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Towards Co-operative Identity IV: Re-Configuring the Co-operative Business Ontology for Modelling Framework

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Abstract:
Background*: Today, co-operatives are increasingly becoming hybridized to fill the economic development gaps in the state-owned enterprises (SOE), not-for-profit social enterprises (NFPSE), and for-profit investor-owned firms (IOF). However, there is limited specialized attention accorded to the systematic analysis of co-operative business model ontology or structure.*
Purpose and Methodology*: The purpose of this study paper was to help broadly understand the development of the business model ontology from Investor-Owned Firms (IOF), Social Enterprises (SEs), and Co-operatives and Mutual Enterprises (CMEs) perspectives; to reconfigure an elaborative Circular Co-operative Business Model Canvas (CC-BMC) that can complete the circular co-operative business modelling framework, which deepens the co-operative identity. Specifically, the study was to (1) explain the key elements of the CME business model from the epistemological, axiological, and taxonomical viewpoint, and (2) demonstrate how the co-operative business model canvas (of attributes component and building blocks) can be integrated from a conceptual perspective, (3) illustrate how the co-operative business model might be reconfigured to ensure co-operative sustainability. The qualitative approach was used for this study. This is a qualitative study based on interpretivism and constructivism of various related secondary data and based on experiences in Sub-Saharan Africa and the Middle East.*
Results*: It was established that there is a possibility to understand how a sustainable co-operative business model can be designed to create, deliver, capture, measure, communicate and 'destruct' value in the changing contexts and periodic phases for self-adapting and self-renewal for sustainability. This study reconfigures 13-blocks' circular co-operative business model canvas (CC-BMC) that can be applied by co-operative practitioners in strategic management. They are drawn from the studies on cooperative epistemology, axiology and taxonomy.*
Conclusion: *The result of this study stimulates structured strategic thinking, managerial practices, and the setting up of value propositions for the sustainable co-operative business models in the changing environment.*
Key Word*: Co-operative, Business, Ontology*

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Definition of Terms

Terms	Definition
Business model ontology	Defined as the way to clarify what terms and concepts belong to a business model and how they relate to each other (Osterwalder, et. al., n. d).
Circular Co-operative Business Modelling Framework	A co-operatives development framework that synergizes the epistemological, axiological, taxonomical, and ontological concepts for co-operative business model success and sustainability.
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.
Exchange value	A form of the worth created from the exchange between producers and consumers assumes that, for it to be an income for the producer, there should be value in use (or utility), for the consumer.
Investor Owner Enterprise	An enterprise that has an economic mission with economic, by drawing people and capital together to exploit an opportunity to deliver a "customers value proposition" (CVP).
Social Enterprise	An enterprise that has a social mission with economic returns (Neck, et. al., 2009), by drawing people and capital together to exploit an opportunity to deliver a "social value proposition" (SVP) (Austin, et. al., 2006).
Shared value	Value creation of an enterprise to include stakeholders that are affected by its actions.

Terms	Definition
Sustainability	Best known for its ecology-related interpretation, which also means, in a broader sense, the flexibility and sustainability of the organization's life or even its reincarnation.
Value capture	The ability of the co-operative business to create profit from its transactions from members and other stakeholders.
Value communication	This involves the co-operative credible information sharing, in economic and social terms, the differentiating benefits of their products and services. The goal is to establish for the members the "value" identified during the value creation stage.
Value creation	Any process that creates outputs to the co-operative members that are more valuable than member inputs. It is the basis of productivity and efficiency.
Value destruction	The result of a change in co-operative's assumptions and these changes are a result of a change in the socio-economic environment.
Value proposition	A promise of value to be created, delivered, communicated, and acknowledged by the co-operative members. MVP is also a belief from the members about how co-operative benefits will be delivered, acquired, and experienced. A value proposition can apply to an entire co-operative, or organs thereof, or member accounts, or products or services.

I. Introduction

The term ontology as per the general definition means the branch of metaphysics that deals with the nature of being that investigate the nature of "things" including their cause and identity. An ontology defines a set of concepts, features (or properties), and relationships (or relations among features) that model a domain of knowledge or discourse. It is simply a specification of a conceptualization.

Generally, a business model ontology is defined as the way to clarify what terms and concepts belong to a business model and how they relate to each other (Osterwalder, et. al., n. d). This study, therefore, looks into description logics and conceptual models, which could be selected, based on the rationale for adopting co-operative epistemology and axiology paradigms for defining the co-operative business model ontology. The co-operative business model ontology could be referred to as a system of belief that reflects an interpretation by a co-operative about what constitutes its business fact. It is 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. This modelling is for the business model of co-operatives, not only as of the enterprise model, but also to improve the inter-operability of co-operatives for success and sustainability, and subsequently deepening of the co-operative identity.

Today, co-operatives are increasingly becoming hybridized to fill the economic development gaps in the state-owned enterprises (SOE), not-for-profit social enterprises (NFPSE), and for-profit investor-owned firms (IOF) (Mazzarol, at. al., 2018). However, there is limited specialized attention accorded to the systematic analysis of co-operative business model ontology or structure.

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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 the development of the business model ontology from Investor-Owned Firms (IOF), Social Enterprises (SEs), and Co-operatives and Mutual Enterprises (CMEs) perspectives; to reconfigure an elaborative Circular Co-operative Business Model Canvas (CC-BMC) that can complete the circular co-operative business modelling framework, which deepens the co-operative identity. Specifically, the study was to (1) explain the key elements of the CME business model from the epistemological, axiological, and taxonomical viewpoint, and (2) demonstrate how the co-operative business model canvas (of attributes component and building blocks) can be integrated from a conceptual perspective, (3) illustrate how the co-operative business model might be reconfigured to ensure co-operative sustainability.

Methodology/Approach: This is a qualitative study using the interpretivism and constructivism approach of the existing secondary data on the subject matter. A qualitative review has been carried out on the business model ontologies to reconfigure the co-operative business model ontology. Drawing on the limited literature on co-operative business model (CBM) ontology, this study attempts to compare the business model concept as postulated by various scholars in mainstream corporate businesses, social enterprises, and initial co-operative businesses. This study endeavours to add to the knowledge of business models and canvases (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;

Teece, 2007, 2014, and 2018; Mazzarol, at. al., 2018; Lopes, et. al., 2019; Sparviero, 2019). Building on the previous studies under this series, such as co-operative epistemology, axiology, and taxonomy, the basic conceptual framework of the study is illustrated in Figure 1 below.

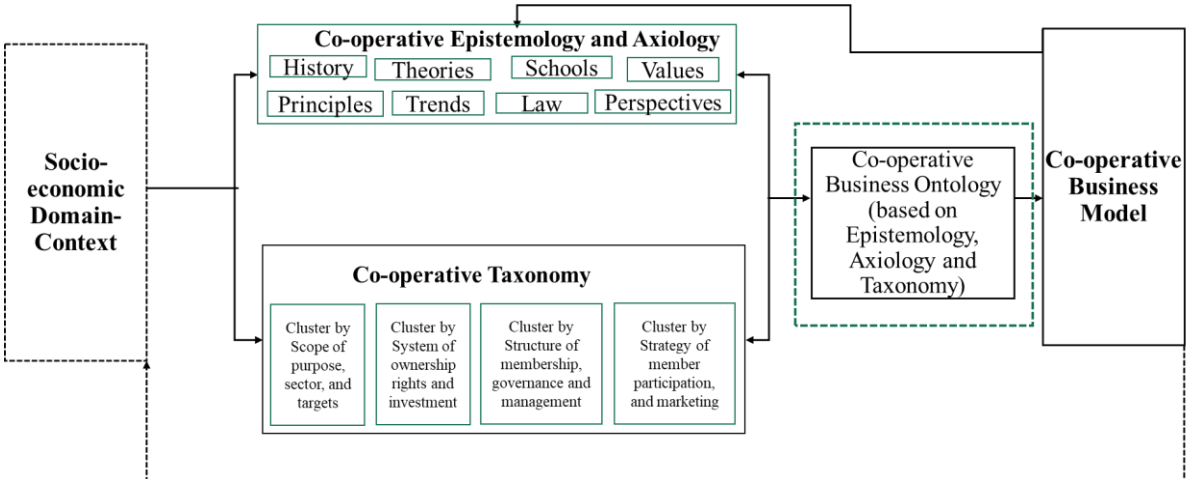

Figure 1: A study conceptual framework

The author defines a co-operative business model ontology that underlines the importance of the interplay of co-operative epistemology, axiology, and taxonomy. One of the key contributions of this study is to provide a circular business modelling framework that addresses the main co-operative business model dimensions of the value creation, delivery, and capture process. This can be shared and accepted and applied by the co-operative practitioners regardless of their context, understanding, or theoretical anchoring – hence deepening the co-operative identity.

