Corporate Business Incubators(CBIs) Value Co-Creation with UBIs: A Meta-Model and Integrative Review Approach

Ademola Taiwo *

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Article

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Ademola Taiwo

Independent Researcher, Switzerland; ademolataiwomba@gmail.com

Abstract

This study as part of a postdoctoral research takes a critical look into Corporate business incubators (CBIs) value co-creation by adopting a meta-model and integrative review approach. An integrative review aids the aggregation of studies fragmented with diverse views and perspective or approaches without a cogent agreeable framework; while meta-modelling aids the development of new models from an existing one. Based on paradigms with meta models from different perspectives and areas of studies (philosophical, entrepreneurial, psychological, innovation), this study aggregates them into a compounded framework of study for easier audience digest. This study uses a multi-level analyses for the methodological synthesis of CBI value co-creation concepts capturing the holistic view based on CBIs classifications taxonomy and typology, scope and pathways based on CBI activities with an outlook on evolving CBI Business Models. In addition to this, an emerging and captivating concept of cognitive schema of CBIs is applied to the model capturing the attributes, relationships and CBI sub-schemas and their value co-creation outcomes based on response to environmental conditions and innate organizational capabilities. The study identifies three meta models which are based on CBIs core components and functions, CBIs Value Co-creation and UBIs (University Business Incubators) Core Business Models, Classifications and Value Co-creation. It also addresses the complementarities towards a compounded CBI framework. The evolving model(s) would serve as the conceptual framework on which further CBIs co-creation research study with UBIs would be built.

Keywords: Corporate Business Incubators(tion); corporate entrepreneurship; Corporate Business Incubators value co-creation; meta-modeling

Introduction

Corporate organizations create different pathways towards enhancing corporate entrepreneurship in their organizations via Venturing (Internal or external), strategic renewal (transformation of processes and workflows that modifies existing models into new ones) and Innovation via recombination, modification, changes of organizational assets, competencies and capabilities towards the birth of new products, services and markets(Dess and Lumpkin, 2005; Newey and Zahra, 2009).

The concept of corporate business incubation(CBIs) or corporate intrapreneurship focusses on how corporations and large firms or MNCs (Multi-National Companies) adapt to market dynamisms, their external environment or changes via venture creation of startups or spinoffs within their corporate ecosystem. This is based on munificence (amount of critical resources and environmental assets available to them), dynamism, hostility and embeddedness which are all due to the flexibility of resource absorption, severe environmental effect for resource availability and a firm awareness and understanding of their embedded ecosystem(Civera and Meoli, 2024). Corporate organizations are required to adapt to their external environment and market disruptions and this is done via the adoption of several models of knowledge generation, co-creation and exploitation for value creation

 doi:10.20944/preprints202603.0743.v1

using open innovation via inbound-in or outbound-out or via co-creation. Other essential factors include the Parent Company' entrepreneurial strategic vision, trust and reward of individuals or group of individuals within the organization that foster or initiate innovation or venturing, autonomy and flexibility within the organization from lower cadre to upper helm of affairs to engage in venturing activities and a consistent management and leadership support for Innovation and venturing activities(Rigtering and Behrens, 2021). This is achieved with other actors within their ecosystem such as Universities innovation platforms, University Based Business Incubators(Becker and Gassmann, 2006a, 2006b), SMEs and startups (Weiblen and Chesbrough, 2015). These factors integrated together lead to favorable and sustainable firm performance, strategic renewal due to process or transformation of business strategies, business models and innovation for new products, new market entry or services.

Another critical area of examination in the CBI concept is the investigation into how CBI typologies have evolved over the years. Although(Becker and Gassmann, 2006a) highlighted types of CBIs: leverage, fast incubator, market based and insourcing in the case study of US and European based CBIs, however the early 2000s have also seen the rise of Corporate Accelerators(MARZANO, 2015; Noviaristanti et al., 2024) as extended version of Corporate Business Incubators for matured startups who could scale faster for more financial gains. Based on these myriads of Corporate Incubation practices, classifications and models, there seems not to be a newly universally accepted classification (typology and taxonomy) of CBIs and a tracking of the evolution of the existing CBIs into new ones. Interesting questions do arise such as: how have CBIs evolved due to the continual technology adaptation and digital transformation to their environment resources, assets munificence, market dynamics and their embedded ecosystem(Civera and Meoli, 2024). In addition to this, due to the continual adaptation of Corporate organizations to their external environment in co-creating value, specific capabilities(dynamic) are required and they differ by each organization and CBIs during co-creation(Newey and Zahra, 2009; Zahra, Randerson and Fayolle, 2013). In this vein, a cross industry based research should be facilitated to illustrate the differences across several industrial sectors. This should also be viewed from different contexts and embeddedness (i.e., ecosystems), RIS or NIS(Gutmann et al., 2020).

Apart from this, it has also been established from literatures that organizations' continual quest for co-creation involves interactions which creates 'complex adaptive structures which are dynamic in nature(Harris, 2021). The existence of these structures give rise to socio-structural changes brought about by cognitive, exertion of power and influence and normative expressions(Greenhalgh and Stones, 2010; MARTINS, L., RINDOVA, and GREENBAUM, 2015; Stones, 2017). An important, upcoming and interesting research area related to socio human structure is 'cognitive structures or schemas' which are concept of embedded knowledge, mode of thinking that brings about changes during CBIs value co-creation efforts. i.e., what schemas are required for CBIs value co-creation in relationship with CE (Corporate Entrepreneurship). While (Corbett and Hmieleski, 2007) elaborated on conflicting roles and events schemas (*Awareness, Willingness and Ability*) which are based on venturing activities and ideas prevention or promotion, opportunities identification and analysis and the ability to perform in the specific role during corporate venturing activities based on experiential knowledge and continuous learning(ESBJÖRNSSON and SARRI, 2018; Civera and Meoli, 2024), what other existing schemas are applicable(on a multi-level analysis) to CBIs and UBIs during value co-creation remains an opened research area. The need to also analyze and segregate these schemas based on their '*positional practices*' within the socio-human structure on a macro, meso and micro levels and their impact on both CE (corporate entrepreneurship) and CBIs are still opened for examination. (Rigtering and Behrens, 2021) discussed the positional practice effect of individuals on CE based on their point of reflexivity and transformational agencies positions and their corresponding impact on venturing in CE, applying this phenomenon to CBIs co-creation with UBIs as an example, we could argue that different cognitive structures would exist for different CBIs based on the actors' positional practices within the given schemas and the overall socio-human structures. Analyzing this from a first principle of cognitive structure schemas, we can postulate a first model

