierarchical corporate governance. The corporate governance models protect owners' interests (focused on financial return) and are typically designed as a top-down control mechanism. Co-operatives are pressured to adopt hierarchical command and control systems that ensure adherence to corporate governance "best practices". The co-operatives should tap into tools and structures fitting democratic, member-owned, and controlled organizations.

Scholars have recognized the essence of governance structure for the co-operative's strategic fit and therefore endeavoured to classify co-operatives in terms of their corporate governance models. These include the traditional model of co-operative governance, extended tradition or management model of co-operative governance, and corporation model of co-operative governance (Bijman, et. al., 2013; Chaddad and Iliopoulos, 2013; Bijman, et., al., 2014; Milagres, 2014).

Traditional Governance Model

The ***traditional model*** includes two mandatory organs, i.e., the general assembly (GA) and the board of directors (BoD). In some cases, a supervisory committee (SC) is included as a vital organ. The members of the BoD are elected by the GA to perform decision management. The board members then allocate among themselves duties and responsibilities (for instance, the member who received the most votes, is elected as the chairman). In general, the GA exercises "*ex-post*" decision control – this is based on an equal or proportional allocation of residual control rights. On the other hand, the BoD exercises "*ex-ante*" decision control and decision management, except on certain types of decisions requiring GA approval[5]. According to Matabi (2018a), if there are human resource management issues, the co-operatives' competitiveness will be compromised, hence low success.

In some countries, like the Netherlands, there is what is referred to as the ***extended-traditional model.*** In this model, the BoD maintains the *ex-ante* decision control function, but decision management is carried out by a professional manager[6], i.e., the operational decisions are delegated to professional management hired by the BoD. Furthermore, the GA can appoint members of an SC. The SC's "*ex-post*" decision control function focuses on ensuring that the interests of all stakeholders are taken into consideration by the BoD (Bijman, et. al., 2013). Figure 8 illustrates this.

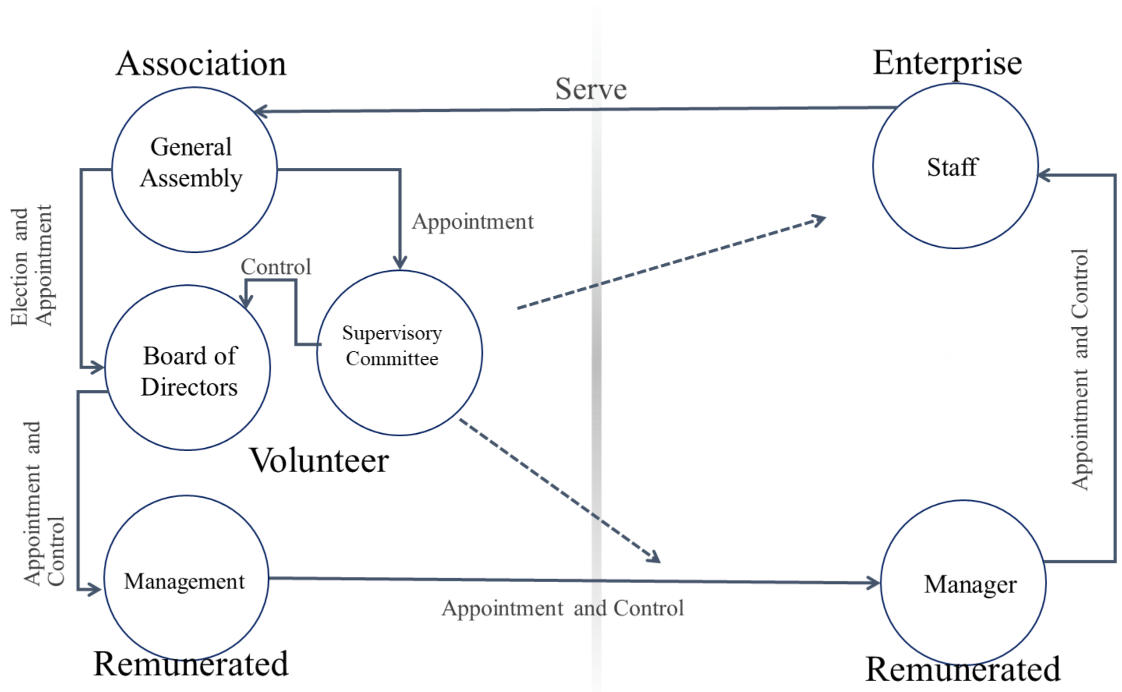

Figure 8: Traditional/Extended Traditional Model of Co-operative Governance Model
Source: Adapted from Bijman, J., Hendrikse, G. and A. van Oijen, (2013); Iliopoulos, (2015).

Managerial Governance Model

In the ***management model***, the BoD and professional management are consolidated, thus eliminating one level of governance. The BoD is the policy organ of the co-operative, which is responsible for decision management functions performed exclusively by professional staff who are not necessarily member-patrons. Consequently, the management model entrusts both formal and real authority to professional management. While formal control is still vested in the GA, it is professional managers that make all operational and strategic decisions; which, according to Matabi 2018b), is likely to enhance the organizational performance. The supervisory (or the BoC in larger co-operatives) exercises *ex-post* control over decisions made by the BoD. However, in the management model, the SC/BoC has less authority over the BoD in contrast to the traditional model. This is illustrated in Figure 9.

[5] All around the world, co-operative governance structures consist of a General Assembly and a Board of Directors, and most co-operatives also have some kind of Supervisory Committee (Henrij, 2005).
[6] This process of replacing board management by professional management as the co-operative grows does not take place in countries where the board has the statutory obligation to manage the co-operative.

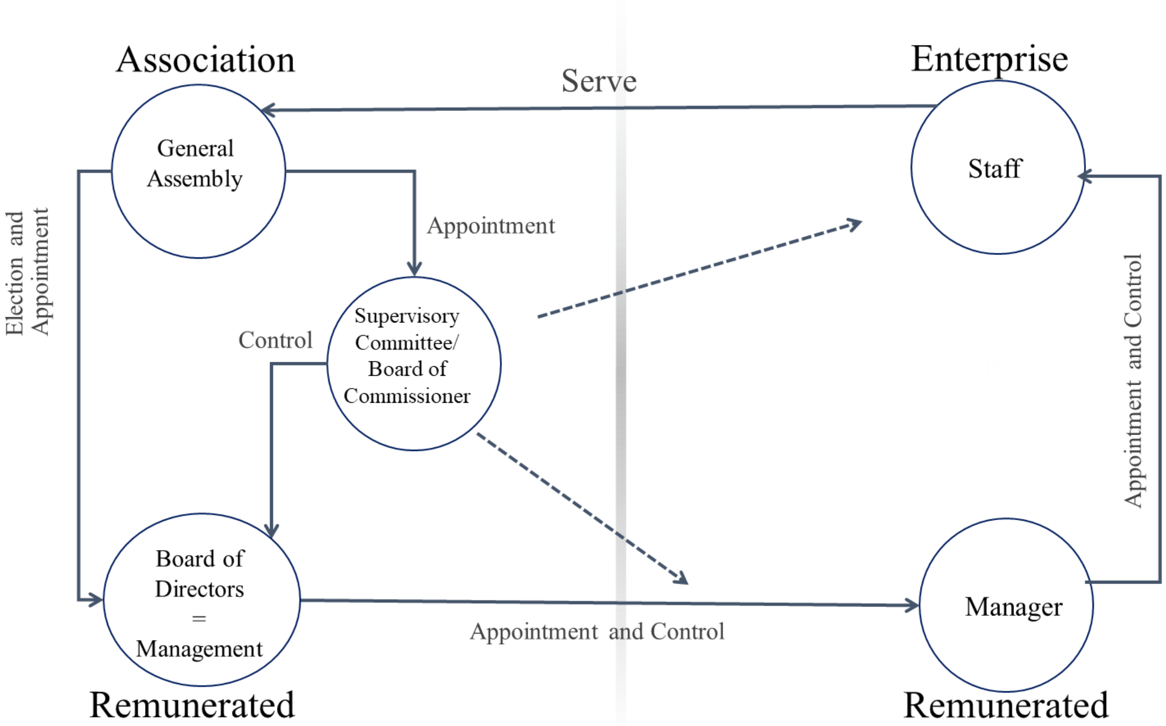

Figure 9: Management Model of Co-operative Corporate Governance
Source: Adapted from Bijman, J., Hendrikse, G. and A. van Oijen, (2013); Iliopoulos, (2015).

In this model, the BoD has been professionalized, and the supervisory committee supervises association and enterprise simultaneously. Therefore, there is no longer a distinction between decision-making on and executing of the strategies and policies of the co-operative.

Corporation Governance Model
In the ***corporation model***, the BoD, and the SC or BoC are consolidated. Both members and non-members (usually the experts) participate in this extended BoD, but bylaws may stipulate that two-thirds of BoD members are also member-patrons of the co-operative. This model tends to be more visible in large co-operatives, and increasingly investor-owned co-operatives. The BoD of the co-operative association becomes the supervisory committee of the co-operative enterprise. The legal separation between association and enterprise has been established, turning the co-operative association into a 100% shareholder of the co-operative enterprise.
This model provides the management with relatively the most autonomy to make appropriate, strategic, and tactic responses to competitive pressures, without undue member influence on operational decisions, to find new sources of equity capital, and to professionalize the supervisory bodies. Professional managers exert both formal and real authority. In this model, most of the decisions are delegated to managers, as the BoD is merely responsible for "*ex-post"* decision control. This is illustrated in Figure 10.