III. The Discourse of Co-operative Business Model Ontology

The 'business model' concept arose first in the 1950s and 1960s with the works of such scholars as Peter Drucker (see Mazzarol, et al., 2011). However, the concept gained academic discourse in the 1990s as an own field of study alternative to more traditional management approaches (Zott, et. al., 2011). There are three interpretations of the meaning and function of "business models" that have emerged from the literature of management: (1) the business models as attributes of real enterprises, (2) the business models as intellectual or dialectal schemas, and (3) the business models as formal conceptual representations of how a business function (Massa, et al, 2017). This study paper offers a critical review of this business model literature with the lens of co-operative identity to develop attributes of a co-operative business model, business model schema, and conceptual representation of how a co-operative business model should develop and function.

The power of a business model cannot be overemphasized (see Shafer, et. al., 2005;). A business model is characterized as the association with customers, a composition of core strategy, strategic resources, and value network (Ammar and Ouakouak, 2015); use of resources (see Afua and Tucci, 2003; Upward and Jones, 2016); capabilities (Seelos and Mair, 2007); and the enterprise's value proposition (e.g., Seddon, et. al., 2004). It is a unit of analysis offering a systemic perspective on how to "do business" (Zott, et. al., 2011, p. 1019-1042), principally to understand how to enhance the ability of the organizations to create financial value (Wirtz, et, al., 2016, p. 36-54) and how to create a value (Teece 2010, p. 179). It is a conceptual tool that includes a set of components and their relationships, presenting a schematic business idea for a specific enterprise. It, therefore, constitutes a static model of the phenomena, in contrast to the strategy of the enterprise expressing the actions and behaviour concerning changing environmental conditions and its interior (see; Seroka-Stolka, et. al., 2016, p. 122). A business model is simply the justification and infrastructure of how an organization creates, delivers, and captures value (Osterwalder and Pigneur, 2010, p.14). A business model is also a conceptual instrument to help explain how an enterprise does business, and it is usable for analysis, comparison and performance assessment, management, communication, and innovation" (Osterwalder, et. al., 2011, p. 22-30). It is a schema of real enterprises, which are used to explain the enterprise's performance and competitive advantage (Zott, et. al., 2011). It is used for rethinking and redesigning an enterprise's strategy to benefit from innovations and other opportunities; and/or articulating, challenging, transferring, and recombining tacit knowledge underlying implicit cognitive schemas and heuristics. A business model is a tool that simplifies perception to build narratives that facilitate communication, coordination, and social action within the organization and with external stakeholders (Massa, et. al., 2017). It helps to understand how an organization does business; and how the organization creates value and formulates the business logic and other evidence, which support a value

proposition mainly for the customer, and a viable structure of revenues and costs for the organization delivering that value. (Teece, 2010). It is useful for framing, understanding, and communicating the features and the strategies of an enterprise.

From the above, it is obvious that there is no agreement on the common definition of the business model (Shafer, et. al., 2005; Teece, 2010; Wirtz et. al., 2016). The definitions do not include explicitly refer to co-operatives expressly, but they are pointers to the co-operative business model. However, there seems to be common understanding of the functions of the business models (Chesbrough, 2007; 2010) that business models (1) articulate the enterprise's value proposition – i.e., the value created by the enterprise's offering for the users; (2) identify a market segment for the enterprise – i.e., the group of users to whom the enterprise's offering is useful and for what purpose; (3) define the required enterprise's structure of the value chain to create and distribute its offering, and determine the matching assets needed to support its position in the chain, including the raw materials, suppliers and customers; (4) specify the enterprise's revenue generation mechanisms, and estimate the cost-structure and profit-potential of producing the enterprise's offering, based on the value proposition and value chain structure chosen; (5) describe the enterprise's position in the value network or ecosystem that links the suppliers and customers, and identify potential complementors and competitors; and, (6) formulate the enterprise's competitive strategy to continually innovate to gain and grip an advantage over competitors.

In essence, the business model is an engine that interconnections of the resources and groups of stakeholders to create, deliver and capture value for the target stakeholder from a mere formation advantage standpoint but for competitive and sustainability advantage (See illustration in Figure 2).

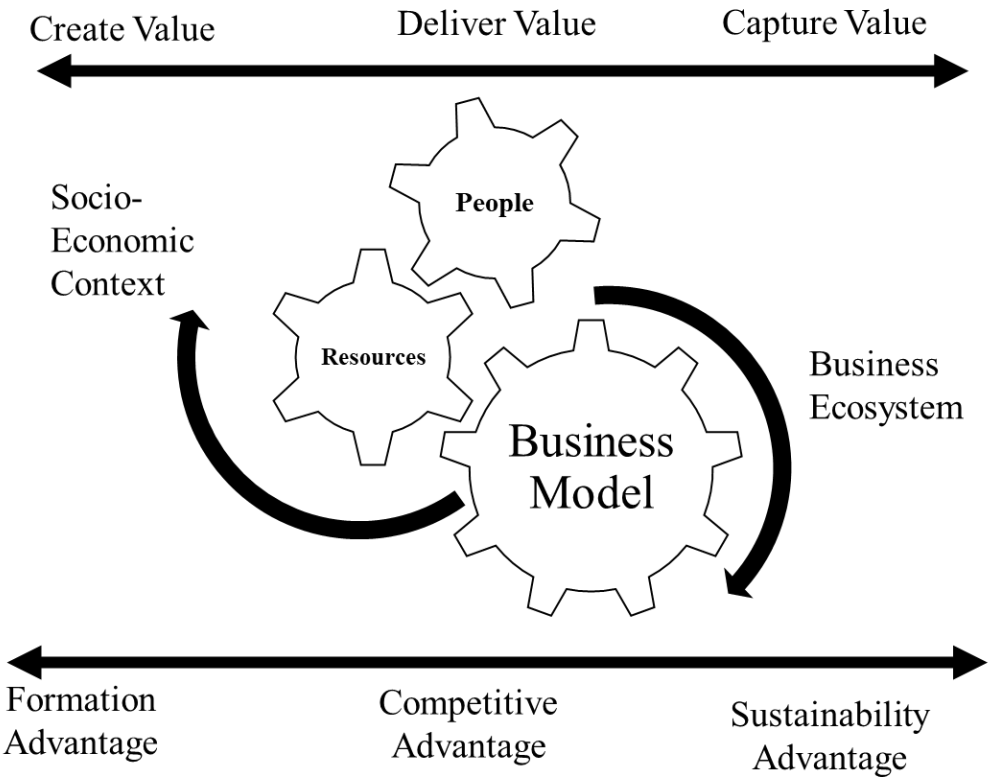

Figure 2: Business Model functionality to create, deliver and capture value for competitive and sustainability advantage

Source: Author's elaboration from Lopes, et. al., 2019.

This study paper, therefore, postulates a "co-operative business model" as, a conceptual framework that helps understand how a co-operative does its business and how it creates and captures value and formulates and transforms the business logic and other evidence that support a value proposition for the members, customer, community; and a viable structure of revenues and costs for the co-operative to sustainably deliver, measure and communicate that value for a competitive advantage and sustainability advantage.

In the rapidly changing world, economies are becoming more circular (see Valavanidis, 2018; United Nations Industrial Development Organization, n.d), and the need for sustainable strategies is inevitable. In such an environment, the business models even for co-operatives, need to be dynamic to face emerging realities

(Teece, 2007, 2014, 2018), while being idiosyncratic in the scanning of their ecosystem for their composition and propositions (Lopes, et. al., 2019) for competitive advantage and sustainability (Li, and Liu, 2014) in continuous value creation, delivery, and capture (Lopes, et. al., 2019). The business model should ensure interdependences and interconnections that are aligned with the strategic functions of internal management capabilities and translate them to address member, customer, and community preferences and needs (Plé, et. al., 2010). The business model should stimulate business creativity and innovation (Trimi and Berbegal-Mirabent, 2012) and be compatible with new technologies (Amit and Zott, 2015), and assist in decision-making amid external factors and scarce internal resources (Casadesus-Masanell and Heilbron, 2015). The business model should induce strategic management in a co-operative by stimulating the knowledge, entrepreneurial spirit, and resource management of co-operative leaders and managers.

To develop a co-operative business model ontology, therefore, three elements should be clear - interdependences, value, and sustainability. In this regard, this study paper analyses (1) the business model ontology in respect to the interdependence of the constitutive components of the co-operative business; (2) the inducement of value by the co-operative business model; and (3) the strategic conception of the business model for a sustainable co-operative and deep co-operative identity.

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IV. Result and Discussions

The cooperative business ontology is well described by the cooperative epistemological, axiological and taxonomical underpinnings.