 doi:10.20944/preprints202603.0743.v1

for a basic CBI and UBI co-creation schema(CBI<->UBI) by defining its sub-schemas, attributes and relationships and mapping this with different CBI and UBI classifications with their Business models(BM) and innovation inclusive. In addition to this, specific schemas required by CBIs in developing their internal structures of Conjectures and Habitus within the CBI' socio-human structures are still areas of open research.

To achieve this, an integrative review would firstly dissect the commonalities, entities and scope of typical CBI value co-creation and secondly expand and highlight venturing pathways, business models used by CBIs towards value co-creation and thirdly aggregate related ensuing variable using both empirical and cases of CBIs value co-creation system of activities (Kötting, 2020).

Based on the initial meta modeling and integrative review, several new models would be formed from existing conceptual frameworks or models in a process known as Meta-Modeling: which is an inductive qualitative process based on a continuous iterative back and forth model identification and creation via extractions and aggregation from relevant literatures and articles (Burke, 1993).

It is intended that the meta-model and integrative review would capture extensive CBIs and UBIs value co-creation scope, pathways, schemas and socio structural structures, business models(BMs) and Business Model Innovation(BMI) in creating new conceptual and theoretical models. The next sections discuss: CBI meta models, reviews and further research agenda.

CBIs Value Co-Creation Review

Generally, value co-creation facilitation causes a shifts from: value chain to value network and ecosystem focused, individual firm strategy to a more collective and sustainable value creation strategy for the ecosystem, competition to copetition. This perspective has given rise to a new framework and insight into the component, entities, business models and interactions for value creation, however a gap still exist in understanding the scope and transition pathways during such co-creation process between these entities and several actors within typical regional contexts. While the SDL (service dominant logic) has been applied to the value co-creation in business incubators based on value creation (Clarysse, Tartari and Salter, 2011) with a triad actor(incubator, incubatees and investors) based perspective using cases of incubators within a region(Beckett and Dalrymple, 2020), further study require the inclusion of other actors within a specific regional contexts and also in different regional modes(Steiber, Alange and Corvello, 2021; Noviaristanti et al., 2024).

The concept of co-creation in CBIs and BIs and startups has recently generated more research awareness due to the involvement of the end-user or customer in the value co-creation or innovation milieu of the corporation during product development. Several perspective and dominant logics have also been identified as modes of value creation in CBIs collaborations which include the general management perspective, network product development(NPD), marketing and service dominant logic(SDL),business perspective, International Business and Entrepreneurship perspective, however there is need to examine the effectiveness and impact of such logic and perspective overtime based on a longitudinal study on corporate organizations' CBIs and UBI collaboration for value creation and their intended innovation outcomes(Ghezzi et al., 2022; Yuliana et al., 2023).

In addition to this, Rigtering and Behrens(2021) examined the impact of co-creation on organizational renewal based on an ecosystem and individuals within such ecosystem using cases of CBIs and actors within the network, a more holistic approach based on a multi-level is required that examines the impact of co-creation overtime on a meso, macro and micro levels as it has already been established in UBIs related study of the regional influence and multi-stakeholders impact on entrepreneurial activities on all levels (Baraldi and Havenvid, 2016; McAdam, Miller and McAdam, 2016). For a more holistic understanding of the value co-creation concept of CBIs and UBIs, a methodical and theoretical stance is therefore required as most of the studies in co-creation with startups are more case based compared to quantitative techniques usage. In this vein, this research would adopt the mixed method to investigate the scope, pathways and transitions of value creation between UBIs and CBIs overtime and the capabilities required for efficient and successful innovative outcomes based on a multi-level analysis and governance (Seppa and Tanev, 2011).

 doi:10.20944/preprints202603.0743.v1

This study is focused on how CBIs co-create with UBIs. However, to understand this concept, there is the dire need to develop firstly a conceptual framework that aggregates the diverse approaches of CEs and CBIs studies. Kötting (2019) took a step in this direction via a systematic review of CBIs approaches via knowledge brokering and system activities, however there is still a knowledge gap in aggregating the diverse and fragmented framework of co-creators on a multi-level analysis that also takes several context(ecosystem), socio-human structures with individual (independent) schemas or cognitive structure into consideration at the same time (Eriksson, Vilhunen and Voutilainen, 2014; Rigtering and Behrens, 2021; Yuliana et al., 2024). This study intends to bridge this gap by firstly conducting an integrative review with meta-modelling of connected extant literatures that captures the core nitty-gritty of CBIs value co-creation i.e., understanding of the different types of CBIs based on existing classifications (typology and taxonomy), CBIs system of activities and Business models(innovation), extended socio-structural analysis based on impact of individual cognitive schemas on CBIs structure using multi-level analysis. Secondly, a meta-model is used to develop new models based on an integrative causal model of related extant literatures.