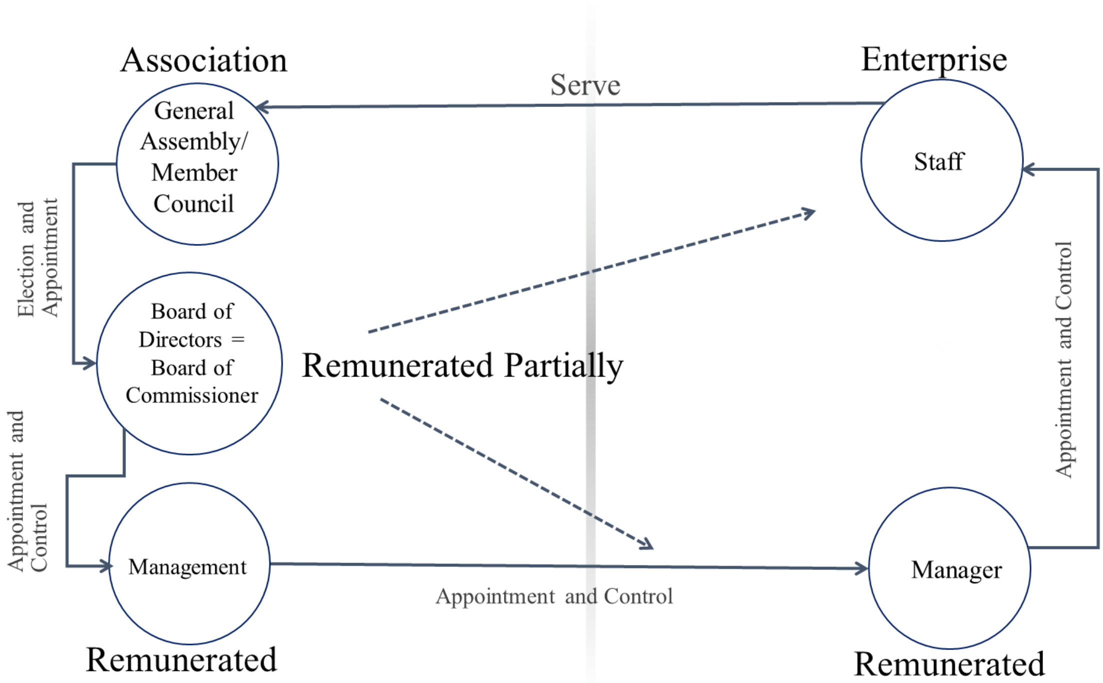

Figure 10: Corporation Model of Co-operative Governance
Source: Adapted from Bijman, J., Hendrikse, G. and A. van Oijen, (2013); Iliopoulos, (2015).

However, it is equally associated with numerous governance failures and leadership non-authenticities (see Matabi, 2017b). These are attributable to the "monocentric" governance construct, in contrast to "polycentric" self-governance mechanisms which more effectively govern common goods.[7] It is also argued that hierarchical command and control systems fail because of "the tendency of centralized power to corrupt; the difficulty in managing complexity; and the suppression of checks and balances." (Turnbull, 2002). Such a governance model of single-board structures is considered inadequate in co-operative due to power concentration; inability to facilitate access to information and deal with complexity. The co-operative structural complexities need to be broken down into manageable units. This is to simplify the responsibilities and duties of directors, executives, and employees. This is because, the unitary board structure could be unable to access full information due to uncertainty, linked to human fallibility that emanates from information overload, bounded rationality, skewed judgment with oligarchical tendencies, and/or expertise limitations.

In the study conducted in the Netherlands, co-operatives with a traditional board model seem least diversified, whereas co-operatives with a management board model seem most diversified. Moreover, co-operatives with a traditional model outperform all other types of models regarding financial returns. Compared with co-operatives that have a management model, co-operatives with a corporation model only have a marginally lower average return on total assets and a fairly higher return on equity (see Bijman, et. al., 2013, p. 213-2014).

Network Governance Model

In the above regard, ICA (2015) proposes a design of a ***network governance model*** **-** based on the three inherent properties (humanism, democracy, and joint ownership and control) of co-operatives. Co-operatives need to break down their complex structures into manageable units and split decision-making into a network of independent control centres – i.e., polycentric or network governance such as functional sub-committees. This is because, the complexities the co-operatives are operating in, requires access to multiple sources of information that can come from and be dealt with best by a more diverse network of key stakeholders such as employees, suppliers, and consumers.

The co-operative networked governance model fits perfectly for those interested more in the MSCs, which are times considered complex due to conflicting interests of different classes of stakeholders. The model has four elements: (1) the small independent basic units that can function alone, but also form a part of the larger network, such as federations, industry networks, or solidarity networks; (2) the decisions are made at the level

[7] Vincent and Elinor Ostrom call these 'monocentric' governance constructs, in contrast to 'polycentric' self-governance mechanisms which more effectively govern common goods. B. Allen (2014). A role for co-operatives in governance of the commons, in Novkovic S. and T. Webb Co-operatives in a post growth era. Zed books:242-263.

closest to the basic unit (i.e., the subsidiarity principle); (3) the connected structure of multiple centres of control (based on polycentricity); and (4) the participation and engagement of multiple stakeholders with control over their area of expertise (e.g., workers councils).

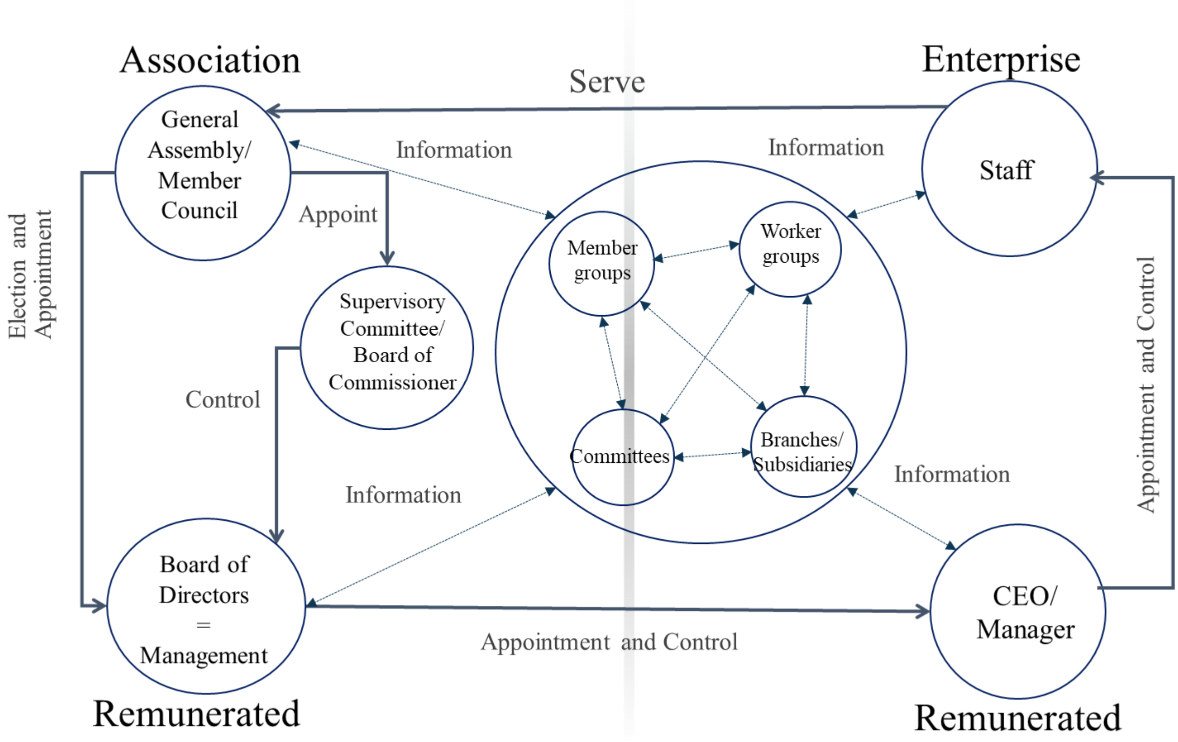

Figure 11: Sample Network Model of Co-operative Governance

Source: Author

The *small independent units* ensure autonomous decision-making and the ability to adjust to changing circumstances on the ground. This may be for a production or a system improvement, or just a simple observation that the working environment is changing. Small units also enable direct democracy.

The subsidiarity principle assumes decision-making at the lowest possible level in the co-operative. In case the basic units have the means and capacity to act on their own, the next tier in the network need not be involved. The subsequent tiers in the organization provide complementary services to basic units, rather than a substitute for their decisions and responsibilities.

Multiple control centres (polycentricity) or power bases (See Matabi, 2017c) in co-operatives need to protect joint assets, secure democratic voice and enhance stewardship/humanism within all layers of the co-operative. These centres (such as the committees) include independent mechanisms for conflict resolution; coordination of small caucus groups; general member assembly and education meetings; representation in joint co-operative taskforces; feedback loops through two-way links; and access to various types of expertise such as the co-operative management and co-operative strategy expertise; technical expertise; business operations; risk; and many more.

Multiple stakeholders are a valuable source of information given that effective decision-making in a co-operative requires access to several expert knowledge that may not be in one set of stakeholders. The co-operative's values, purpose, and nature are favourable to the engagement of multiple individuals as they endeavour to benefit both members and communities. However, the participation and engagement of some stake-holding could be developed without a membership status; through building a network on stewardship and solidarity, and continuous membership consultations. The multi-stakeholder co-operative enable the significant involvement of a broad range of stakeholders in the co-operative governance, as all key stakeholders (e.g., consumers, workers, suppliers) are co-operative's, potential members. The networked governance design is advantageous over a single member type co-operative governance in a heterogeneous composed co-operative. Nonetheless, the networked governance is not needful in homogeneously composed co-operatives.

In small co-operatives where trust is high and members are closely connected to other constituents, they may not need to. However, even in small co-operatives, employees ought to have decision-making powers on matters that impact their personal growth and the work environment; they are the frontline in co-operative's dealing with other stakeholders and the portent of co-operative strength.