Analysis of Business Model Ontology: Interdependence of the constitutive components of the co-operative business

Since the concept of the Business Model Ontology – actually known as the Business Model Canvas (BMC) – was introduced by Osterwalder (2004), there have been varied perspectives from various scholars (see Zott and Amit, R., (2013). Wirtz, et. al., 2016). The business model ontology began as (1) unity of business; then (2) a tool to create value; then (3) a concept to create, capture and deliver value including non-financial missions; while emphasizing the visual representation of the business' constitutive components, and then later on value proposition (see Osterwalder, 2004; Osterwalder and Pigneur, 2010; Osterwalder, et. al., 2014). Importantly, the studies of these BMC pioneer scholars were more on Investor-owned Firms (IOF).

IOF Business Model Canvas (IOF-BMC)

Osterwalder's canvas has "nine blocks" (see Osterwalder, 2004; Osterwalder, et. al., n.d; Osterwalder, 2005; Osterwalder, et. al., 2005): customer segments, value propositions, channels, customer relationships, revenue streams, key resources, key activities, key partnerships, and cost structure. Later, Osterwalder and Pigneur (2010) updated this tool with two more blocks under IOF's Corporate Social Responsibility (CRS) Social and Environmental Costs and Benefits. Each 'block' has a series of questions that need to be addressed to help validate the model and guide strategy (Trimi and Berbegal-Mirabent, 2012). The guide is to help the users to think systematically through every "block", on how value can be identified, generated, and delivered; the importance of strategic alliances and partners, and how to organize the resource configuration that secures an enterprise's competitive advantage (Ebel, et. al., 2016). The IOF-BMC is conceptualized in Figure 3 below.

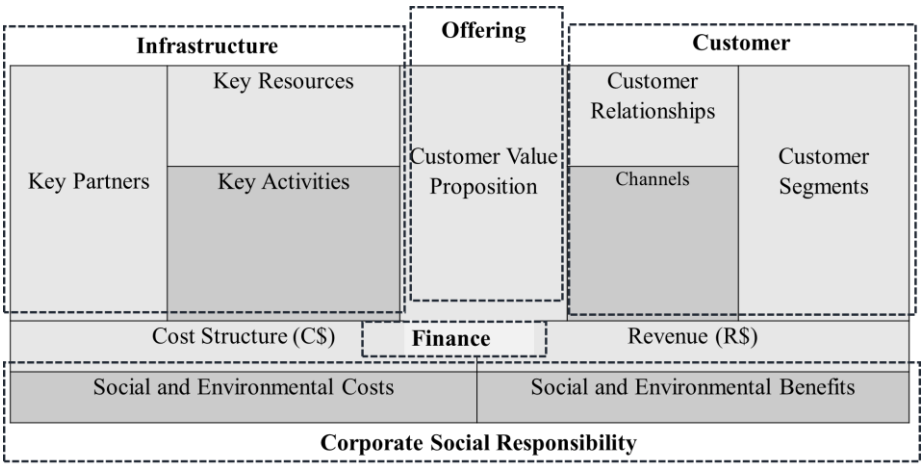

Figure 3: IOF - Business Model Canvas (IOF– BMC)
Source: Adapted from Osterwalder and Pigneur, 2010.

The nine blocks are further classified into five clusters (Osterwalder and Pigneur, 2010). The **infrastructure** related components include (1) Key activities, which describe the most important activities in executing an IOF's value proposition; (2) Key resources, which describe the necessary resources and assets (e.g., human, financial, physical, and intellectual) that create value for the customer and sustain and support the business; (3) Key partner network, which describe the buyer-supplier relationships and alliances that optimize operations and reduce risks of IOF. This can be through joint ventures or strategic alliances between competitors or non-competitors. The **offering-related** components include (4) value propositions, which describe a collection of products and services offered by the IOF to meet the needs of its customers and differentiate it from its competitors. The value proposition delivers value through various elements. This may include newness, performance, customization, "getting the job done", design, brand/status, price, cost reduction, risk reduction, accessibility, and convenience/usability. The value propositions may be quantitative (e.g., price and efficiency) and/or qualitative (i.e., overall customer experience and outcome). The **customer-**related components include (5) customer segments, which describe a group of customers to serve. Various categories of customers can be segmented based on their different needs and attributes to ensure appropriate implementation of corporate strategy to meet the characteristics of selected groups of clients; (6) channels, which describe different channels (such as own channels (storefront), partner channels (major distributors), or a mix of both) that an IOF can deliver its value proposition to the target customers in a fast, efficient, and cost-effective; (4) customer relationships, which describes the IOF-customer relationship to be created with each their customer segments for market share, product share, and revenue share. The finance-related component includes (8) cost structure, which describes the monetary consequences while operating under different business models; (9) revenue streams, which describe the IOF's incomes from each of the customer segments.

The business model concept is closely aligned with business strategy and seeks to link the enterprise's structure and strategy together with its resources into a competitive system, that enterprises find themselves in. In the recent past, the business model ontology has been significantly simplified for ease of understanding by the users and adoption by various scholars in different areas (Fritscher and Pigneur, 2015). Such areas of adoption of BMC have been in Social Enterprises (see Sparviero, 2019), and Co-operative and Mutual Enterprises (Mazzarol, at. al., 2018).

Social Enterprise Model Canvas (SEMC)

The Social Enterprise Model Canvas (SEMC) was (re)designed from the corporate BMC (as postulated by Osterwalder, 2004; Osterwalder and Pigneur, 2010; Osterwalder, et. al., 2014) to address strategy, legitimacy and governance challenges and mission measurement paradox in social enterprises (SEs)(Sparviero, 2019). SEMC components are designed to (1) blend social and economic objectives of SEs; (2) effectively communicate these objectives in coherence with SEs' resources usage and strategy; (3) assess, quantify SEs' results in terms of output, outcomes, and impact; and (4) adopt the best governance mechanisms that enable SE to pursue its mission values and objectives.

SEMC has 14 blocks; some of which have been inherited and/or redefined from the IOF-BMC (as defined in Osterwalder and Pigneur, 2010) to make sure that the appropriate terminologies are used in the description of SE, and find common ground with the business model thinking.

<table>
<tr><td colspan="4">Governance (Gov)</td></tr>
<tr><td rowspan="2">Non-Targeted Stakeholders (NtS)</td><td>Key Resources (KR)</td><td>Channels (CH)</td><td rowspan="2">Customer and Beneficiaries (C&B)</td></tr>
<tr><td>Key Activities (KA)</td><td>Customer and Beneficiaries Engagement (C&BE)</td></tr>
<tr><td>Mission Value (MV):</td><td rowspan="2">Social Value Proposition (SVP)</td><td colspan="2">Impact Measures (IM):</td></tr>
<tr><td>Objectives (Obj):</td><td colspan="2">Output Measures (OM):</td></tr>
<tr><td colspan="2">Cost Structure (C$)</td><td colspan="2">Income (I$)</td></tr>
</table>

Figure 4: Social Enterprise Model Canvas
Source: Adapted from Sparviero (2019)

These SEMC components are (1) Key Resources (KR) – which describes the important assets that SE need for the business model work; (2) Key Activities (KA) – which describes the important things an SE should do to make its business model work; (3) Channels (CH) – which describes how an SE should communicate and reach its customers/beneficiaries to deliver its value proposition; (4) Cost Structure (C$) – which describes all costs that are incurred to operate a business model; (5) Social Value Proposition (SVP) – which (replaces the customer VP in IOF-BMC) describes the package of products and services that create value for SE's specific customers and beneficiaries; (6) Non-targeted Stakeholders (NtS) – which (replaces the Key Partnerships in IOF-BMC) describes the stakeholders that are likely to be affected by the activities of the SEs and stakeholders (who are partners, and not customers or targeted beneficiaries) of the social actions envisaged by SEs; (7) Customers and Beneficiaries (C&B) – which (replaces the Customer Segments of the IOF-BMC) describes the groups of people that an SE aims to reach and serve; (8) Customers and Beneficiaries Engagement (C&B E) - which (replaces the Customer Relationships of IOF-BMC) describes the relationships established by the SE with its targeted beneficiaries, who are dual in nature as they simultaneously create and benefit from the value for the SE; (9) Income (I$) – which (replaces the Revenue of the IOF-BMC) describe the kinds of financial and in-kind resources (donations, fees, government funding, investments and gifts) that SEs are recipients of; (10) the Mission Values (MV) – which describes the higher, long-term, desirable end-states or goals of the SEs; (11) the Objectives (Obj) – which describes the short term, desirable modes of conduct and more practical targets of the SEs; (12) the Impact Measures (IM) – which defines the assessment measures of mission values; (13) the Output Measures (OM), which defines the assessment measures of the objectives; and (14) the Governance (Gov), which defines the main rules and/or committees and boards that are put in place to manage the organization.

According to Sparviero (2019), SEMC needs SEs to (1) adopt multidimensional ideas of value and values; (2) make explicit goals with differentiated mission values and objectives; (3) make explicit output and impacts measures that are connected to the mission values and objectives; (4) reflect on the governance principles in a framework that includes mission goals, objectives, assessment of measures, identified groups of targets and non-targeted stakeholders, and their relationships.