Owing to the different perspectives within such ecosystems in differing industrial sectors, it is pertinent to investigate the transition across several CBIs industrial sectors and UBI forms. The aim of this research is to aggregate and investigate varying CBIs' case studies, their scope, pathways and diverse perspectives that aids value co-creation between with UBIs as well as the sustenance of the value co-creation overtime based on market dynamics, industry and government regulations or environmental forces. The following research questions are developed to guide the research study:

(a) What are the scope, pathways and metrics that applies to Corporate CBIs and Universities Based Innovation platforms (UBIs, TTOs, Spinoffs) value co-creation?
(b) How do or how can Corporate CBIs and UBIs sustain their value co-creation overtime with market dynamics, policies and regulations in different industrial sectors and UBI forms based on the CBIs innovation metrics. The next sections examine the Meta-Model development and discussions.

Conceptual Framework Development

Developing Meta-Models

Using extant literatures from management, innovation, entrepreneurship and other cross industry articles (healthcare, creative, fashion and luxury), conference papers and research projects covering the scope of Corporate entrepreneurship and intrapreneurship, CBIs cases, CBIs value co-creation with startups and Universities, Three Meta Models are developed and are discussed below. A combined sixty (60) extant literatures were selected using Google and EBSCO database across the study overtime for both Models I and II as shown in Appendixes A and B.

Meta Model I: - CBIs' Core Components and Core Function

Model I as shown in Figure 1, illustrates CBIs components with antecedents, knowledge and learning, structural morphology, organizational (parent companies') strategic and entrepreneurial factors and their capabilities. This model highlights the core functional elements of the CBI, its core characteristics and function e.g., knowledge brokerage, intelligent innovation builder and tech transfer. Generally, CBIs antecedents are based on several environmental factors and the need for the CBI to adapt, renew and transform their parent company' venturing and Corporate activities. The key element is adaptation via Innovation i.e., the adaptation to availability of critical entrepreneurship resources usage and leverage on regional ecosystem advantage as in the cases of Eskom and Lenovo Corporate Incubators (Steyn, 2009; Yang, 2024) by using sustainable development advantage in designing cooling systems and agents for data centers while also partnering with Universities for idea commercialization and venturing programs. Parents Companies are also engrossed in the 'innovation dilemma' which involves choice between the entrepreneurship market strategy combination(exploration or exploitation)(Gonthier and Chirita, 2019). This poses an

 doi:10.20944/preprints202603.0743.v1

intriguing and importantant question: Why do PCs (Parent Companies) engage CBIs for Corporate Entrepreneurship(CE)? CBIs are generally instituted based on the PCs Corporate Entrepreneurship mission (Becker and Gassmann, 2006a) and the structure, processes and availability of assets(resources) and competencies to: leverage on new technologies or market opportunities, burgeoning potential to spin-off and scale fast using R & D assets of the PC, the ability to create new process or potential acquisition by other firms. An important element and advantage for CBIs and their PCs is the fit and alignment of the startup or partners, coupled with accessibility to critical resources within the organization, a regional ecosystem embeddedness that facilitates resources and assets dynamic flow with low level of hostility in absorbing these resources thereby enabling the Parent Company CE to flourish even within dynamic markets (Gonthier and Chirita, 2019; Civera and Meoli, 2024).

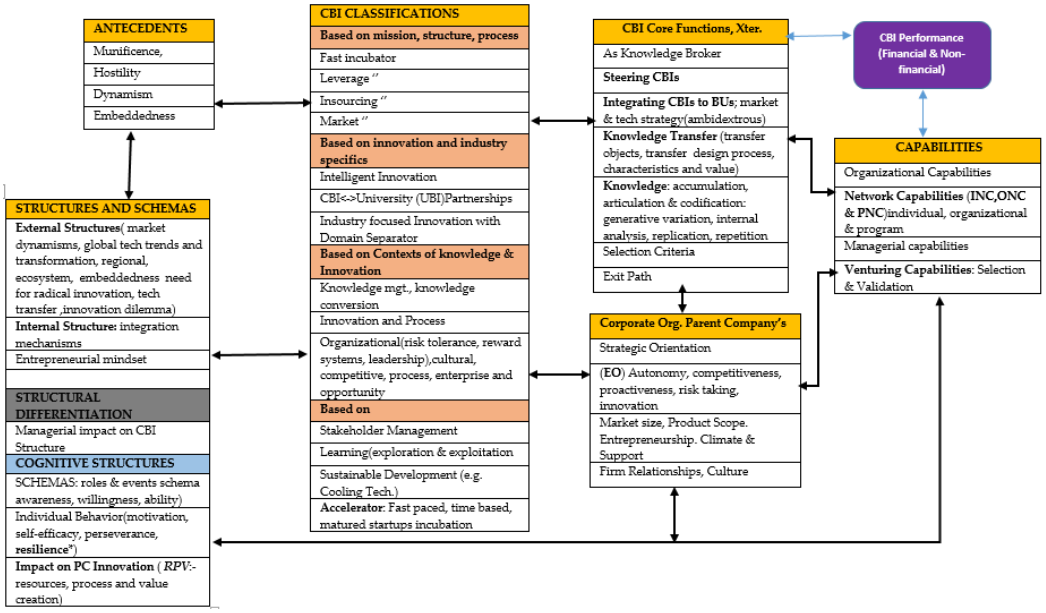

Figure 1. Meta-Model I: - Corporate Business Incubators: their antecedents, classifications, capabilities and Parent companies' structure and organizational factors.