These elements and properties are powerful forces, which can elevate co-operative member participation to a new level and deliver a "potent combination of empowerment, autonomy, and efficiency" Turnbull, 2002, p.22), and enhance followership for their subsequent satisfaction (Matabi, 2017d). This is because, in co-operatives, the individual member has a role to play that goes beyond the basic economic relationship of consumer, worker, or producer. Jointly, members own their co-operative, and through democratic arrangements, they participate in its governance; and individually, they have a right to a voice, information, and representation.

Discussion

The membership and governance structures equally have some interconnections (illustrated in Figure 12). The centralized co-operatives could adopt traditional (or extended tradition) and management governance models. The mixed co-operatives could adopt largely the management and corporation governance models and to some extent the network governance model. The federated co-operatives could adopt largely the network governance model.

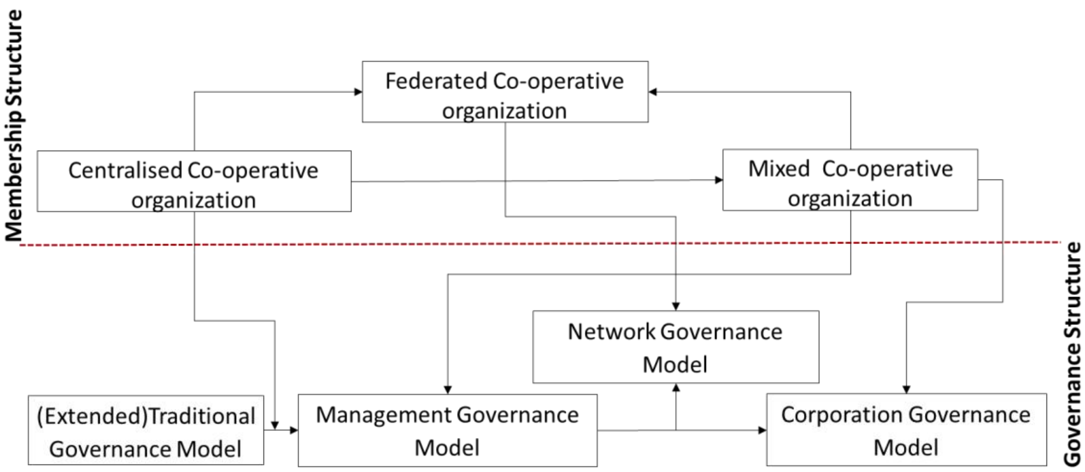

Figure 12: the possible interconnection of the membership and governance structures
Source: A construct of the author

Moreover, to achieve governance best principles and practices, co-operatives should also evolve, not only in terms of ownership rights modelling but also in decision/control rights modelling – i.e., in terms of governance models. This evolution should show trade-offs between the co-operative governance models and ownership models. According to the study by Professor Constantine Iliopoulos (2015), three parameters can be used by co-operative members to establish the governance model fit for their ownership-model adopted, among the first four governance models of traditional, extended tradition, management and corporation. These parameters are (1) Member-Patron's Investor mentality, (2) Co-operative Capital Needs, and (3) Organizational Complexity. This paper has added to this "trade-offs" matrix, the network governance model, as illustrated in Figure 13.

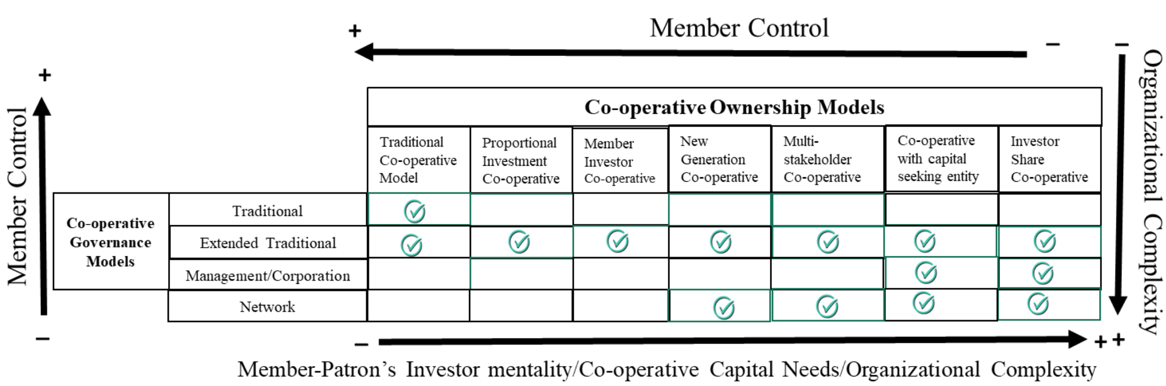

Figure 13: Trade-offs in choosing an ownership-rights system and governance structure (and/or features) in co-operatives
Source: Adapted from Iliopoulos, (2015).

The matrix infers **14 combinations** of governance-ownership models both theoretically feasible and some observed in various countries (See Table 13):

Table 9: Feasible constructs of for the co-operatives by systems of ownership-rights/Investment, and the governance structure

S/No.	Co-operatives by a governance structure	Co-operatives by ownership-rights and investment system
1.	Traditional Governance Structure	Traditional Co-operative
2.	Extended Traditional Governance Structure	Traditional Co-operative
3.	Extended Traditional Governance Structure	Proportional Investment Co-operative
4.	Extended Traditional Governance Structure	Member Investor Co-operative
5.	Extended Traditional Governance Structure	New Generation Co-operative
6.	Extended Traditional Governance Structure	Multistakeholder Co-operative
7.	Extended Traditional Governance Structure	Co-operative With Capital-Seeking Entities
8.	Extended Traditional Governance Structure	Investor Share Co-operative
9.	Managerial/Corporate Governance Structure	Co-operative With Capital-Seeking Entities
10.	Managerial/Corporate Governance Structure	Investor Share Co-operative
11.	Network Governance Structure	New Generation Co-operative
12.	Network Governance Structure	Multistakeholder Co-operative
13.	Network Governance Structure	Co-operative With Capital-Seeking Entities
14.	Network Governance Structure	Investor Share Co-operative

From the matrix, the more the members incorporate investor preferences into their co-operative functions, the more they will be willing to lose varying degrees of member-control over their co-operatively owned business – from the traditional member-owned model to the investor-share model. Secondly, the more the increasing co-operative's need for risk capital to invest in projects that will safeguard the co-operative from external competitive pressures, the more it will need to adopt degenerate to investor-owned orientation to enable it to offensively seek higher margins in other levels of vertical supply chains. Thirdly, as the organizational complexity[8] of co-operatives increases (and co-operative degeneration is accelerated), from traditional to the investor share co-operatives, the co-operative (1) distributes more and more clearly defined residual claimant rights to member-patrons; (2) adopt the separate product, capital and decision-making pools; and (3) distribute residual income rights in more equitable ways. In such a case, which is also characterized by reducing member control; the co-operatives may be obliged to amend the bylaws, for instance, to allow proportional voting (which is a departure from ICA's democratic principle of "one member, one vote") (Iliopoulos and Cook, 1999). Otherwise, if the "oppressed" members cannot exercise convincingly their voice option (see O¨ Sternberg and Nilsson, 2009), they usually will leave the co-operative and may start a new collective entrepreneurship venture.

In such cases, therefore, there is a greater need for improved decision-making efficiency. Hence, the co-operative moves from the traditional to the extended traditional and the managerial and corporation governance models, and then to the network governance model. With this trajectory of adopting more and more of the non-traditional governance features, it is hypothesized that *costs of collective decision-making* are supposedly becoming lower and lower – implying that the loss of member control may not pose a serious threat to co-operatives. Nonetheless, this achievement may come at the expense of *higher management monitoring costs* – but in any case, members are always in a weak position to monitor management effectively (See Bontems and Fulton, 2009).

In essence, several issues are observed by Iliopoulos (2015), among others are: (1) co-operative in the strictest sense of ICA definition, is not a co-operative (2) collective decision-making rights are gradually being determined by member investment and patronage responsibility (3) the more members start having the investor mentality the more they accept non-member investment (4) provision of intra-co-operative incentives is bounded not only to attract the member investments but also target subgroups of stakeholders that can be tied contractually to the co-operative (5) efficient co-operative organizational design and trade-offs is beneficial but remain complex.

Therefore, a humanist approach to co-operative governance and management should be adopted in recognition that the co-operative members (i.e., the key stakeholders) are motivated by solidarity, and their shared objective is realized through a co-operative. Whichever governance model is adopted, members' interests should be aligned to work towards co-operative viability and adherence to co-operative values. This is because without these key stakeholders (members) the co-operative would cease to exist, and democratic member engagement in all facets of governance is crucially important to the health of the co-operative. The engagement of multiple (key) stakeholders or constituents is an important aspect of the humanistic and polycentric governance frameworks in co-operatives. The proposal is that members and other stakeholders should contribute

[8] Organizational complexity refers to the condition of having many diverse and autonomous but interrelated and interdependent components or parts linked through dense interconnections. In the framework of an organization,
complexity is associated with interrelationships of the individuals, their effect on the organization and the organization's interrelationships with its external environment (Keskinen, A., Aaltonen, M., and Mitleton-Kelly, E., 2003).

to the co-operative's governance and management processes. For instance, employees (whether they are members or not, in MSC or SSC), occupy a special place as insiders with a clear interest in co-operative's long-term viability, as well as in its organizational culture and implementation of co-operative values and principles.

The change in the decision-making structure is likely to result in strategic reorientation towards more member and customer focus, diversification, and innovation. This leads to the next discussion on the "co-operative cluster of classification by strategy on member participation and marketing".