Co-operative and Mutual Enterprise (CME) Business Model Canvas (CME-MBC)

The Co-operative and Mutual Enterprise (CME) BMC was (re)designed from the IOF-BMC was (re)designed from the corporate BMC (as postulated by Osterwalder, 2004; Osterwalder and Pigneur, 2010; Osterwalder, et. al., 2014) to suit the nature, activities, and outcomes of CMEs (Mazzarol, at. al., 2018).

CMEs are argued to be different from IOFs and SEs in terms of purpose, ownership, governance, and funding. For instance, the SE ownership and funding can be public, private, or public-private; and when it comes to governance, they may be independent of government, but conversely, mission and performance are highly influenced by the government. On their part, CMEs organizational design is a

"Network form", where it is owned in mutual by other natural or legal persons (see Sexton, 1983). CMEs are described as a "nexus of contracts", owned and controlled by members who are both the suppliers and customers (Birchall, 2011). CMEs have a dual role of an association or alliance, and a business (Fairbairn, 2012). CMEs can be "non-distributing" not-for-profit enterprises, or ‘"distributing" thus including a share capital structure where shares are valued and dividends paid to members (Mamouni-Limnios, et. al., 2016).

CMEs and IOFs are also different in both business and decision-making. Table 1 below highlights some of these differences.

Table 1: The Business Models Comparisons between the Co-operative and Investor-Owned Firm

Key Business Model Elements	**Co-operative and Mutual Enterprises**	**Investor-Owned Firm**
Identify purpose	Embed mission and co-operative principles to meet member needs	Focus mission on outcomes for investors
Articulate value proposition	Maximize member benefits. Can offer members deferred patronage refunds; essentially returning to them the cost of their transactions with the co-operative. The members should value both patronage and investment, the co-operative is best able to satisfy members (Nilsson, 2001).	Satisfy customer needs and maximize shareholder returns
Identify market segments	Target areas of greatest member need. They are hinged on members' participation and the skills within and part membership to achieve multiple goals (Peredo and Chrisman, 2006).	Target most lucrative opportunities
Define value chain configuration	Suppliers and customers are owner-members of the enterprise. Members are both the patron (customer and supplier) and the owners (shareholder) (Birchall, 2011).	Suppliers and customers are outsiders to the enterprise.
Estimate cost and profit potential	Offer higher prices to suppliers and lower prices to customers (Tennbakk, 2004; Royer, 2014a; Royer, 2014b). They can also enjoy tax reliefs and may operate with a single tax on income.	Reduce supplier costs and premium price customers

Key Business Model Elements	Co-operative and Mutual Enterprises	Investor-Owned Firm
	The profits are reinvested in the CME business, and/or returned to members based on their level of patronage, and any share capital accumulation that might occur within the CME by members is generally based on patronage (Chaddad and Cook, 2004).	
Define position within the value chain	Block substitution threats and form strategic partnerships within the co-operative membership.	Block substitution threats and form strategic partnerships with complementary actors
Formulate a competitive strategy	Offer members the best value and achieve superior competitive advantage through their ability to forge strategic alliances (Bruque, et. al., 2003). They aim to optimize the returns to both its members and their operations (Brewin, et. al., 2008; Bontems and Fulton, 2009).	Exploit future opportunities with existing resources
Evaluate performance	Economic value and social capital. The community-based enterprise hinged on the skills within its membership, and is dependent on members' participation, to achieve multiple goals, which can be either social and/or economic (Peredo and Chrisman, 2006).)	Primarily economic value

Source: Adapted from Mazzarol, at. al., (2018).

If the CME loses the view of its purpose, it will be at risk of being degenerated into a mere social club or demutualized to IOF (Battilani and Schröter, 2015). Therefore, the CME-BMC is an important strategic guide for CMEs. In their design but within the context of IOF-BMC (Osterwalder and Pigneur, 2010) and social orientation in SEMC (Sparviero, 2019), Mazzarol, at. al., (2018), developed and redefine CME-BMC with new nine blocks as illustrated in the Figure below.

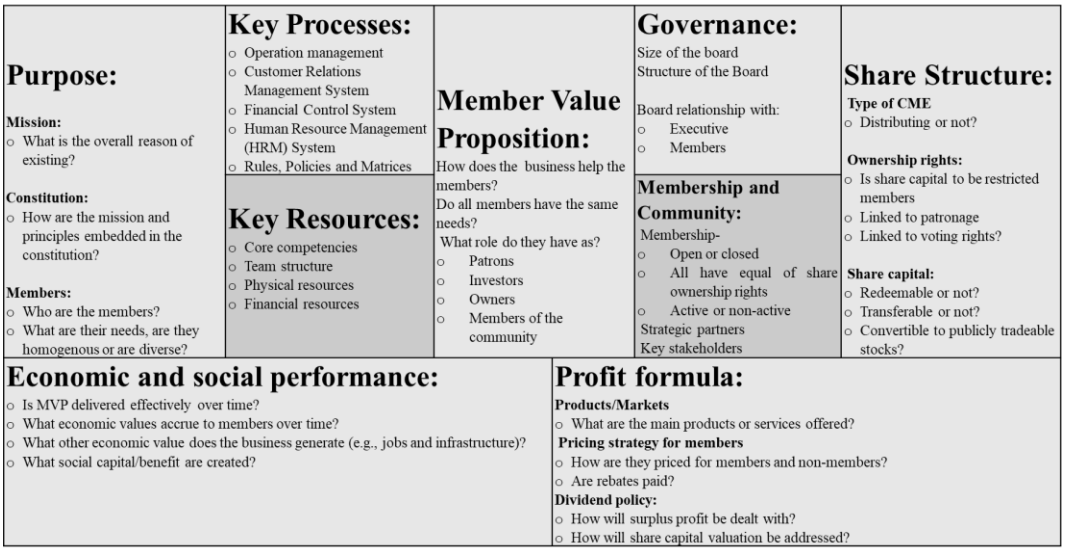

Figure 5: Co-operative and Mutual Enterprise (CME) Business Model Canvas (CME-BMC)
Source: Adapted from Adapted from Mazzarol, at. al., (2018)

These CME-BMC blocks are (1) purpose, which describes guides the CME toward s a strategic goal and social and economic objectives; (2) member value proposition, which ai considered the central to CME business model framework and it replaces the customer value proposition in IOF-BMC – and describes value creation for the members; (3) share structure, which describe how CME (whether distributing or non-distributing) is to manage share capital including issues of patronage and voting rights and dividend policy while addressing the *'Free Rider', 'Horizon', 'Portfolio', 'Control' and 'Influence-Cost'* problems; (4) Governance, which relates to that of SEMC and reflects the influence of member ownership and participation on how the CME is governed and managed based on constitution, articles of association and internal operational policies; (5) membership and community, which describe how CMEs mobilises and synergizes skills and participation of their communities into a common purpose; (6) Key resources, which describes the required competencies, team structure, physical and financial resources to deliver CME's MVP and strategic purpose; (7) key process, which describes the processes (such as the organisational structures, systems and activities) that CME use to generate benefits for members and allow them to participate in decision making; (8) profit formula,

which describes how the CME views its financial purpose; and (9) economic and social performance, which describes the CME's direct and indirect effects such as jobs created, infrastructure built and financial benefits to members.

The CME-BMC is a great attempt in designing a business modelling ontology of co-operatives. However, the scholars do not adequately concretize it to the co-operative epistemology, axiology, and taxonomy.

Analysis of Business Model Axiology (Value): The inducement of value by the co-operative business model

Generally, the co-operative axiology is three-fold – (1) what defines the co-operative forms of the enterprise (i.e., ethical value), (2) what the contribution the co-operatives make to development (i.e., contributory value), and what belief do proponents hold (i.e., the ideological value). This is the value-based system of the co-operative business. Specifically, the business model value stems from the (1) resource-based view of the enterprise – in which it identifies the management conditions and the infrastructure of the activity; and (2) positioning view – in which it interprets the interface conditions, relationships, and communication with the customers and the distribution channels (Lopes, et. al., 2019). This means therefore that the business model should be constructed and managed fluidly to bring out the enterprise's value (i.e., be value-based) in context and a particular period.