Furthermore, CBIs core function include Knowledge brokerage (tacit and codified) and implicit and explicit knowledge types to the PCs and immediate regional ecosystem and this is achieved via a knowledge and innovation contexts comprising of: knowledge accumulation, management, articulation, and codification of knowledge. New knowledge acquisition require (ACAP) absorptive capabilities(Newey and Zahra, 2009) development by the PCs from the CBIs and this depends on a paradigm shift and synergy in the knowledge facilitation process via exploration or exploitation or a combination of the two(ambidextrous) with their innovation context (market or technology) depending on the PC's strategy. For a perfect knowledge flow, synergy across BUs (Business Units) and a structured knowledge transfer process during Incubation is essential as this improves the PC's EO (Entrepreneurial Orientation) in terms of competitiveness and autonomy of knowledge and innovation. For successful knowledge transfer, the transfer definition, objects, characteristics and value must be defined as well as how the new knowledge integrates with existing business models(BMs).

CBI Classification

CBIs are generally classified under Model II of BIs i.e., for profit incubators (Grimaldi and Grandi, 2001) compared to UBIs that could be either for profit or non–profit. CBIs emergence overtime has evolved due to variation in PCs' mission and structures (Becker and Gassmann, 2006b,

 doi:10.20944/preprints202603.0743.v1

2006a), quest for continual learning (Weiblen and Chesbrough, 2015), knowledge and innovation contexts(Steyn, 2009) with organizational management and culture, selection criteria for startups and exit path strategies.

Becker and Gassmann (2006a) classified CBIs into four categories in a case study of US and European CBIs: fast incubators, leverage incubator, market based and insourcing incubators. These are based on their approaches towards innovation, ideas and R & D commercialization either for fast profit, spin-off or development of new products into the market, or scouting for new ideas and spinning in startups that fit and align to their core strategies) in a bid to innovate and expand their markets. Other Tech based approaches include a core knowledge and Innovation contexts development integrated with organizational culture, opportunities exploration, increasing competitiveness with leadership and management contexts(Weinert et al., 2024). Core CBIs incubation activities still involve strategic selection criteria such as a disruptive innovation by the startup, ability to generate and scale to $100m, fit and alignment with the PCs strategies as seen in the case of a major high-tech company and exit path strategies which defines the mode of incubation(Ford, Garnsey and Probert, 2010).

An interesting phenomenon termed 'Corporate Accelerators'(Noviaristanti et al., 2024) have also sprung up which are fast–paced and shorter time-based incubators with more attractions for matured startups, however more investigative research is still required on similarities in their core structures and value creation with typical Corporate Business Incubators (CBIs).

Comparism could be made and data collected for different Corporate Accelerators and CBIs for their value co-creation paths and perspectives. Other research questions areas include:

(a) How do the different CBIs classifications and contexts impact their value co-creation activities and PCs (Parent Companies) objectives and expected outcomes?
(b) How do CBIs and PCs develop specific capabilities required for each CBI classifications overtime based on their goals, objective and expected value co-creation?
(c) How could Analog reasoning and Conceptual Combination components of Cognitive System be applied to the CBIs classifications i.e., how could a typical classified entity (source) be transformed into a targeted classification? e.g., how could a PC and CBI transform from a Market based CBI type to a Fast Incubator CBI, or Leverage CBI to Insourcing overtime?
(d) What schemas, capabilities, CBIs core characteristics and PCs entrepreneurial ecosystem and mindset are needed to effect these changes overtime?

CBIs Structures and Schemas

MARTINS, L., RINDOVA, and GREENBAUM (2015) and Corbett and Hmieleski (2007) established the concepts of Schemas in relationship with events within CBIs and how individuals perform their roles based on different individual cognitive schemas, resources at their disposal and how schemas based on the constituents' objects and relationships could be combined to form other targeted schemas. It's already established based on the Cognitive theory(Corbett and Hmieleski, 2007; MARTINS, L., RINDOVA, and GREENBAUM, 2015) that the sum total of behavioral patterns could be ascertained based on individual's behavior and effect of the environment. Rigtering and Behrens (2021) examined individual level impact based on reflexivity and the transformational effect on CBIs outcome using Structuration theory, however still open for research discussion is the need to examine collective behavioral and decision making patterns and impact overtime e.g., for a Business Unit on CBI outcomes. In addition to this how Business Units (e.g., Innovation) and CBIs build resilience and adaptation during co-creation e.g., with UBIs overtime due to different environmental and ecosystem external conditions and structures as defined by (Gonthier and Chirita, 2019) are still opened research gaps. Typical research questions involving Schemas and CBIs co-creation with UBIs would include:

(a) How do CBIs develop resilience during co-creation while adapting to resource, assets, competencies and capabilities orchestration overtime?

 doi:10.20944/preprints202603.0743.v1

(b) What collective schemas are required by CBIs with BUs (Business Units) of Parent Companies(PCs) overtime in developing successful value co-creation outcomes?
(c) What schemas build up value uncaptured during co-creation and how does this impact on Stakeholders? OR The effectuation of Uncaptured value during CBIs and UBIs co-creation and impact on stakeholders' expectations and benefits?
(d) How could different Cognitive Schemas required during value creation be modelled using mathematical equations, algorithms and machine learning applications(ML) with AI?

To facilitate an ontology driven schema framework for CBIs, an assumption would be made that the internal structures of CBIs (conjectures and habitus) for adaptation to their external environment and market dynamisms are developed via specific 'schemas' that builds up to 'specific conjectures (norms, processes, brands, reputation etc.) and 'habitus' (*the way we do things: culture, mindset, way of life, thought patterns*). The QNS Quadripartite Network System (SST) (Greenhalgh and Stones, 2010; Makrygiannakis and Jack, 2018; Taiwo and Provodnikova, 2025) comprising of the external, internal structures, actant or active agents and outcomes is applied to selected CBIs case studies(Steyn, 2009; Ford, Garnsey and Probert, 2010; Bal et al., 2023; Yuliana et al., 2023; Yang, 2024). The initial output is shown in Table 1 below.