The co-operative classification by strategy for member participation and marketing

Once the co-operatives system of ownership rights and investment, and the co-operative structure of membership, governance, and management is identified; co-operatives ought to establish a strategy of their member traction and market positioning. This will help them to continue being relevant in delivering the objective and self-renewing for sustainability.

This cluster of classification is attributable to several co-operative theories such as theories of economic history, economics[9], co-operative design and evolution, and ownership (see Birchall, 2011, p.32-33). Specifically, co-operative classifications are in terms of member participation strategies; and marketing strategies, as follows:

Co-operatives by strategy for member participation

One above accounts, co-operative scholars have therefore the advanced classification of co-operatives from structure to strategies. They argue that increased membership, member commitment, and trust (see O¨ Sternberg and Nilsson, 2009) are key in addressing market failures. This is because, in principle, members have two roles in a co-operative business, as patrons and as investors. They can attach varying weight to these two roles.

The improvement of market failures is sought in the patron role, i.e., buying from the co-operative, selling to it, working in it, borrowing from it, etc. Since a co-operative business is a form of vertical integration, the members' patron role outweighs the investor role. Members invest in the co-operative to conduct trade with it. Consequently, co-operatives have traditionally been organized in such a way as to enhance the patron role and to suppress that of the investor, and in most cases investor role is not always in the members' minds. The more the investor role is suppressed, the greater is the probability of serious monitoring problems (Nilsson, 2001). The investor role is found mainly in the co-operatives that have tradable residual rights – i.e., entrepreneurial co-operatives. The patron role is more important when the members regard the co-operative as able to fix market failures, or when there is adequate trust and cohesion for the members to control the business.

If the two roles are combined (though not sharply defining dichotomies), the following four extreme types of co-operative emerge based on member participation strategy according to Professor Jerker Nilsson (Nilsson, 2001): Type I (Traditional co-operatives), Type II (Entrepreneurial co-operatives), Type III (Degenerated co-operatives); and Type IV (Ex-co-operatives (non-co-operatives). See Table 10 for a description of each of these taxonomies.

Table 10: Description of the co-operative taxonomies by the strategy of member participation

Co-operative Taxonomy	Description
Type I co-operatives i.e., Traditional co-operatives:	These are the type of co-operatives where members perceive their patronage relations as very rewarding, thus seeing their patron role overshadowing the investor role. Investment does not matter much since, the co-operative business can be financed collectively without any problem, as the association is controlled effectively from their patron position. In these co-operative business operations are fairly homogeneous, social conditions are useful to the members who may have similar characteristics, and the members are involved in the operations. This context shows that there are no problems in high importance of high member participation as patrons, in consideration of ownership, and residual rights. This taxonomy is poised to be found more when the co-operative business operations are closely related to the members' operations. Moreover, these co-operatives are large, easily standardized, routinized, and automated, deal only with the very first stage of the value chain, and the size of the investment is fairly small, especially in agriculture producers. However, as the scale of operation rises, the investment per unit as well and per member will decline together with average processing cost; hence the members are stimulated to grow and consolidate co-operative volumes by expanding their operations and by inviting new members. The co-operative then can transit to entrepreneurial co-operatives as illustrated in Table 11. The advantages of the traditional co-operatives are that: (1) the need for equity within the co-operative is reduced, so that the existence of unallocated capital and collective decisions about the allocated capital would

[9] The most common economic theoretical tool for vertical integration is the "transaction cost theory", which was relevant to traditional co-operatives; then "neo-classical economic theory" combined with "game theory" is more instrumental and states that when the average cost curve of the processing activities is constantly declining and the price is independent of the volume supplied, the firm (or rather its owners) has an incentive to increase the volume as much as possible. Then finally the "property rights theoretical perspective is appropriate; the best owners of a firm are those whose inputs to the firm's operations are the most uncertain ones (See Nilsson, 1999 p. 458-460).

Co-operative Taxonomy	Description
	create fewer problems; (2) the capital need could be reduced to the extent that allocated capital alone is sufficient (3) the members' market failure problems belong by necessity to the first stages of the value chain, so they would be solved. The value-added activities cannot pose any market failure problems for the members because they simply do not operate on those markets; (4) being suppliers and workers to the co-operative, the members are in regular contact with the first stages of the processing chain, and so are sufficiently knowledgeable to control this; (5) the members can be expected to be more motivated to control a co-operative that operates with member-related business operations only, i.e., member participation increases; (6) as the business operations of the co-operative become more simple, the managers have less freedom to act, and thus less chance to behave deceitfully; (7) the heterogeneity in the co-operative's operations is reduced, whereupon the interests of various member categories become more closely aligned; and (8) the business activities are characterized by substantial economies of scale. Typically, this type of co-operatives is characterized by equal treatment, large collective equity capital, low or non-existent remuneration to the members' capital, "one-member-one-vote", ideological propaganda, etc. Their impact is in increasing the volume of the co-operative's business operations. Economies of scale are attained, hence benefiting the members in terms of better prices.
Type II co-operatives i.e., Entrepreneurial co-operatives	These are co-operatives where the members are highly involved both in their patron role and their investor role. This then makes the co-operative more effective in correcting market failures and strengthening the members' market position. Here there is mutual consideration of both member patronage and investment roles. In these co-operatives, the residual claims are tradable as equity shares, and as a result, the members are willing to invest large amounts to get remuneration for their capital. The typology is equated to the types of co-operatives by the structure of ownership rights – multi-stakeholder co-operatives (MSCs), new generation co-operative (NGCs), Co-operative with capital seeking entities, and Investor share co-operative. In these co-operatives, operations extend far beyond the members' operations, as the need for capital increases due to increasing investments per unit. These co-operatives are also characterized by the increasing complexity of co-operative operations in terms of production and marketing; hence the continued need to precisely define the property rights for co-operative efficiency. Eventually, members are expected to adopt more and more of a business' view of the co-operative, and the social factors will be suppressed, thus the possibility of conversion to investor-owned firms (IOF). The advantages of the entrepreneurial co-operatives are that: (1) the members' profits from the value-added operations come in the shape of return on investments, not of better prices for their raw produce, i.e., the product market does not become distorted; (2) the members will be willing to invest larger amounts as the shares are individually owned and can be traded on a market; (3) to the extent that extended capital is needed in the firm, there are no problems about inviting external financiers; (4) when it comes to a choice between investment alternatives there is no reason to limit oneself to the processing of the members′ raw produce; and (5) higher profitability can be achieved by extending the operations beyond the activities that are close to the members, e.g. national or international operations, highly processed products, aggressive marketing strategy, etc.
Type III co-operatives i.e., Degenerated co-operatives	These are co-operatives that fall from the state of traditional and entrepreneurial co-operatives. Most of the degenerated co-operatives are from the traditional co-operatives. In essence, generated co-operatives can be a result of the following (1) co-operatives that expanded by making large investments in types of businesses that are removed from the members' operations or even unrelated to the members altogether; (2) co-operative using its capital base from the traditionally unallocated equity, and members losing control of the co-operative ever more complex and remote enterprise (3) co-operatives have increasing difficulty in monitoring the co-operatives enterprise, and members having little incentive to monitor; (4) co-operatives' growth resulting in increasingly heterogeneous and anonymous membership. Degenerated co-operatives are, therefore, co-operatives that are regarded as having insufficient capacity to correct market failures due to serious problems of lack of both member participation in patronage and investment role. The members in degenerated co-operatives fail to appreciate their investor role, there are monitoring problems and the market functions are weak. As a result, there is a risk of inefficiency and takeover or seizing of control by the management and/or the board. In such a case, if no restructuring action is taken for regeneration, the resources may become depleted, and thereafter the co-operative's existence will be in jeopardy.
Type IV: Ex-co-operatives (non-cooperatives)	***These*** are the type of organizations that is investor-owned firms (IOF) rather than a co-operative, but the owners of the enterprise may be former members of a co-operative, or the enterprise may be owned by a co-operative firm. Here, investor orientation is of high importance than patronage. The ex-co-operatives are mainly the result of degenerated co-operatives that have run into overwhelming difficulties and have failed to convert into traditional or entrepreneurial co-operatives.

From the four classifications, the most challenged are the degenerated co-operatives, where members' involvement in both patronage and investment roles is extremely low or weak. It is established that, in many industries and many countries, there may be a considerable number of co-operatives that do not improve the market positions of their members in a significant manner or treat members as investors.

There are several ways to renew and consolidate the degenerated co-operative businesses to traditional and entrepreneurial co-operatives, and/or convert to IOF. This may involve introducing measures to increase the membership's involvement in either their patron or their investor roles, or both: (1) From degenerated to traditional co-operative – there is a need to increase the member participation as patrons by liquidating excess assets and redirecting the co-operative's operations towards other badly functioning markets where the members are having difficulties, or to other market-correction measures, more or less redefining the mission that the co-operative has for its members; (2) From degenerated to entrepreneurial co-operative – transform to co-operative structure that clearly defined property rights in the form of transferable and appreciable equity shares, to attract members to make a large investment. The co-operative could convert to different "entrepreneurial" co-operative

forms (see Table 16, Figure 14), and not necessarily be the same e.g., NGC, MSC, or a co-maker co-operative that is characterized by joint ownership between the co-operative society itself, the members individually, and often also external investors; (3) From degenerated to ex-co-operative – simply convert to no longer be co-operative, by selling the co-operative to some investor(s), or members remain the owners of the converted firm.
To further explain these member-involvement strategy classifications, this paper blends in the Chaddad and Cook (2004) typology propositions.