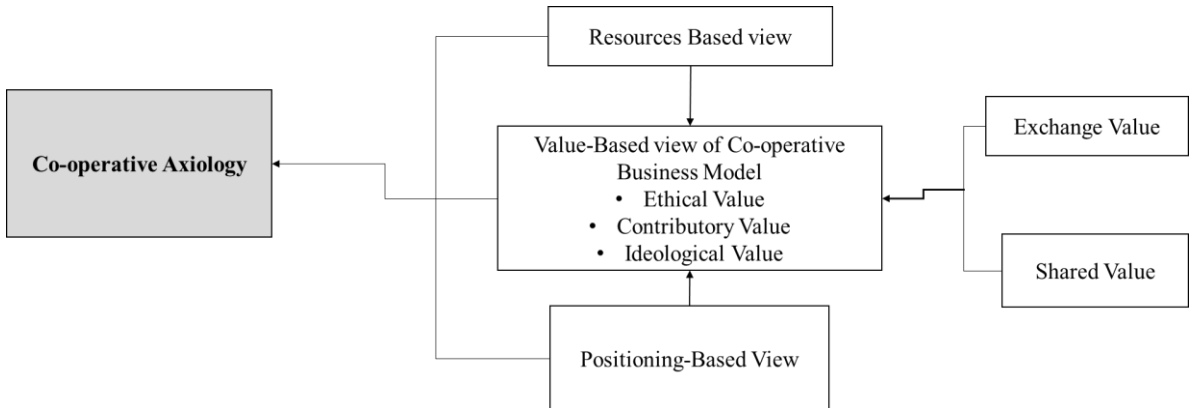

Figure 6: Business Model Axiology (Pluralistic Value) of Co-operatives
Source: Author's construct

The value-based view of the business model clarifies (1) how a business bundles together products and services to create and deliver value, both for the customer segment and the enterprise (Osterwalder and Pigneur, 2010; Kühn and Louw, 2017); (2) the way to communicate, create, deliver, and capture value out of a value proposition (Makhotin, et. al., 2013). The value-based view of the business model, therefore, has several value dimensions and their elements (1) customer value proposition; (2) value creation, value architecture, or business infrastructure; (3) value capture or profit generation (Makhotin, et. al., 2013); (4) value network, value measure, and value communication (Bocken, et. al., 2014; Boons and Lüdeke-Freund, 2013; Täuscher and Abdelkafi, 2016); and (5) value destruction (Seroka-Stolka, et., al., 2017;). Further to the value-based view discussion, two things are introduced – the "exchange value" and "shared value".

In the mainstream traditional economic theory (see Arvidsson, 2011) and economics (of IOF and not CMEs or SEs), the business model is focused on customer value propositions (CVP) based on the "exchange value" of maximizing profits for its owners and shareholders, without maximizing utility for consumers. "Exchange value" is a form of the worth created from the exchange between producers and consumers, which assumes that, for it to be an income for the producer, there should be value in use (or utility), for the consumer. In this "traditional" business approaches "creation of value" is explained only on the supply side. However, with the new forms of IOF's business model approaches (that are overlapping in various aspects with co-operatives), there is increasing recognition for not only "creating value", but also "capturing value" element to explain the purpose of business models (as also postulated by Osterwalder and Pigneur 2010)" in which new or existing activities are used to generate a latent demand (Massa, et al, 2017) – see illustration in Figure 5 below.

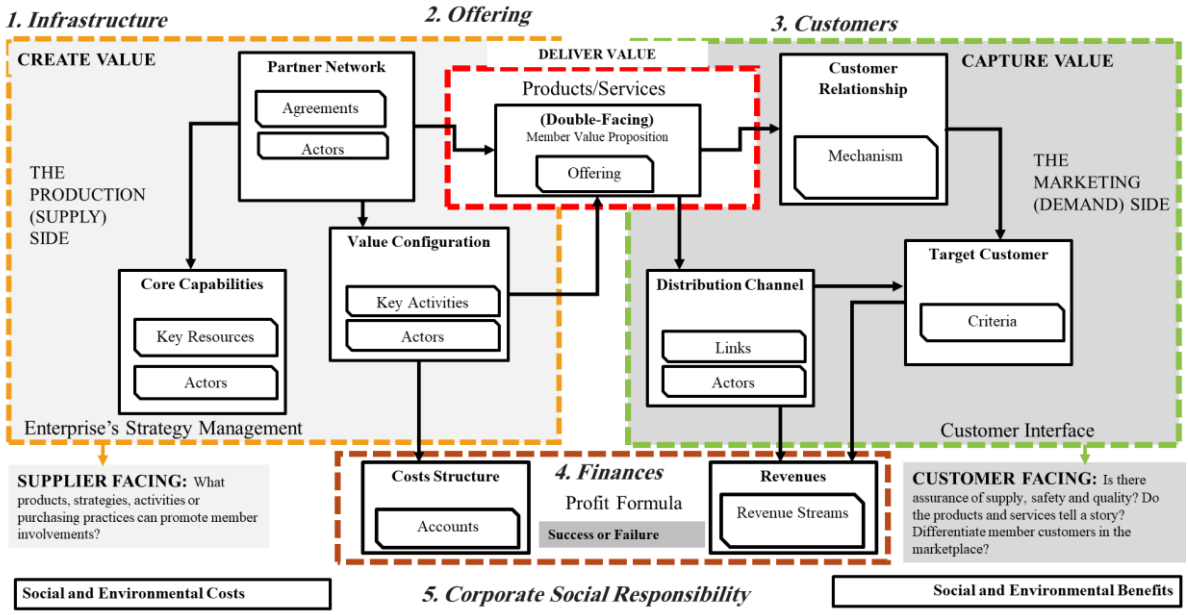

Figure 7: The Exchange Value of the Business Model
Source: Author's elaboration from Osterwalder and Pigneur (2010) and Teece (2010)

In this regard, the co-operative business models should define their business value, in terms of the Sustainable Member (double-faced) Value Proposition (MVP) since their uniqueness is the members who have the dual interest of patronage (as customer or supplier), and of investor (owner/shareholder). (Mazzarol, et al, 2011).

In the "shared value" business conceptualization by Porter and Kramer (2011), enterprises also emphasize specific policies and operating practices that align with their quest for (1) profits (through increased productivity, sales, and savings); (2) access to resources (including raw materials, employees); and (3) improved competitive position with the creation of social value of better quality of the natural environment, nutrition, access to water and housing, health, education, and income (Dembek, et. al., 2016). This approach is considered a "necessity of convenience" between the IOF and the society for particular win-win situations and ignores the circumstances in which attempts to increase economic gains, would negatively affect the creation of social value or vice-versa.

However, the approach is close to SEs that have a social mission with economic returns (Neck, et. al., 2009), by drawing people and capital together to exploit an opportunity to deliver a "social value proposition" (SVP) (Austin, et. al., 2006). Conversely, co-operatives do simultaneously create substantial social value and economic value; and thus, face difficulty in measuring the intangible value of social capital if they do not adequately adhere to the "co-operative principles". Moreover, the analyses of "shared-value" creation are likely to select only the stakeholders directly involved rather than adopting a "system perspective", where all stakeholders that are affected by the actions of the enterprise are included. This selection method facilitates the uncovering of "win-win" situations used as illustrations, by concentrating on the gains made by the stakeholders directly involved, while avoiding the negative outcomes suffered by the ones affected (Sparviero, 2019). This approach does not guarantee successful sustainability.

Analysis of the business model epistemology: The strategic conception for a sustainable co-operative and deep co-operative identity

The knowledge of truth is that business models have transformed slowly from the technological orientation of original proponents (see Osterwalder, 2004; Osterwalder, et. al., n.d; Osterwalder, 2005; Osterwalder, et. al., 2005; Osterwalder and Pigneur, 2010) to organizational orientation (Wirtz, et. al., 2016), are turning to be a hybrid of the market (outside) – "right side" – and the organization (inside) – "left side" (Lopes, et. al., 2019) as also illustrated in Figure 5. The BMC blocks are further categorized in this regard as follows.

Table 2: BMC 9-Blocks distribution between the Organization and Market Sides

Organization (Inside) Side or Left Side	Market (Outside) or Right Side
Key Activities: action to be done by the enterprise to realize the goals set.	***Customer segments:*** The type of customer sought by the enterprise
Key Resources: resources used in the process of value creation. Also, the skills the enterprise should have and use to provide value propositions.	***Customer Value Proposition:*** the bundles of products and services that create value for the type of customer segment or what motivates the customer to choose the enterprise
Key Partnerships: the cooperation agreements between two or more enterprises, which aim at creating a project or the joint activities that organize additional required capacities, resources, and activities	***Channels:*** How the enterprise delivers value proposition to the target customer segment – whether directly or indirectly.
	Customer Relationships: the relationship between the enterprise and the customer
Cost Structure: the measure of monetary costs of the enterprise.	***Revenue Sources:*** periodic revenues from value offered by the enterprise. Also used to determine the pricing mechanism of the value to be offered.

Source: Author's elaboration from Lopes, et. al., 2019)

It is worthwhile, to note that a co-operative by its nature is an organization with dual character – association and enterprise. On one hand, a co-operative is an association of persons who came together for their common needs and aspirations to be met. On the other hand, a co-operative is an enterprise with distinct values and principles, serving its members while considering the interests of its customers and the wider community. A co-operative is a type of enterprise that is owned and democratically controlled by its members – the people who use and benefit from the services provided by the co-operative business. Therefore, some of these blocks are likely to be redefined or repositioned.