Based on the QNS output, the internal structures are facilitated by the conjectures and habitus developed overtime to combat the external conditions and influences of market dynamisms, regulations, quest for new market entry, adaptation to tech trends and sustainability by the active agents' incubators, parent company stakeholders, investors, venture capitalists etc. with outcomes such as stable profitability and revenue, continual learning, knowledge accumulation for transformation, lean process management, Unicorn startups creation.

The Internal structures could be further subdivided into *network, organizational and individual level* of **conjectures** and **habitus** or **macro**, **meso** and **micro** levels of 'Conjectures' and 'Habitus'. This implies that: Internal structures of Innovative collaboration, knowledge and innovation contexts and Unicorn startups creation would be at the **macro or network level** within the internal structure, while process dynamism via intelligent operational and strategic coordination, sustainable tech development, strategies (ambidextrous and blue ocean), entrepreneurial climate(PC and CBI) exit path (startups) would be at the **meso** or **organizational** level and finally competencies development, entrepreneurial mindset and managerial decisions would be at the micro or individual level of the Internal structure of Conjecture and Habitus of the CBI.

This serves as a foundation on which the schema framework would be developed.

We could postulate that: ''***typical CBI and startups individual level or micro schema within the Internal socio-human structure will include schemas such as entrepreneurial mindset, managerial decision making, employee branding***". In addition to this, organizational or meso level schemas within the internal structure of the CBI would ***include process dynamism* via *intelligent operational and strategic coordination, sustainable tech development, strategies (ambidextrous and blue ocean), entrepreneurial climate PC and CBI) exit path (startups)*** *and* ***at the network or the macro level of the internal structure, schemas such as (innovative collaboration, Unicorn startup creation, Knowledge and Innovation contexts) would exist.*** We could represent these statements mathematically below. These schemas should be measured overtime and aggregated together and built towards CBI' the internal structure (Conjectures and Habitus) overtime.

 doi:10.20944/preprints202603.0743.v1

$$\mathbf{Ind}_{sch} \sum (\text{Entp. Mndst(em), Mgr. Dec.Makng(mm), Comptn.Dev(cd).})$$

$$\mathbf{Org}_{sch} \sum (\text{Ops Eff.(of), Entp. Climate(EC), Strategic focus \& alignment, sustainable tech dev.(std), successful exit path(SEp), successful Unicorn startups created(SUc))}$$

$$\mathbf{Net}_{sch} \sum (\text{Innovative collaboration(academia), Unicorn startups creation, Innovation and knowledge contexts)}$$

Typical questions and assumption to guide the schema framework development include:

(a) What cognitive schemas are required for the development of Unicorn startups in CBIs based on the intelligent operations, lean management coordination and strategic market exploration?
(b) What are the schemas required for managerial decision making in developing lean-startup CBI processes?
(c) What levels of entrepreneurial mindset and climate are required for Unicorn CBIs startups creation?
(d) What schemas are required for innovative collaboration with the academia (Universities, UBIs)?

Table 1. QNS SST Applied to CBIs case Studies (C-Conjecture, H- Habitus).

External Structure
Fierce Competition, Market dynamism, technology trends, need for new market entry, Sustainability
Internal Structure
innovative collaboration (academia)(**C**), unicorn startups creation(**C**), knowledge and innovation contexts(**C**), process dynamism via intelligent operational and strategic coordination(**C**), sustainable tech development(**C**), strategy(ambidextrous, blue ocean) (**C**), selection criteria(incubatee/startups) (**C**),Exit path (startups) (**C**), employee branding(**C**) and (**H**), competencies development(C and **H**), CBI managerial decision(**C** and **H**), entrepreneurial mindset(**H**), entrepreneurial climate**(C)**
Actors: Startups(incubatee), regional government, MNCs, firms, parent companies(PC),investors, Universities, UBIs, CBI managers and management, Business Units(BUs),Venture Capitalists,
Outcomes
Ideas commercialization, Unicorn startups creation, lean process management and integration, continual knowledge accumulation and lifecycle for transformation, stable financial performance and profitability

 doi:10.20944/preprints202603.0743.v1

CBIS Value Co-Creation: Model II

CBI Value Co-Creation Key Components: (Antecedents, Drivers, Enablers and Outcomes)

(CBIs) Value Co-creation involves several actors within the PCs ecosystem (business, innovation, resources and technology) stakeholders (incubator, incubatee, investors, regional government, firms and industries, SME and startups) interacting and engaging based on the available PCs assets, resources, competencies and capabilities in creating value. Value co-creation evolve or are enabled based on information or knowledge seeking, compatibility, interests(mutual), trust and commitment of the actors involved in establishing goals and objectives towards their expected value. Realized Value co-created could differ from the expected value based on the sets of activities and processes involved in the value during Co-creation. These activities include: adapting, bridging and relating based on the processes of relating and communicating (Pojiltov and Mainela, 2025). In divulging the value co-creation phenomenon in CBIs, it is pertinent to understand the different perspectives, logic and theoretical underpinnings or views used in the Value co-creation concept. The SDL has been the dominant perspective used in explaining the value co-creation concept (Hughes, Ireland and Morgan, 2007; Beckett and Dalrymple, 2020; Soltanifar et al., 2023; Yuliana et al., 2024). Beckett and Dalrymple (2020) facilitated the value co-creation in business incubators while expatiating on the constituents' ecosystem components (made of business, knowledge, innovation and technology), participating actors, Incubator's business model, stakeholder perspectives and customer satisfaction, however several other actors within the ecosystem based on a multi-level analysis and governance are still required to ascertain stakeholder's expectations and benefits during value co-creation based on a longitudinal study.