Table 11: The connection between co-operatives by the strategy of member participation and co-operatives by the structure of ownership rights

S/No.	Co-operatives by Member participation Strategy (Nilsson, 2001)	Co-operatives by Structure of ownership rights (Chaddad and Cook, 2004)
1.	Type I: Traditional co-operatives	• Traditional co-operative • Proportional investment co-operative, • Member investor co-operative
2.	Type II: Entrepreneurial co-operatives	• New Generation co-operative, • Co-operative with capital seeking entities • Investor-share co-operative • Multi-stakeholder (as added to the typology by the author of this paper)
3.	Type III: Degenerated co-operatives	• Not Applicable (but implied by Birchall (2013) in the co-operative lifecycle – on "Decline" Co-operatives)
4.	Type IV: Ex-co-operatives (non-co-operatives	• Conversion to Investor Owner Firm (IOF)

Additionally, the paper incorporates Professor Johnston Birchall's propositions on the co-operative life cycle periods of growth, consolidation, decline, and renewal (Birchall, 2013). The classifications are as illustrated in Figure 14.

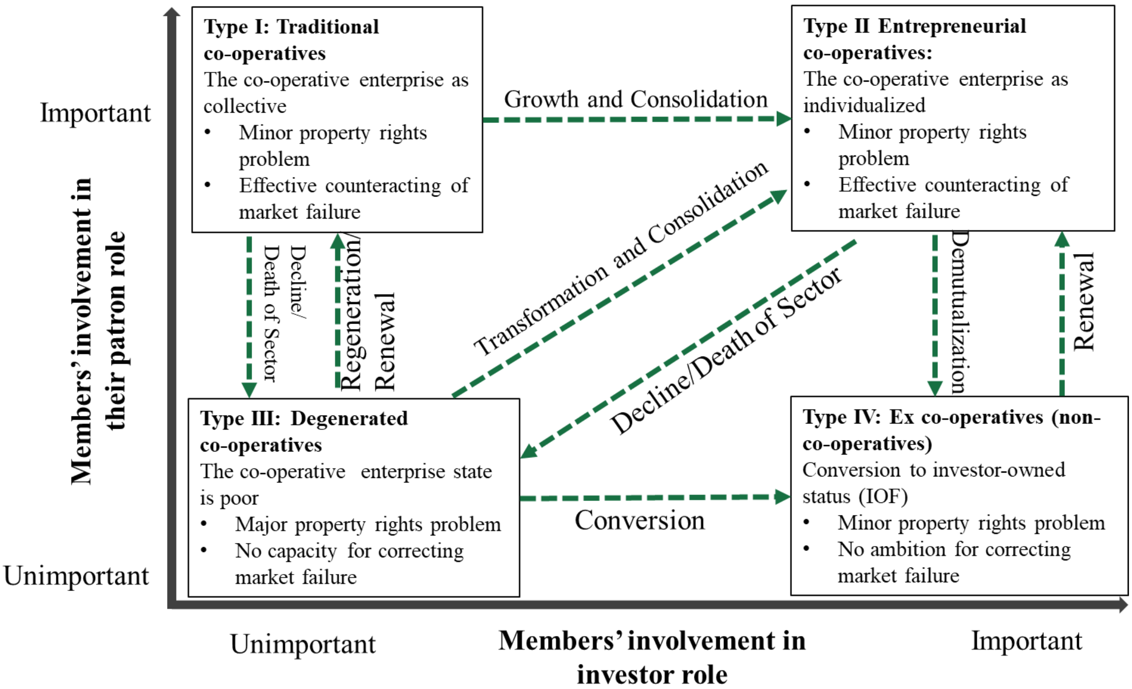

Figure 14: Co-operative classification by strategy of member participation
Source: Adapted from Nilsson, (2001); Chaddad and Cook (2004); Birchall, (2013).

Further to the strategy for member participation, by Nilsson (2001), two extreme taxonomies are suggested by Bekkum, (2001). These are "collectivist" co-operatives to "individualistic" co-operatives, with elements highlighted in Table 17 below.

Table 12: Comparison of key elements of the collectivist and individualistic co-operative structure

Model/ Element	Collectivist co-operatives	Individualistic co-operatives
Ownership and Investment/Shareholding		
The financial entry conditions	Free and costless entry.	Membership is closed or subjected to ownership of production rights.
The financial instruments	The collective reserves are without any individual rights, risks, obligations, or benefits. In the case of member loans, there are very small or no interests.	The general reserves are small/minor in terms of member loans. There are base capital plans.
Distribution of residual surpluses	The reserves which are proportionally high/major are supplemented with the price of products and services	In addition to reserves, which are of small proportion/minor; the dividend is paid on a production/service right basis.
Nature of the right to residual claims	The property rights are held by the membership as a collective, permanent, non-tradable	The property rights are held by individual members. Such rights are permanent but the attachment to transactions restricts the duration of individual ownership; voting; member share "tradability" and "appreciability".
Governance		
Voting rules	One member, one vote.	Proportional to production rights.
Decision-making rights and monitoring	The decision management and control are in the hands of the Board of Directors.	There is a separation of residual risk-bearing (by individual members) from decision management, with decision control, only delegated to the Board of Directors
Transactions		
Pricing policy	There is uniform pricing for all members, with some minimum criteria.	There is differentiated pricing in terms of volume and quality to reflect handling costs and market returns
Supply (or service) management	There are unrestricted deliveries or services. Intake or off-take obligation from producer and consumer members, respectively. No significant entry barriers for non-members.	The delivery volumes are dependent on marketing needs, through the obligatory purchase of production or service rights tradable among members. Some raw materials may be purchased, or (in case of worker/service co-operatives) labour services acquired from non-members as market opportunities call for

Source: Adapted from Bekkum, (2001).

Basically, from this analysis, co-operatives can be classified along the continuum of collectivism and/or individualism. Generally, based on the membership involvement strategy, the traditional co-operatives are collectivist-co-operatives, while the more entrepreneurial-co-operatives are individualistic-co-operatives.

Co-operatives by strategy for marketing

Building on Bekkum, (2001), transaction element to differentiate between the collectivist and individualistic co-operatives (See Table 16), scholars also advanced on these to classify co-operatives by the strategy for marketing. Based on Michael Porter's (1998) Competitive Advantage for Creating and Sustaining Superior Performance, co-operatives can be classified based on marketing strategy at a time, or environment. This is because, co-operatives are in business, and so they are in marketing; whether it is on input or output markets. These market conditions are changing. Competition is growing, trade policies are being liberalized, markets are being opened, the retail chains' power is increasing, as consumer markets become more and more diverse, etc. The intensified competition means an economic squeeze in terms of prices, profits, and costs, which makes the co-operatives have an increasing difficulty paying good prices for the members' products, services, or labor. The co-operatives have to react to this, and there are three ways for them, like other enterprises, to have a competitive advantage. They ought to employ, either: (1) an overall cost-leadership strategy, which is historically been the natural strategy for traditionally organized co-operatives thus mainly applied by members in traditional co-operatives; (2) a differentiation strategy, which seeks to offer what market need not what members produce to avoid the most competitive markets and direct the members' production in terms of qualities, or volumes, or both, thus mainly applied by members in entrepreneurial co-operative with external co-owners/investors); and, (3) focus strategy, which is like differentiated except that the product and/or service range is narrower and focused for target market, and thus mainly applied by members in entrepreneurial co-operative with a closed membership. The advantage or disadvantage of these strategies may equally vary with the co-operative system by ownership-rights, holding other factors, as highlighted in Table 18.

Table 13: The construct between the co-operative by the strategy of the market and the system of ownership-rights/investment

Main Strategy	**Traditional co-operatives**	**Entrepreneurial co-operatives with external co-owners/investors**	**Entrepreneurial co-operatives with closed membership**
1. Overall cost leadership Strategy: This is producing large volumes or labour force (in case of workers co-operative) at an average cost level, lower than that of all competitors. This requires open membership	***The overall cost leadership strategy brings good prospects in traditional co-operatives because of large volumes (economies of scale) and limited need for investments as well as simple and easily controllable operations.***	Investors would be reluctant to accept volume maximization as a goal as the profit decreases.	The co-operative's volume is not sufficient to gain competitiveness
2. Differentiation Strategy: This strategy is where the firm offers what the market needs not what members produce or service or offer to avoid the most competitive markets. Direct the members' production or services or labour in terms of qualities, volumes, or both	Governance problems and capital problems may occur – because Power balance from members to management.	***The differentiated strategy poises a good prospect for intrapreneurial co-operatives with external co-owners/investors because of access to capital and involved owners.***	The co-operative has not sufficient capital to act on large markets - and requires large investments as production, processing, and marketing (research and promotions) call for capital.
3. Focus Strategy: This strategy is similar to differentiation save that the product or services range is narrower and focused on the target market	Governance problems and capital problems may occur	A focus strategy is appropriate but only for a minor part of the co-operative's business operation.	***The focus strategy poise good prospects in Entrepreneurial co-operatives with closed membership due to involved owners, as the limited access to capital, is acceptable due to the small volume and specified market.***

Source: Adapted from Nilsson and Ohlsson, (2007)

Notably, different strategies and the different co-operative organizational models can be combined; and given different socio-economic and cultural orientations, co-operatives may be successful with any combination of the strategies if they mitigate both the capital and governance problems. The change or misalignment of such strategies may occur if: (1) the assets used in non-core business activities may have increased in value so much that a co-operative has capital enough for investments in core business activities; (2) a co-operative may be so dominant at a specific market that it enjoys success, irrespective of prescribed strategy; (3) the membership mentality or culture, may have an effect on member satisfaction with a specific co-operative structure model (Fahlbeck, 2007); (4) personal factors may have immense importance, such as whether the directors or the general manager are skilled and motivated (Fulton and Giannakas, 2007); (5) the success of co-operative depends to a large extent on the members' attributes; for example, if they are not able to produce at low costs, it does not help even if the co-operative operates at a very large scale.

There are four co-operatives classification by strategy for marketing developed using the 3-dimension of the co-operatives' structure and strategy models. They can show how co-operatives can move or integrate both horizontally or vertically, while employing either the overall-cost leadership strategy or differentiation strategy or focus strategy, for success and sustainability. Horizontally, they can use the involvement of members and owners in investment roles, from the collective structure of equity to the individualistic structure of equity. Vertically, the co-operative can use the involvement of members low to high patronage and/or usage while employing the differentiation or focus strategy of marketing.