To provide a strategic decision, the BMC (including the co-operatives) requires market and organizational practices and parameters to manage and transform the adopted business model over time (Amit and Zott, 2015). The business model should show the interface between the enterprise and the external environment, and how the enterprise can collect and transform information into strategic actions. Such mechanisms include the SWOT analysis, five forces analysis, Blue or Red Ocean model of investment evaluation, and matrix management for multiple business models that may be adopted.

This strategic conception is cognizance that enterprises face dynamic environments and conditions, irrespective of the "value" they intend to create, deliver, and/or capture – hence the introduction of the two blocks CRS on BMC and emphasis of the "shared-value" (Osterwalder and Pigneur, 2010). Enterprises should, therefore, become more and more sustainable by developing sustainable[1] business models. Sustainable business models should not only integrate social, economic, and ecological aspects but there is also a necessity for a complex approach to cope with the challenges of a sustainable advantage and future (Bocken, et. al., 2014; Skowron-Grabowska, et. al., 2016). There are several sustainability perspectives for business models – socio-economic efficiency and environmental effectiveness; technological, and social innovations; organization systems dynamics; and sustainable performance measurement.

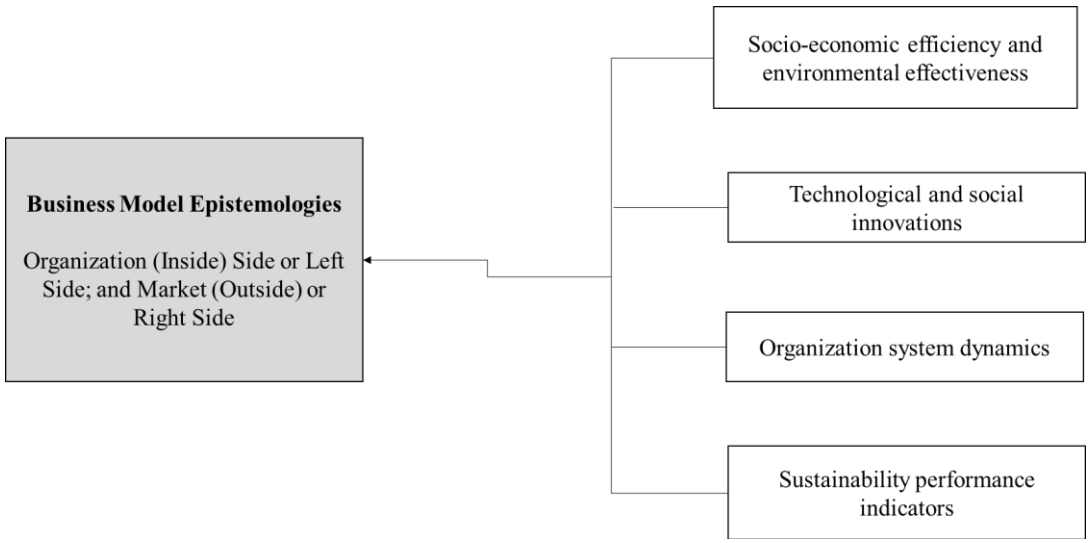

Figure 8: Business Model Practices and Parameters concerning Co-operatives

Source: Author's construct.

[1] Sustainability is best known for its ecology-related interpretation, which also means, in a broader sense, the flexibility and sustainability of the organization's life or even its reincarnation.

Socio-economic efficiency and environmental effectiveness

According to this perspective, enterprises have three approaches: (1) economy – the economy approach focuses on factors arising out of generated profits; (2) equity – equity approach focuses on improving the quality of life of all stakeholders and restoring the condition of ecosystems; (3) ecology – ecology approach means the respect for the laws of nature and creative behaviour in a given location (e.g., local aspects) (Seroka-Stolka, et. al., 2017). In this regard, therefore, enterprises exhibit three different cases for sustainability (1) business case, (2) natural case, and (3) societal case (Dyllick and Hockerts, 2002). The enterprises should have a business model that (1) promote energy and material efficiency, (2) creates value from "waste", (3) substitutes with renewables and natural processes, (4) deliver functionality rather than ownership, (5) adopt a stewardship role, (6) encourage sufficiency, (7) re-purpose the business for society or environment, (8) develop scale-up solutions (Bocken, et. al., (2014). In essence, the enterprises' operations in its bid to emphasize the importance of the entrepreneurial mindset (profits); should consider the social and economic efficiency and environmental effectiveness (eco-efficiency) to maintain the balance in the human being's ecosystem (Bahrami, et. al., 2016).

Therefore, a business model for sustainability should create economic success through certain environmental or voluntary social actions, which can solve or moderate social and/or environmental challenges (Seroka-Stolka, et., al., 2017). Enterprises should proactively engage in strategies that represent a holistic view of environmental or social objectives as a part of their business logic to contribute to the sustainable development of the economy and society. The sustainable business model should help enterprises describe, analyze, manage, measure, and communicate (1) sustainable value proposition to all stakeholders; (2) the value creation and delivery; (3) the capturing of economic value (Schaltegger, et. al., 2012). In return, such a model may lead to increased sales and revenues or profits, ensure competitive advantage, reduce costs and risks, change customer behaviour, enhance reputation, increase innovative capabilities, and enhance attractiveness as an employer (Seroka-Stolka, et., al., 2017). Importantly, a sustainable business model requires active management that integrates social, environmental, and business activities to create customer and social value.

Technological and social innovations

According to this perspective, the creation of sustainable value as an element of a business model is usually achieved by product, process, and technological innovations (Boons and Lüdeke-Freund, 2013). These elements are interdependent – the technological innovations may depend on organizational change or support social value propositions. Innovative business models can help reduce the use of natural resources in the short term, even if they are insufficient to transform industries, societies, and organizations; or change production and consumption systems. Such a model can also cause a certain effect on increasing the consumption of products and services by cheapening them and enhancing their accessibility (Hansen, et. al., 2009). They simply act as a moderator between consumption and production; and change the way of doing business by shaping the culture, structure, and routines of enterprises. A sustainable business model is a hybrid of different corporate approaches to business. The social innovations and eco-innovations by an enterprise are viewed as a key to creating and transforming the target markets towards sustainable development.

Organization system dynamics

The recent literature presents business models for sustainability from a system dynamics perspective (Seroka-Stolka, et., al., 2017; Täuscher and Abdelkafi, 2016; Makhotin, et. al., 2013). A business model for sustainability should create value for different stakeholders and the natural environment, i.e., a specific causal loop between the value captured by the enterprise, the value to the natural environment, and the created value to the customers. A business model should be dynamic (Demil and Lecocq, 2010; Krzakiewicz and Cyfert, 2014), in the enterprise's changing environment and markets (Seroka-Stolka, et. al., 2016) for the contribution to sustainable development (Porter and Derry, 2012). The dynamics of a business model that support innovative and sustainable market transformation are propelled by three mechanisms: variation, selection, and retention (Schaltegger, et. al., 2016; Makhotin, et. al., 2013; Demil and Lecocq, 2010).

Moreover, a sustainable business model should demonstrate connections between individuals and groups inside and outside the enterprise, in that there is "building networks and collaborative practices for learning and action about a new vision, the deployment of new concepts from outside the enterprise, elaborating an implementation structure within a rebuilt network, and "value destruction" (Roome and Louche, 2016). The "value destruction" is an element that shows that the enterprise is self-adapting and self-renewing – harmoniously changing from one (or a mix of) model to another; for the enterprise to be sustainable, either multiplicity (Starik and Kanashiro, 2013) or integrally (Sharma, et. al., 2007). In essence, all elements of a sustainable business model have "value" – the value proposition, value network, value capture, value creation, and value delivery (Bocken, et al., 2014; Boons and Lüdeke-Freund, 2013; Roome and Louche, 2016).

Sustainability performance measurement

The success of business models depends on the approaches to sustainability. However, sustainability measurement is not usually incorporated into accounting practices, decision-making, or general business models.

According to Upward and Jones (2016), sustainability can be measured by indicators that estimate the performance and effects of business model decisions understandably. In this regard, there are two types of sustainability of business models – the "weak" and "strong". The "Weak" sustainability is where the environmental goals are included in the structures and systems of business. It is based majorly on incremental changes and uses only some sustainability elements. On the other hand, "Strong" sustainability is where all the activities of the enterprise are integrated into environmental or socio-ecological systems. This is characterized by a more radical change and is based on the whole system thinking of the enterprise and is incorporated into its business logic (Roome, 2012; Upward and Jones 2016; Seroka-Stolka, et., al., 2017).

In essence, a "strong" sustainable business model should supply the enterprise with a base for leading the co-creation of value with all stakeholders including the customers, shareholders, social, and other actors to create value. It has such elements as the stakeholders, development of the product and processes, learning, and measurement of each of the dimensions. The environmental, social, and financial-economic features are important to the sustainable business model. The business models sold be adaptable to the external environment.