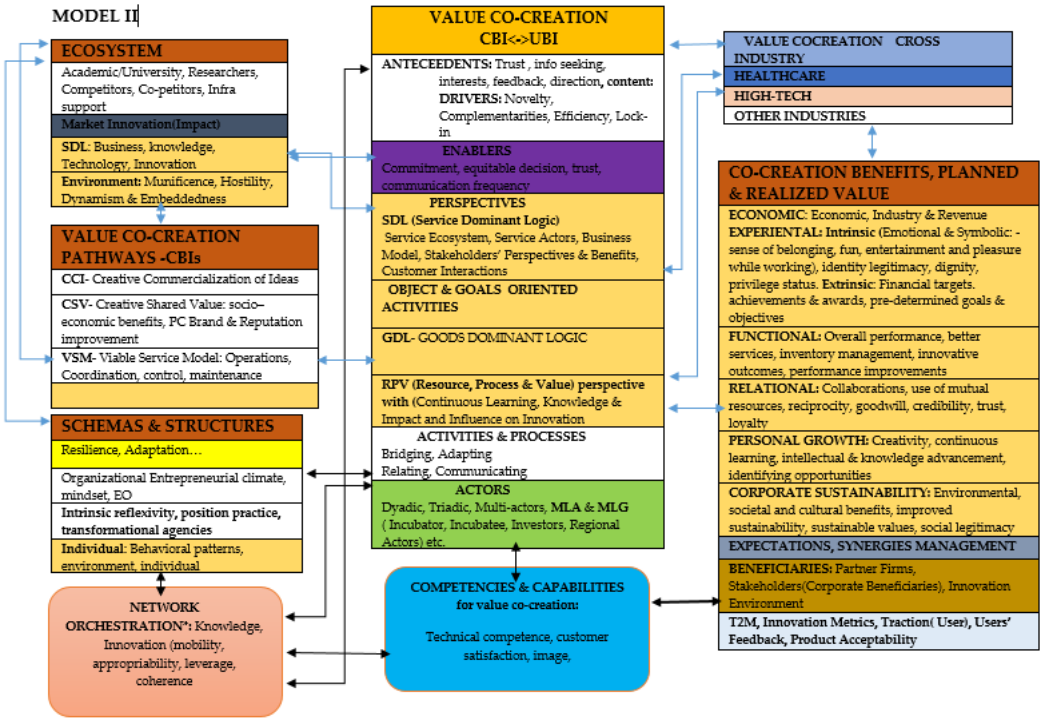

Figure 2. Meta Model II: - Corporate Business Incubators value co-creation.

Other perspectives and logic used include: the **GDL**(Good Dominant Logic) in compared with **SDL** (Yuliana et al., 2024) in the case of a developing country based corporate high-tech incubator, **Object and Activity oriented** with Parent Company goals and Innovation actors based on Innovation and value co-creation within the healthcare Industry (Pojiltov and Mainela, 2025), however further application of these perspectives are required in cross-industries based on the themes and concepts

 doi:10.20944/preprints202603.0743.v1

generated with respect to the healthcare industry. While these new perspectives have generated new waves of research ontologies and concepts, CBIs and PCs have also engaged and adopted different modes of value co-creation in adapting to their immediate environmental conditions. Such value co-creation include the **Collective Commercialization of Ideas(CCIs)**(Eriksson, Vilhunen and Voutilainen, 2014) as seen from the case of a Finish Incubator with Regional, Corporate and University collaboration and participation in business development, problem solving and joint project facilitation for new products development with the parent companies and SMEs involved. CCI incites a different CBI and UBI co-creation model based on the immediate need of the regional companies also facilitated based on EU entrepreneurship projects in the Scandinavia. Thereby raising more research avenues to understand the regional contexts influence of different companies in adapting to their external conditions in facilitating corporate entrepreneurship and value co-creation with UBIs and also the suitable Business models to adopt in specific cases for value co-creation. In addition to this, Weinert *et al.* (2024) examined the **CSV (Creative Shared Value)** concept in a study of a Polish CBI value co-creation with Universities. With expected socio-economic benefits, improved company branding and reputation, coupled with corporate social responsibilities and sustainable development, however a multi-case CBIs' CSV application based on a multi-case study is still required.

Gonthier and Chirita(2019) using a multi-case study applied the **RPV(Resource, Processes and Value**) perspective was applied in the case study of CBIs and PCs intrapreneurship and the impact on innovation capabilities based on the CBIs knowledge accumulation, articulation and codification using generational variation, internal knowledge analysis, replication and repetition of knowledge accumulated and its direct impact on the resources, processes and value creation on the innovation capabilities of the Parent Company.

While these perspectives open up new paradigm in the value co-creation concepts, managing synergies and expectations of the stakeholders on both ends is critical. Myriads of expectations (flurry, implicit and explicit) arise based on diverse needs and expected benefits (MARZANO, 2015; Gustavo et al., 2021). dos Santos *et al.* (2023) expanded more on beneficiaries of CBIs value co-creation using the case of organizations in the Southern Part of Brazil. The authors specified three major beneficiaries based on several competencies and capabilities developed. These include: Corporate Beneficiaries (created value direct beneficiaries within the firm, the innovation environment and Partner Firms). These benefits are created based on the incubator (managers') technical, managerial competencies as well as corporate brand, reputation and satisfaction. Due to this, expected value might be different from realized value and this requires further investigation into the discrepancies between the two(Bal et al., 2023). Realized Value co-created could be classified into: economic (revenue and industry growth), experiential (sense of belonging, rewards for achievements and awards), relational (emotional and symbolic, identity), functional (improved performance, lean management and sustainable(corporate), personal growth(intellectual advancement and improved knowledge which includes societal, environmental, legitimacy (Bal et al., 2023). However further clarifications are required for other value and metrics realized across different industries and the impact of uncaptured value on stakeholders' or the causation and effectuation overtime of uncaptured value during co-creation on CBIs and their Parent Companies(PCs)(Steiber, Alange and Corvello, 2021).