These are classified as local co-operatives, niche co-operatives, entrepreneurial co-operatives, and the "countervailing power" co-operatives (see Figure 15).

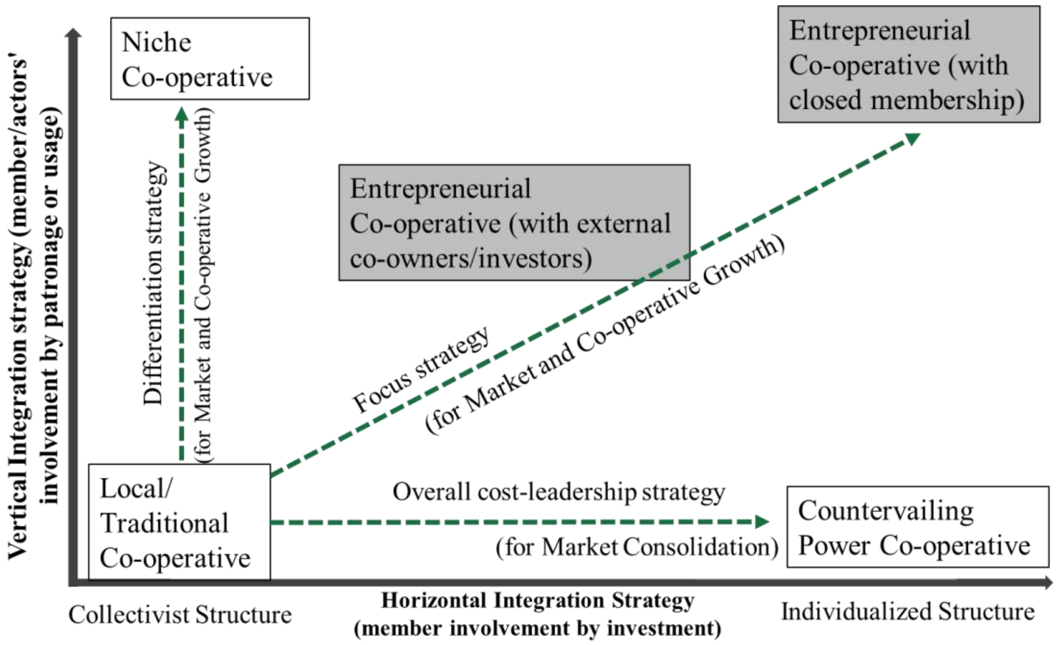

Figure 15: Co-operative models according to strategic-structural dimensions
Source: Adapted from Bekkum, (2001); Nilsson, (2001); Nilsson and Ohlsson, (2007)

The *"Local/traditional Co-operative"* is the small, traditional co-operative based on the traditional co-operative philosophy ICA and principles of with more of ***"collective structure"*** of equity, and low vertical strategy of member patronage or actor usage; and "***overall cost leadership strategy"*** as good prospects because of large volume (economies of scale) and limited need for investments as well as simple and easily controllable operations.

The *"Niche Co-operative"* shares a small size and narrow business focus than of the traditional co-operatives. However, it applies the ***differentiated marketing strategy*** and ***vertical integration strategy*** because of access to capital and involved owners, for both market and co-operative growth by targeting a particular market niche or customers, where there are not many similar businesses. The Niche Co-operative uses a collective structure of equity capital because of many members by open membership.

The *"Countervailing Power Co-operatives"* are the larger co-operatives formed potentially from operating in a larger area with many members, or the merger of traditional/local co-operatives. They employ the "***overall cost leadership strategy"*** as it moves horizontally to an individualized structure of equity. This is because of good prospects due to involved owners (whether individual or corporate members), while the limited access to capital is acceptable due to small volume and specified market. They are more diversified than the small traditional co-operatives but remain largely in commodity businesses and retain a high level of pooling of capital and acquiring and consolidating large market share.

The *"Entrepreneurial Co-operatives"* – either with external co-owners/investors or simply the closed members (building from Nilsson and Ohlsson, 2007) – also have transformed horizontally by individualizing the structure of equity and by reducing the commodity content of their businesses using the ***focus strategy***. Focus strategy involves owners, focus on small volume and specified market accepting the limited access to capital. They do this by gradually developing vertically into consumer brands and other forms of product differentiation. Entrepreneurial co-operatives can be hybridized or extreme – from semi-closed to closed memberships in both member participation on patronage and investment roles.

Discussion

In essence, from the analysis, many co-operatives may not conform to a particular extreme model. Most co-operatives, just as they would "prefer member-heterogeneity and system-lifeworld dichotomy (Iliopoulos and Valentinov, 2017), would prefer the balance of all the marketing strategies (Overall Cost Leadership strategy, differentiation strategy, and focus strategy, vertical integration strategy, horizontal integration strategy), and membership and ownership structure (collective structure of equity and individualistic structure of equity).

In this regard, the interconnection between the member-involvement and marketing strategies that co-operatives may be modelled can be observed as illustrated in Figure16.

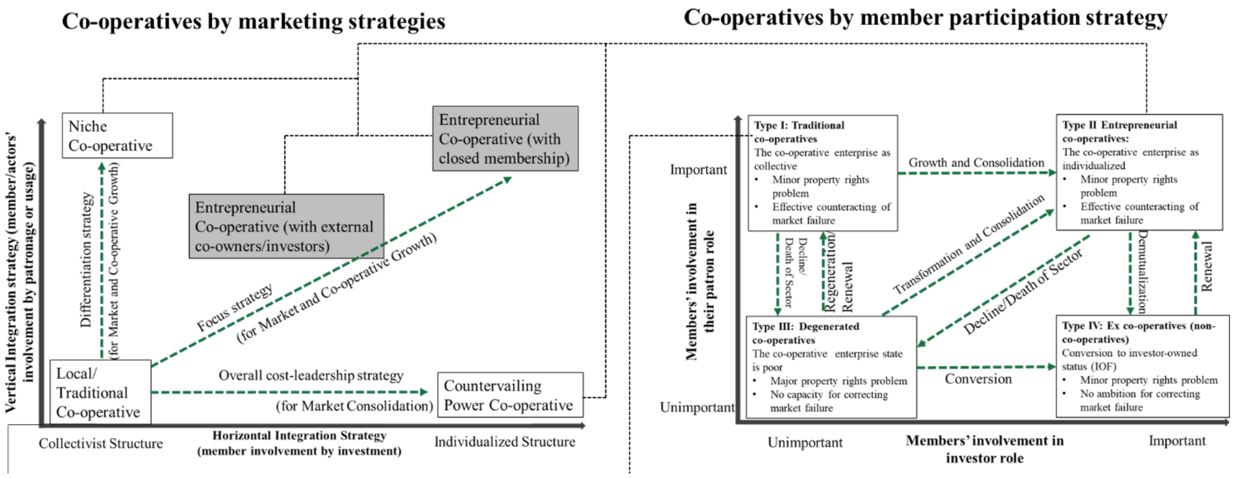

Figure 16: Interconnection of co-operatives by member-involvement and marketing strategics
Source: A construct of the author

The review, therefore, suggests that when co-operatives are making the transition towards the entrepreneurial and business focus, they are likely to exclude particular target members, notably those that cannot comply with the product or service quality standards that markets increasingly demand. As market orientation requires strategic focus and more emphasis on niche and differentiation for efficiency, co-operatives are expected to become more selective in accepting members. In the current environment, therefore, co-operatives are in a precarious position to (1) choose between providing benefits to the whole community versus targeting only member interests. Choosing the benefits more for member interests may lead to the exclusion of the poorest and most disadvantaged community members, and (2) determine the formal decision for closed versus open membership. Determining the need to build a strong co-operative business, will lead to the exclusion of members that cannot deliver the minimum quantity and quality; and subsequently, exclude them in the co-operative decision-making process (Bijman and Wijer, 2019).

Table 14: Finding the balance between community development and business focus

Key characteristics of co-operative	Community Development focus	Community Development and business focus	Business focus
Main values	Solidarity	Solidarity and Efficiency	Efficiency
Orientation	Community	Community and market	Market
Membership	Open	Semi-closed	Closed
Inclusiveness	High	Medium	Low

Source: Adapted from Bijman and Wijer, 2019)

Simply, co-operatives become more entrepreneurial-oriented, they are less likely to be inclusive. They need to design and formulate an inclusive business strategy (see Matabi, 2017e). ***"Hybridization"*** of the co-operative model (for balanced focus on community development and business) is what scholars and practitioners are striving at, for success and sustainability.

Figure 17 illustrates the interconnections and balances of various co-operative typologies by the scope, system, structure, and strategy; to bring out the balance of co-operative values, member composition, orientation, and inclusivity. This is toward deepening the co-operative identity.