"Strong" sustainability, therefore, demands a proper understanding of the broader macroeconomy (Upward and Jones 2016). Enterprises equally require favourable market conditions. Moreover, successful sustainable business models should be adapted to external environments – such as changing stakeholders' expectations, the competitive market environment, and regulatory frameworks. This still points to the fact that a successful business model cannot guarantee a competitive advantage in the long period.

V. Conclusion

The co-operatives, like any other forms of enterprise, are operating in a dynamic and rapidly changing environment. Their contribution to sustainable development is more than ever. To achieve sustainability, co-operatives should transform their entire business model ontology. This can be done if the co-operative epistemology, axiology, and taxonomy are concretized and highly hybridized for broad and strong sustainability – in terms of (1) socio-economic efficiency and environmental effectiveness; (2) technological and social innovations; (3) organisational system dynamics; and (4) performance measurement. This can be through a cyclical evolutionary process of variation, selection, and retention; for proper design, implementation/operation, change, and monitoring of the model to generate sustainable economic and social performance.

Co-operative business model ontology

The successes of the IOF business model are largely measured by economic performance operating profits and corporate value and CVP; while those of SEs are measured by the social performance and SVP. The success of co-operatives is measured by both economic and social performance and MVP. In this regard, the business model ontology in respect to the interdependence of the constitutive components, and the induced value of the co-operative business is different from that of IOF and SE.

The CME-BMC by Mazzarol, et. al., (2018) is a great attempt in designing a business modelling ontology of co-operatives. However, the scholars do not adequately concretize it to the co-operative epistemology, axiology, and taxonomy. Creating an interplay of the co-operative epistemology, axiology, and taxonomy concepts; this study has endeavoured to add to the reconfigure a circular co-operative business model canvas (CC-BMC) that is self-adapting, self-renewing for sustainability – with 13-blocks. The study also re-defines and re-integrates BMC components from 9-11 blocks of IOF-BMC (Osterwalder and Pigneur, 2010), 14-blocks of SEMC (Sparviero, 2019), and 9-blocks of CME-BMC (Mazzarol, at. al., 2018). The comparisons are highlighted in the Table below.

Table 3: Comparison of the BMC components for the IOF, SEs, and CMEs

Components Category	**Business Model Canvasses (BMCs)**			
	IOF-BMC	**SEMC**	**CME-BMC**	**CC-BMC**
Organization (Inside) or Association Side or Left Side	1. Key activities 2. Key resources 3. Key partnership 4. Cost structure 5. Social and environmental costs	1. Non-targeted stakeholders 2. Key resources 3. Key activities 4. Governance 5. Cost structure	1. Purpose 2. Key process 3. Key Resources 4. Economic and Social Performance	1. Key focus 2. Governance 3. Management (Key activities, Key processes, Key resources) 4. Cost structure 5. Sustainable economic and social performance

				for Community Stakeholders
Market (Outside) Side or Enterprise Side Right Side	6. Customer segment 7. Customer Value proposition 8. Channels 9. Customer relationships 10. Revenue sources 11. Social and environmental benefits	6. Customer and beneficiaries 7. Mission Value 8. Objectives 9. Social value proposition 10. Channels 11. Customer and beneficiary engagement 12. Impact measure 13. Output measure 14. Income	5. Member Value proposition 6. Governance 7. Membership and Community 8. Share structure 9. Profit Formula	6. Membership structure 7. Member Value proposition 8. Channels 9. Member engagement 10. Strategic partners 11. Shareholding system 12. Revenue sources 13. Sustainable economic and social performance for members

Source: Author's construct

Similar to IOF-BMC, but unlike for SEMC and CME-BMC, the CC-BMC clusters the 12-blocs into 7 clusters as summarised in Table 4.

Table 4: Comparison of the BMC blocks' clusters between IOF and CC

Business Model Canvas	Block-Clusters	Blocks
IOF-BMC	1. Infrastructure	1. Key Partner
		2. Key Resources
		3. Key activities
	2. Offering	4. Customer Value Proposition
	3. Customer	5. Customer Segments
		6. Channels
		7. Customer Relationships
	4. Finance	8. Cost structure
		9. Revenue
	5. Corporate Social Responsibility	10. Social and Environmental Costs
		11. Social and Environmental Benefits
CC-BMC	1. Co-operative scope	1. Key focus
	2. Co-operative structure	2. Membership structure
		3. Governance
		4. Management
	3. Offering	5. Member (Double-Faced) Value Proposition
	4. Co-operative member participation and market strategy	6. Channels
		7. Member engagement
		8. Strategic partners
	5. Co-operative investment system	9. Shareholding system
	6. Surplus formula	10. Cost structure
		11. Revenue
	7. Sustainable economic and social performance	12. Community stakeholders
		13. Members

Source: Author's construct

In this regard, the author reconfigures the CC-BMC as illustrated in Figure 7. The CC-BMC is a single reference business model canvas that co-operatives can use to design, generate, and/or document their business

models (i.e., a strategic management tool) based on the similarities of a wide range of business conceptualizations. With his business model design template, a co-operative can equally describe its business model.

Importantly, the CC-BMC recognizes that a co-operative is dualistic, both as an association and an enterprise – with organization and market sides of value-orientation. The model recognizes the significance of the co-operative to create, deliver and capture value for the members; but also measure and communicate value to other stakeholders, in which when such MVP (for members as patrons, investors, and members of the community) is not forthcoming, they can "destruct" the value to self-adapt and self-renew for sustainability in the current circular, social and solidarity economic environment.

The 13 blocks of the CC-BMC are (1) the Key Focus (KF) – which describes the co-operatives' target sector (whether producer-owned or consumer-owned, agriculture, housing, finance, social sector etc.), purpose (whether single purpose or multipurpose), formations as per the bylaws and the country's co-operative law) target demography (whether workers, smallholders, women or youth) and coverage areas (rural, local, municipal, district, sub-national, provincial, national, or international; (2) Membership structure (MS) – which describes the present state of membership, whether centralized or mixed, or federated, open or closed, active or dormant; (3) Governance (Gov) – which describe the structure (whether traditional, management, corporation or network model) and size of the board, and its relationship with the members and management staff; (4) Management (Mngt) – which describes key business activities (such as input supply, extension services, processing, collective marketing water or electricity management, labor), key processes (such as operation management, customer relations management system, financial control system, human resource management, rules, internal policies and matrices), and key resources (such as core competencies, team structure, physical resources, and financial resources). The governance and management components are relevant to the implementation of the business model – as they compose a value configuration that contributes to delivering value to the member. They should therefore possess specific capabilities in the form of the ability to execute repetitive patterns of value chain activities and to control various resources (tangible, intangible, and human assets); (5) Member (Double-Faced) Value Proposition (MVP) – which contrast the IOF's CVP or the SE's SVP and describes the bundle of activities and services offered simultaneously to the different member categories as patrons, investors, owners, and members of the community. The separate value proposition can be divided into one or more offerings, which are then presented to the members.