Another interesting perspective that requires further examination is CBIs network orchestration during co-creation. Generally, actors engaged in CBIs Co-creation interacts for knowledge exchanges and innovation development. Noviaristanti *et al.* (2024) examined network orchestration in corporate accelerators extracting the dimensions of knowledge mobility, appropriatability, network stability, innovation coherence and innovation leverage based on the dimensions of Structures, Content and Governance to create **Novelty** (what is required for new products and markets), **Efficiency**(areas of improvements and assets combination required), **Complementarities**(what processes and activities could be combined to further improve performance and facilitate new product development) and **Lock-in (**how do they continually create value for customers and stakeholders' retention). However,

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how these factors relate to Corporate Business Incubators in different regional contexts needs to be further examined.

CBIs Value Co-Creation Metrics and Performance Assessments

Extant literature reviews and authors have illustrated and expanded on the wide gap in the CEs and CBIs value co-creation metrics and performance measurements. Steiber, Alange and Corvello (2021) examined value co-creation between corporate organizations and startups using **financial, platform traction, innovation, product acceptability** via pre-orders and user platform tractions as metrics for a product and service acceptability based on a qualitative study of FirstBuild a GE Appliance based corporate incubator co-developed with Universities. The metrics used in this study enabled the PC and CBI to assess, adapt and easily adjust their product offerings in the market based on fast user feedback. With this, the Time to Market(T2M) which was critical for the company was shortened. While these metrics allowed the CBI and Parent company in this study to shorten their T2M and easily assess their value co-creation activities based on the said metrics, the authors still suggest the need to discover other suitable metrics for CBIs co-creation assessments based on stakeholders' expectation and expected benefits.

In another review, the stakeholder perspective was used to expatiate on the expected and realized value during co-creation. Bal *et al.* (2023) highlighted five co-creation value based on an extended review across Marketing, Entrepreneurship, Innovation and Product Based Literatures. The various Co-creation values (expected and realized) factors include: **Economic Value** (financial, revenue and industry growth), **Experimental Value** i.e., based on stakeholders' experience (which was further classified into intrinsic (emotional and symbolic) and extrinsic), **Personal Growth** value (Intellectual advancement and Knowledge development), **Functional Value** (Performance Improvement, reducing waste (lean management), efficiency) and **Corporate Sustainability**(social, human, environmental) sustainability, identity, legitimacy). It is also pertinent to note that in the case of unaligned realized and expected value co-creation, a value destruction, uncaptured or spillage occurs.

While these classification shows a more extensive and expansion reach, there is a dire need to still examine these value captured in the context of different Corporate Incubators in diverse industries or industrial sectors taking a deeper look at their business model (innovation) and value chain. In addition to this, how organizations develop the key objectives, suitable metrics and KPIs (for these metrics) are still opened for further discussions. In addition, Economic value could imply different meanings for several CBI and UBI modes or business models as the co-creation could be non-equity or equity based as seen in the CBI typology (Becker and Gassmann, 2006a) and UBI classifications (Business Models, typology) (Taiwo, 2026). **Functional Value Co-creation** are also dependent on specific dynamic capabilities (Teece, Pisano and Shuen, 1997; Zahra, Sapienza and Davidsson, 2006; Inan and Bititci, 2015; Taiwo, 2024, 2026) of specific CBIs, PCs and the partnered UBIs during co-creation. These capabilities are multi-dimensional and requires measurement overtime. This calls for clear investigation of several CBIs and UBIs models with their specific capabilities(dynamic) that aids Functional Value Co-creation**. Experiential Value realized in Co-creation (intrinsic and extrinsic)** involve both psychological and physiological balances which are dependent on individual cognitive behaviors and environmental (organizational (PC, CBI, Innovation Ecosystem)) and this would influence the final value realized captured overtime. In this vein, an integration of both schemas and socio-human structural analysis in determining **Experiential Value co-creation captured** is essential**.** Important questions to be raised in these cases would include:

(a) How does the CBI and UBIs ecosystem and environment impact stakeholders' individual cognitive Intrinsic values (based on emotions and symbolic) vis-à-vis the **Experiential Co-created Values** (e.g., sense of belonging, fun, entertainment and pleasure while working), identity legitimacy, dignity, privilege status)?

 doi:10.20944/preprints202603.0743.v1

(b) How could we apply MMSST (based on Strong Structuration Theory(SST), Resilience, Adaptation and Behavioral Patterns from Adjen's theory) and Dynamic Social Network Analysis (DSNA) (Taiwo, 2025) to Experiential value co-creation.

(c) What further metrics are required by different CBIs modes and business models for CBIs co-creation performance measurements? And how can they be measured overtime in a multi-dimensional and dynamic way?

Furthermore, based on the meta model developed the following propositions would aid our methodological approach:

Proposition I. *The scope, pathways and perspectives of value co-creation between CBIs and UBIs would differ across different industrial sectors.*

Proposition II. *There are variations in the co-creation value between CBIs and UBIs overtime and these would differ based on diverse intrinsic and cognitive behaviors of actors in different ecosystems based on a multi-level and governance analyses.*

Proposition III. *Several other metrics could exist outside financial and innovative metrics for CBIs and UBIs co-creation value measurement and these would differ by Industry.*

MODEL III

UBIs: Their Business Models Classifications and Co-Creation

While this research project concentrates more on CBIs perspective than the UBI, however to substantiate our meta model, there is the need to examine the UBI complexities and core elements through which CBIs can decide on their co-creation goals and activities. To understand this perspective in detail, three major literatures were combined to develop MetaModel III (Inada, 2024; Taiwo, 2024, 2026; Taiwo and Provodnikova, 2025). They provide comprehensive view of UBIs, their core components, capabilities, schemas and structures, co-creation and business model (classifications, innovation and adaptation). These two authors have integrated the comprehensive UBIs concept into simplified details for easier examination. Figure 4 below shows the integrated format for the UBI concepts and co-creation.