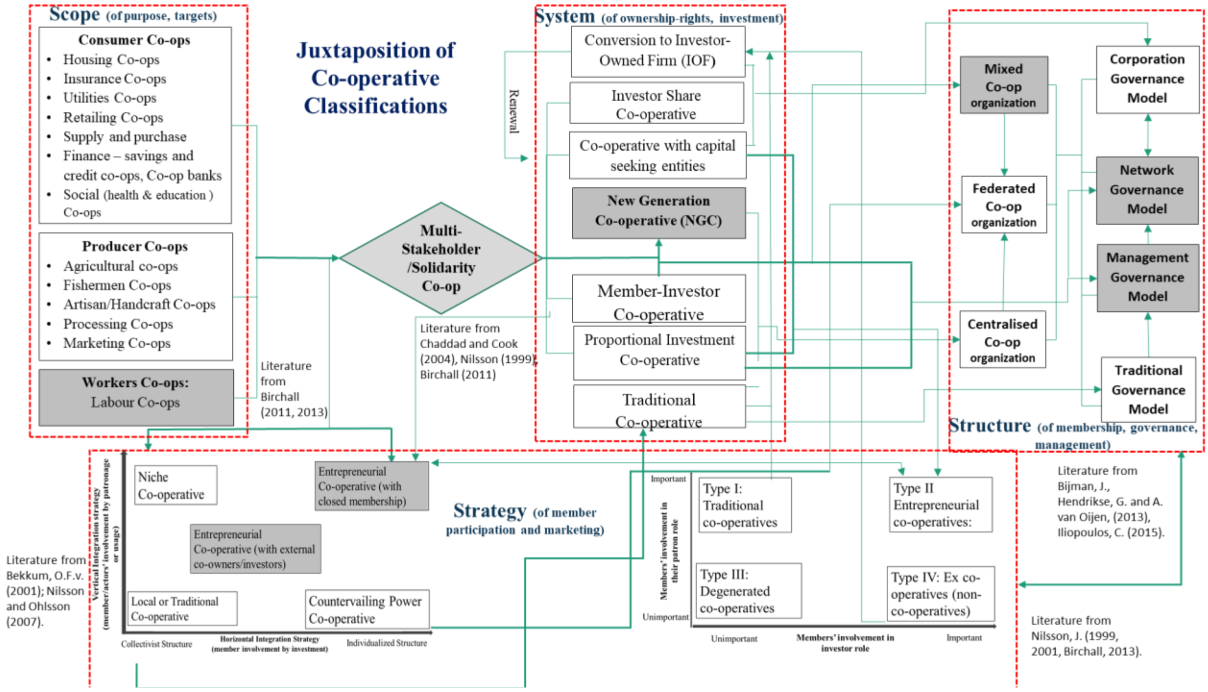

Figure 17: The juxtaposition of the co-operative classifications
Source: A construct of the author

The co-operatives are believed and viewed differently. Essentially, co-operative identities can be viewed in the balance within the civil mix sector and directions of change without being on the extremes of the public, commercial, and community sectors (Huncová, 2003 and Huncová, 2006). Co-operatives are a unique alternative to the conventional choices of private versus public, or public versus non-profit (See Figure 2) – the "Pestoff Welfare Triangle.

IV. Discussions

Co-operative classifications are mostly drawn from the studies on agricultural co-operative in Europe, North America, and Oceania. However, these classifications may be applied across other producer-owned, and consumer-owned co-operatives in different contexts.

There are different typologies based on various elements and dimensions. The co-operative typologies can be further clustered into four: scope (of purpose, sector, and coverage), system (of ownership-rights and investment), structure (of membership, governance, and management), and strategy (of member participation and marketing). Scholars have largely been using a "linear" co-operative business modelling framework. The newly unveiled framework of co-operative epistemology, axiology, and taxonomy toward the business model ontology and circular business modelling framework is elaborated as illustrated in Figure 18 below.

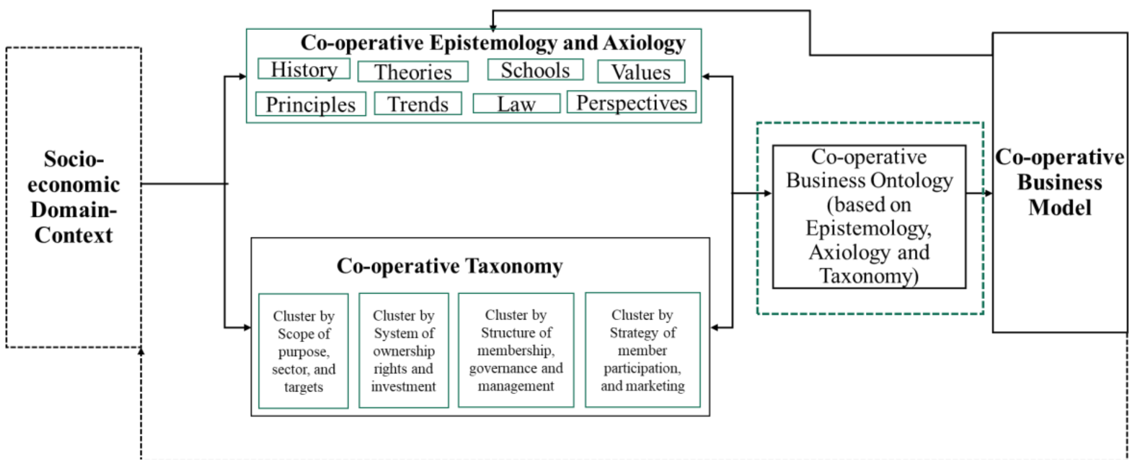

Figure 18: A simplified concept of "circular" co-operative business modelling framework
Source: A construct of the author

The Co-operative Business Model's Theoretical Analogy to a Human Anatomy

Based on these co-operative classifications, the author creates an analogy of the co-operative business as a human being with body components for functionality, survival, production, and sustainability. The classifications by scope can be equated to the "musculoskeletal" that gives shape to and allows the movement (commencement) of the co-operative business model. The classification by system of ownership rights and investment treatment can be equated to the "cells" that mobilize and convert useful resources required for the energized co-operative business model. The classifications by the structure of membership, governance, and management, can be equated to the "tissues" that protect and ensure harmonious connectivity of other parts of the co-operative business model. The classification by strategy of member-participation and marketing can be equated to "organs" that help in the survival and reproduction of the co-operative business model. These "4S" clustering, then have elements that doubtlessly form the "body" of a co-operative business model.

The co-operative taxonomies in either vertical or horizontal framing bring out the extremes of the co-operatives model – i.e., the traditional and entrepreneurial co-operatives. Therefore, hybridization of co-operative types is inevitable in today's complexities– from the scope (of purpose, sector, and coverage) to system (of ownership-rights and investment), to structure (of membership, governance, and management), and the strategy (of member participation and marketing). Co-operatives need to ensure a balance of the co-operative main values, membership composition, co-operatives orientation, and co-operative inclusivity.

The juxtaposed co-operative between the extreme traditional and extreme entrepreneurial before conversion to absolute IOF seems to be the multistakeholder (solidarity) co-operative (MSC), under the system of ownership rights and investment. From the concept descriptions and matrices built, MSCs can be said to be "heart" – in that, in its level of structuring and functionality can deepen the co-operative identity in the face of the present socio-economic and global complexes. However, MSC is not the end in itself, it requires additional components beyond scope of composition to the balanced system of ownership rights and investment, the structure of governance, and also a member and market strategy. These need to be well legislated and appropriately modelled.

Having "identified" and discussed the possible pathway for "combinations" and "selection" of the co-operative business models by scope, systems, structures, and strategies; a "circular" co-operative business modelling framework can be further developed. A well-developed framework will be significant for use by the co-operative practitioners in different contexts and at different periodical phases of the co-operative's cycle. However, the mere identification, combination, and selection of co-operative taxonomy is just but the "body " of co-operative business models. This may not be enough for the success and sustainability of the co-operatives themselves, nor accordingly, deepen the co-operative identity.

To complete the circuit of the proposed "circular" co-operative business modelling framework; a further study should be done to establish the "soul" to design and implement successful and sustainable co-operatives. This is further referenced to the Bible teaching, in the books of Genesis 2:7 and Ezekiel 37:1-10. This is conceptualized in Figure 18 below.

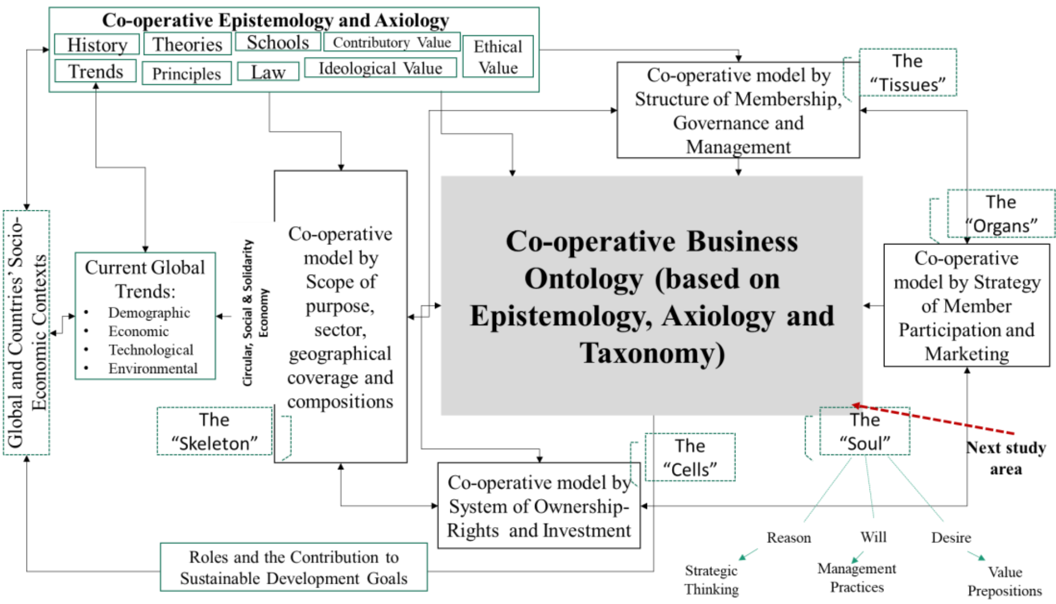

Figure 19: An elaborated concept of "circular" co-operative business modelling framework before the elaboration of business ontology

Source: A construct of the author

The co-operative taxonomical framework is built on the assumption that (1) the strength and survival of the co-operatives business model is based on the combination of elements of the co-operative field in a particular context; (2) identification and selection of the co-operatives business model is based on the combination "body and spirit components" of different co-operative classifications; and (3) the ultimate design and implementation of successful and sustainable co-operative business models are dependent on a different business model's "soul" from those of other enterprises and/or organizations.