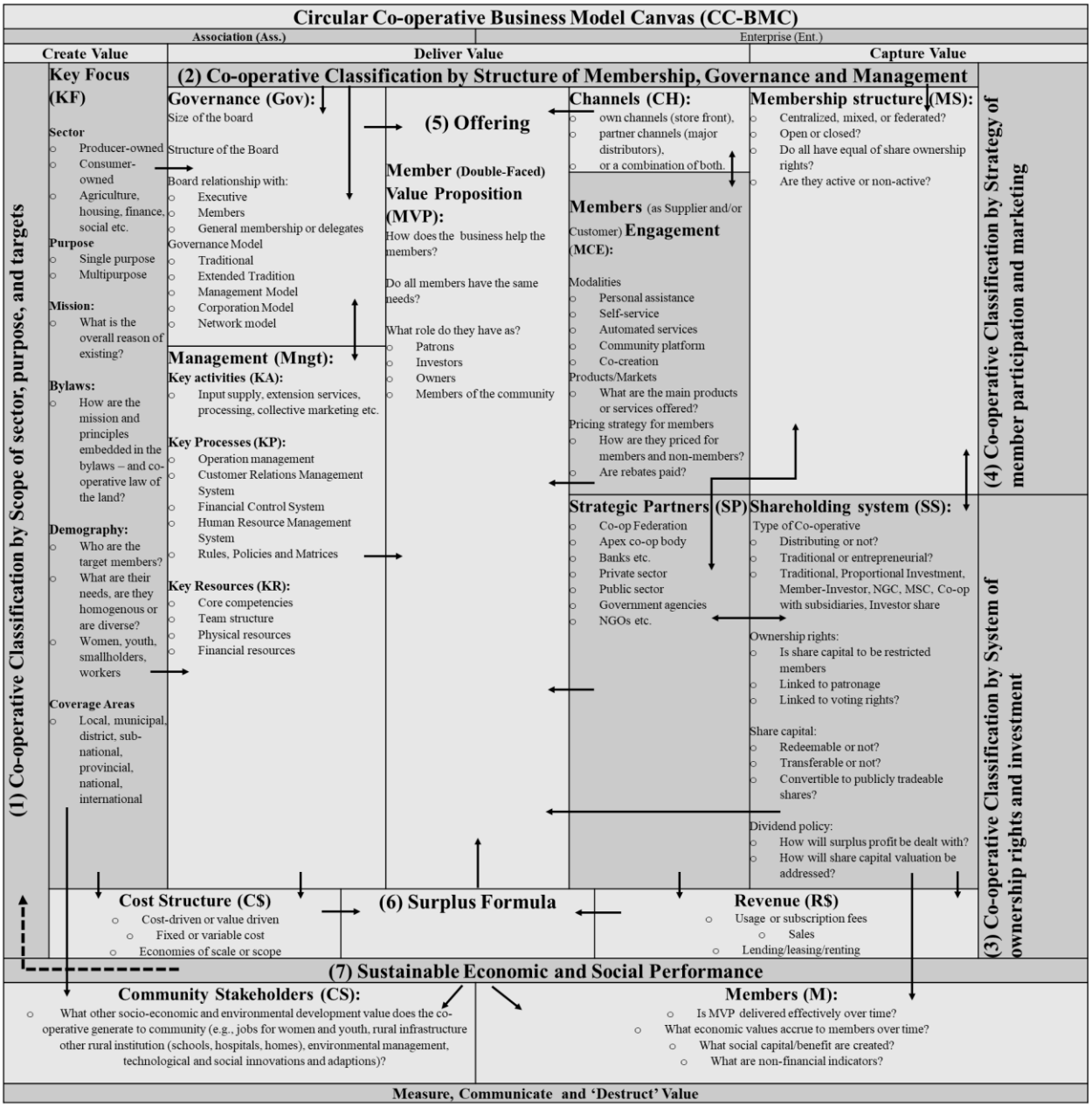

Figure 9: The Reconfigured Circular Co-operative Business Model Canvas (CC-BMC)
Source: Author's construct

Additional components are (6) Channels (CH) – which describe whether the co-operative is to reach and serve members through own channels (such as store front, agrovets, market stalls, warehouses) or partner channels (such major distributors agro-processing plants), or a combination of both; (7) members (as supplier and/or customer) engagement (MCE) – describe the modalities of engaging the members, whether through personal assistance, or self-service or community platforms, or core creation in respect to the main products or services offered and the pricing strategy for members vis a vis the non-members; (8) the shareholding system (SS) – which describe the type of co-operative by system of investment rights, whether its distributing or non-distributing, traditional or entrepreneurial, restrictive or not; (9) strategic partners (SP) – which describe the key and valuable partner network of the co-operative, whether a federation and apex body, or banks or private sector players or the government agencies or government statutory bodies or the none-governmental development organisations; (10) the cost structure (C$) – which describe whether the co-operative is using the cost-driven or value driven structure, or fixed or variable cost, or economies of scale or economies of scope; (11) the revenue (R$) – which describes source of co-operative incomes such as usage or subscription fees, sales, lending/leasing/renting fees. The cost structure and revenue stream form the surplus formula of the co-operative business model – that identifies the revenue model, the cost and benefit structure, margin model, and the

resource velocity (e.g., break-even, cash cycle, cost-profit-volume); (12) co-operative's performance on the community stakeholders (CS) – which describe what the socio-economic and environmental development value the co-operative generate to the community (e.g., jobs for women and youth, rural infrastructure other rural institution (schools, hospitals, homes), environmental management, technological and social innovations, and adaptions); and (13) the co-operative general performance on members (M), especially the non-financial indicators such as education, training, information, collective voice, and action.

The circular co-operative business modelling framework

The CC-BMC should enhance strategic thinking of the business model for a sustainable co-operative and deep co-operative identity. In the emerging circular, social and solidarity economy (C-SSE), co-operatives should adopt eth business modelling framework that reflet so. This is conceptualized in Figure 8 below.

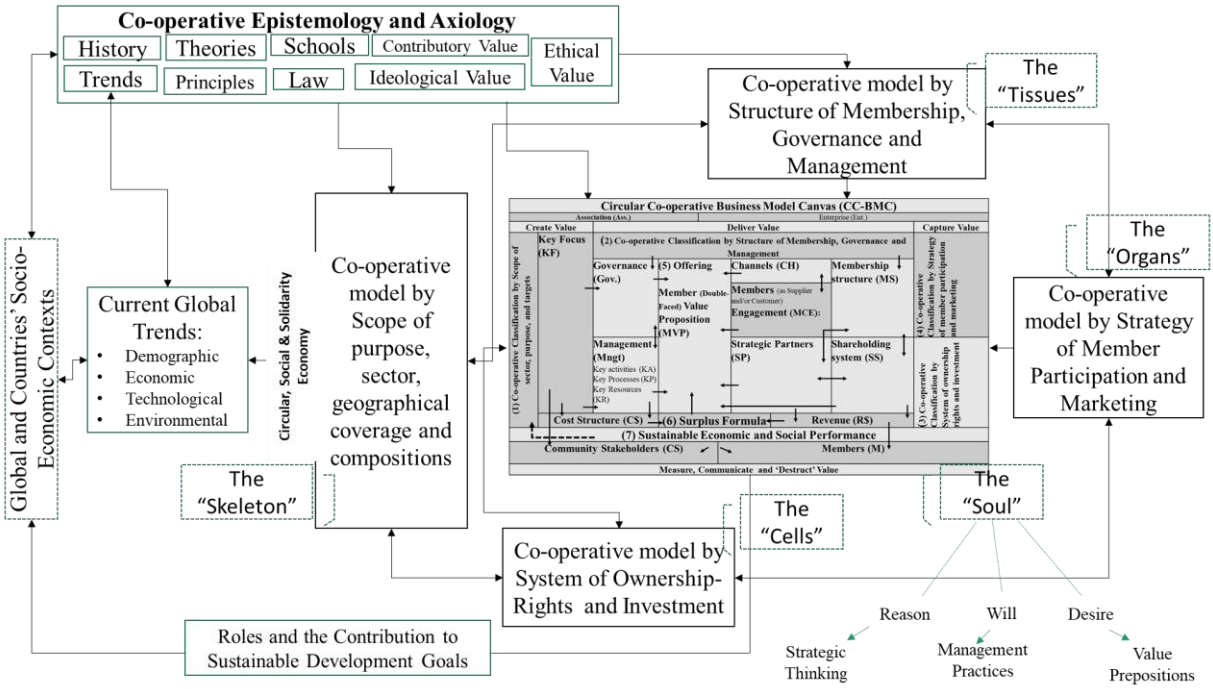

Figure 10: The Complete Circular Co-operative Business Modelling Framework
Source: Author's construct

From the framework, the global or national socio-economic structures, and systems, symbiotically influence the co-operative knowledge (epistemology) and value (axiology). Some of the national trends that influence co-operatives are demographic, economic, technological, and environmental issues. Conversely, the co-operative epistemological issues on institutional framework affect the co-operatives' development and management.

The epistemological and axiological considerations then influence the co-operative typologies (taxonomies). Four clusters of co-operatives taxonomies include the classification by the scope of sector and purpose, a system of ownership rights and investment; structure of membership, governance, and management; and the strategy of member participation and marketing. These taxonomic clusters shape the selection and design of the co-operative business model. The implementation and monitoring circular co-operative business model, in turn, influences epistemological, axiological, and taxonomical changes, and the socio-economic context of a particular jurisdiction in which they are domiciled.

A complete functional co-operative business model is analogous to the human anatomy – composed of the "body" and the "soul" as perceived in the study of the co-operative taxonomy and then co-operative business ontology. Its "body" is composed of the (1) "skeleton" that gives shape to and allows the movement (commencement) of the co-operative business model (i.e., co-operative key focus areas of sector, purpose, and coverage); (2) "cells" that mobilize and convert useful resources required for the energized co-operative business model (that is the system of ownership rights and investments); (3) the "tissues" that protect and ensure harmonious connectivity of other parts of the co-operative business model (that is the structure of membership, governance, and management); and (4) the "organs" that help in the survival and reproduction of the co-operative business model (i.e., the strategy of member-participation and marketing). The "soul" is composed of

the (1) "reason" – which connotes strategic thinking in the co-operative business; (2) "will" – which connotes management practices for strategic decision-making process; and (3) "desire" – that connotes the ultimate value propositions of the business model to the co-operative members and the stakeholder community.

This circular loop of the well-functioning co-operative business models, (just as the healthy functional human anatomy) determines the role and contribution of the co-operative business model into sustainable socio-economic development.

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