According to Plato's tripartite theory of the soul (Lorenz, 2009), the soul is divided into three parts – the "reason/mind", the "will/spirit", and the "desire/emotion". In this paper, it is opined that to develop the soul of the co-operative business model, there are a need to study business model ontology to establish the guidelines for the co-operative strategic thinking (i.e., the "reason/mind"), management practices (i.e., how to "will"), and value propositions (i.e., "desire/emotion"). In simple terms, a successful and sustainable co-operatives business model depends (1) on epistemologies history of co-operatives development (i.e., historical relativism), theories (i.e., Criticalism), schools of thoughts (i.e., Instrumentalism), development trends (i.e., Paradigmatic Relativism), and co-operative definitions and principles (i.e., Paradigmatic Justificationism) and co-operative laws (i.e., Pragmatism of epistemology); (2) for its ontology of business nature; and, (3) in recognition of the axiology to (re) create, (re)deliver, (re)capture value, measure value, communicate value and 'destruct' value for self-adaptation and self-renewal. For, any business model, including the co-operative business model, should create, deliver and capture value, especially to the members/customers and community (see Osterwalder, et. al., 2005; Osterwalder and Pigneur, 2010; Upward and Jones, 2016; Seroka-Stolka, et., al., 2017; Mazzarol, at. Al., 2018; Lopes, et. al., 2019; Sparviero, 2019).

The "soul" development of the co-operative gives direction to the drivers of the "body" co-operative. The level of soul development determines the knowledge, courage, temperance, and justice (Mishra, 2018) the co-operative can be run. Once the co-operative business modelling framework is well developed, with the "body" of classifications and the "soul", both theoretically and empirically; it is envisaged that it will aid in the success and sustainability of co-operatives and, in the deepening of the co-operative identity in different contexts and periodic phases.

The Co-operative Business Models Framework in Practical Management

The business models in practice are associated with attaining and expanding competitive advantage (Johnson, et al., 2008). The business models can be understood here as structured management tools, which are considered especially relevant for success (Magretta, 2002).

From the co-operative taxonomies and clustering study, there is a clear contribution to the areas of co-operative business modelling – even as we conclude on the centrality of MSCs as the "heart" of co-operative taxonomies. In this path, illustrated by Wirtz, et. al., (2016), the co-operative taxonomy analysis can largely give us the "body" components of the business model, i.e., (1) definitions and scope (mainly by co-operative classification by the scope of purpose, sector, and targets), (2) forms and components (mainly by co-operative classification by the system of ownership and investment), (3) value system (mainly by co-operative classification by the strategy of member-involvement and marketing), (4) actors and interaction (mainly by co-operative classification by the structure of membership, governance, and management), (5) innovation (mainly by co-operative classification by the system of ownership and investment).

Figure 20 illustrates the important areas and their interconnectivity towards a practical development and management of the co-operative business model. Under "definitions and scope", the taxonomy of co-operative by the scope of purpose, sector, and targets can help to fundamentally define co-operatives as they are, be differentiated from other existing concepts and models. Under "forms and components" (see Osterwalder, 2004; Demil and Lecocq, 2010; Osterwalder, et. al., 2011), the taxonomy of co-operative by a system of ownership rights and investment gives us various characteristics of co-operative business models given the ownership characteristics. The forms of NGCs and MSCs are being used widely today. Under "value system", the taxonomy of co-operative by the strategy of member-involvement and marketing, brings in the aspects of the general structure of value creation and a useful topology of the value creation partner (the co-operative member) (see Arend, 2013). Under "actors and interactions", the taxonomy of co-operative by the structure of membership, governance, and management brings to the fore the configuration and interface of interactions between actors of co-operative organizations (see Storbacka and Nenonen, 2011; Frankenberger et al., 2013). The multiple actors co-create value for the same member/customer (Storbacka et al., 2012). Under "innovation", the co-operative taxonomy by the system of ownership rights and investment, there are always new or game-changing aspects (see Johnson, et al., 2008); for instance, the delivery rights and agro-processing innovations under NGCs to respective industry or market (see Gambardella and McGahan, 2010).

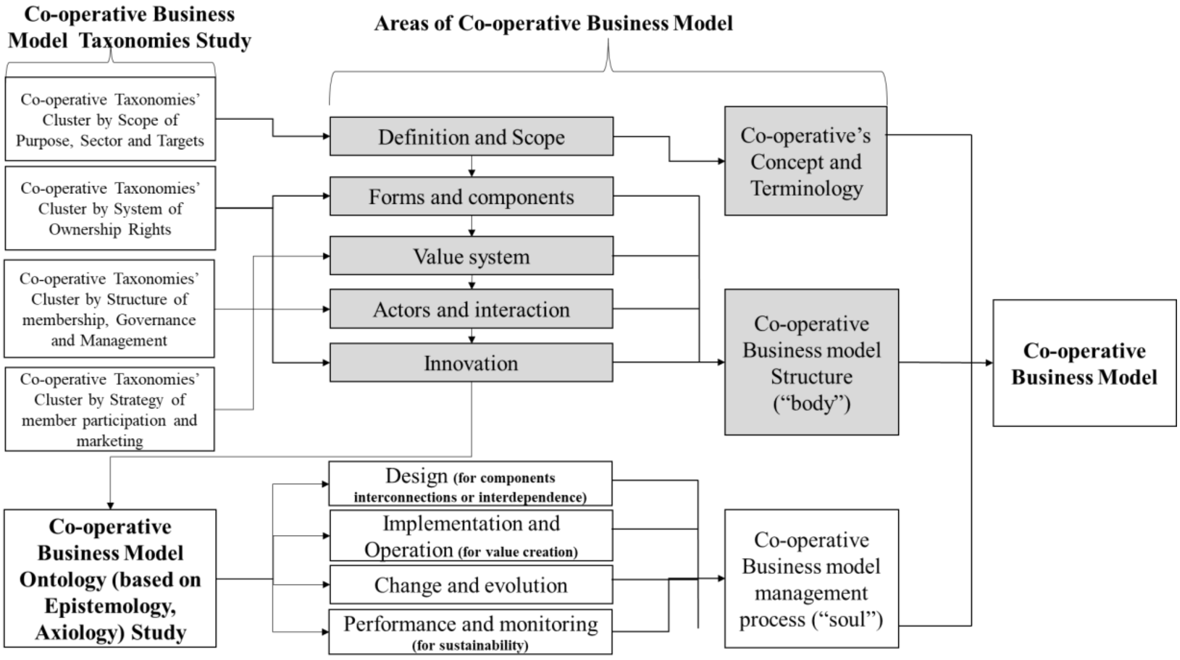

Figure 20: Important areas and their interconnections towards practical development and management of the co-operative business model

Source: Adapted from Wirtz, et. al., (2016).

V. Conclusion

To develop the "soul" of the co-operative business model, studying the remaining important areas of the business modelling is important –to have knowledge (by epistemology) for its nature (by ontology) to create, deliver, and capture value (by axiology). This includes design, implementation and operation, change and evolution, performance, and controlling of business models.

Under the area of "design", it is should be investigated how a successful and sustainable co-operative business model can be represented (see Zott and Amit, 2007, 2008, 2010). Under areas "Implementation and Operation", the investigation should be undertaken on the arrangement of the respective processes, given the co-operatives are user-centric businesses and have cases of organization inertia (see Hienerth, et. al., 2011). Further investigation should be done on how the operative success of co-operative business models can differ based on the differentiation or diversification or integration of operations i.e., the extension or consolidation of co-operative business activities and services (see Cebrowski and Raymond, 2005; Delaere and Ballon, 2007). Under the area of "change and evolution", it is important the business model be promoted on how it needs to transform or evolve (see Pauwels and Weiss, 2007; Aspara, et. al.,2013). Finally, is the area of "Performance and controlling", in which methods for testing the feasibility, capacity, and profitability of business models are to be developed. This is either on how contingent effects of product market strategy and business model choices would affect co-operative performance (see Zott and Amit, 2008) or how the co-operative can promote tighter financial control in firms that are predicated on generating improved investment returns (see Clark, 2012).

The circulation of these business model components and subcomponents initially makes sense when thinking about how important it is nowadays for co-operatives and co-operators to understand the concepts and definitions to apply; co-operative forms to assume; value to create, deliver and capture; innovations to pursue; and relations and decisions to make –to be successful with their business models in the context of the changing global trends and growing marketplace competitiveness.

Therefore, a complete circular co-operative business modelling framework needs to be developed, with further co-operative business model ontology (the "soul") – that stimulates strategic thinking, management practice and process, and value propositions that consider business innovative purposes and targets. Moreover, the design should also be completed with possible feeds for adaptation during implementation and change and evolution in the midst of changing world, industries and sectors, new information and communication technologies (Schwettmannm, 2015). Furthermore, the design should show how the business model can perform and be controlled concerning the quest for competitive advantage; methods for testing the feasibility, profitability, and sustainability; and impact on and responsibility for society, environment, and multiple stakeholders. Based on the works of various scholars (see Osterwalder, 2004; Osterwalder, et. al., n.d; Osterwalder, 2005; Osterwalder, et. al., 2005; Osterwalder and Pigneur, 2010; Osterwalder, et. al., 2011; Demil and Lecocq, 2010; Upward and Jones, 2016; Seroka-Stolka, et., al., 2017; Mazzarol, at. Al., 2018; Lopes, et. al., 2019; Sparviero, 2019), a thorough arrangement of the co-operative business model design process needs to be relooked at; in a way that will make co-operative business models successful and sustainable, and hence deepening the co-operative business identity as envisaged by ICA.

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