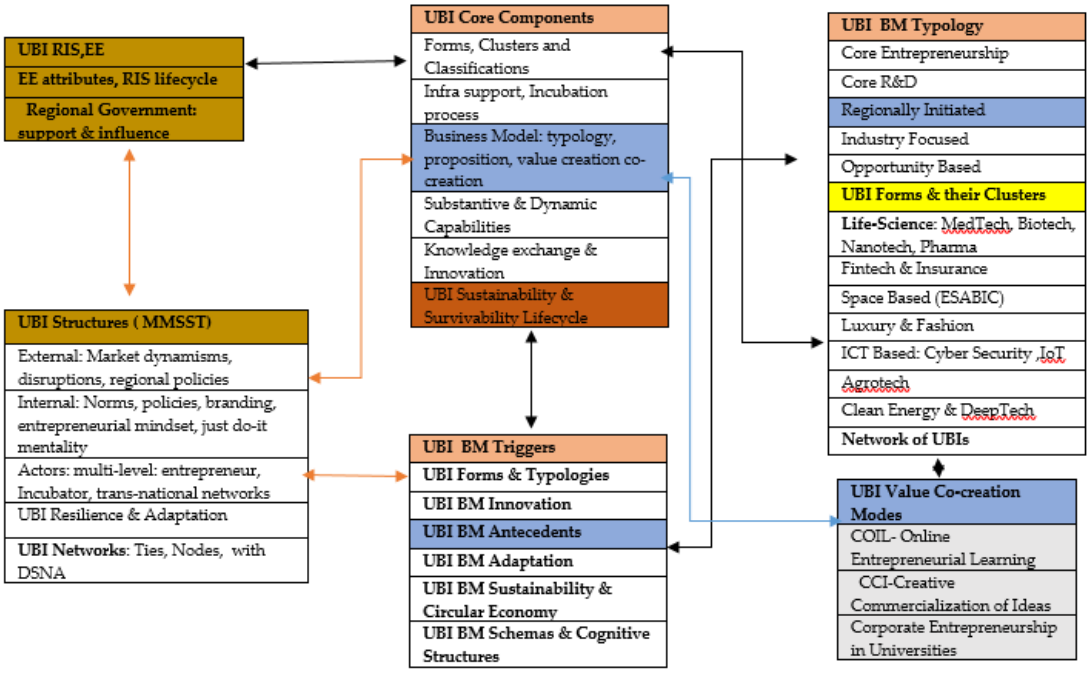

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Figure 3. Integrated UBI Components, Business Models Characteristics, Co-creation and Classifications.

Discussions and Further Research Agenda

Having established the meta models, the core research questions highlights what pathways, scope and perspectives applies to CBIs i.e., how do value co-creation occur in CBIs and what different theoretical perspectives or logics have been used to study CBIs Co-creation and how can CBIs sustain the value created overtime based on different industrial sectors and several market dynamics and external conditions. Firstly, as seen from **MODEL I**, CBIs co-creation pathways and scope are initiated via the Value Co-creation antecedents, enablers and drivers based on the CBIs actors' engagement in their ecosystem. These include: Trust, loyalty, information seeking, credibility, feedback, direction **driven by** equitable decision, communication frequency and commitment as shown in Figure 2. Various perspective used include SDL, GDL, Object activity and goals oriented, Service System Model from **Stafford Beer' Model(BSM**) based on the environmental, operational and strategic co-ordination of activities and **the Network Orchestration** perspective. However, these perspectives require further applications to different regional contexts and industrial sectors. For example, the Object activity and Goals oriented perspective was applied to a Nordic Region and the Healthcare Industry, however further generalization is required with other industrial sectors using multi-actors network engagement. The Network Orchestration perspective also require further comparism with a CBI as a Corporate Accelerator was used in the study. Further examination of how the **Network Orchestration dimensions** of Knowledge mobility, appropriatability, network stability, innovation leverage and coherence commensurate with a typical CBI's Novelty, Complementarities, Efficiency and Lock-In activities is still required.

Secondly, CBIs' ecosystem which could be classified based on resource availability and orchestration into (*Munificence, Hostility, Embeddedness and Dynamic*)(Civera and Meoli, 2024), comprising actors such as Researchers, Universities Academia), Consultant, Competitors and Co-petitors (Gustavo et al., 2021; Borges and Silva, 2022) i.e., different stakeholders with varied views, influence and impact within an ecosystem of varying (cultural, material, social. Economic)(Brown and Mason, 2017; Spigel, 2017). In this vein, adaptation is required to be develop on multi-levels: CBIs, UBIs as organizations, Parent Companies(PC) and their stakeholders. This is required at the Individual Cognitive Levels, (Collective Organizational Business Units(BUs) and the multi-network levels including the Parent company and external environment. While Cognitive Schema theory(Corbett and Hmieleski, 2007) have been consistently applied at the individual level based on decision making (managerial), reflexivity for transformational agency impact on Corporate Entrepreneurship(CE)(Rigtering and Behrens, 2021), individual roles and events based on their abilities and willingness to perform a task or willingness to take on entrepreneurial activities based on their awareness of their innate abilities and environmental resources(Corbett and Hmieleski, 2007), other Schemas are required to be developed based on individual adaptation, resilience development (Taiwo and Provodnikova, 2025) for CBIs during value co-creation and also on a collective business unit level. Typical research questions would include: *How do BUs decisions (*e.g., *Innovation Unit of the PC) affect CBIs and how do CBIs adapt to their impact during value co-creation? What schemas are required by PC and CBIs on BUs level for value co-creation that triggers stakeholders' benefits and captured value? How do these Schemas differ across industries and CBIs?*

Thirdly, Figure 3 has elaborated on the major value captured during co-creation, however more metrics are required to justify how these value can be monitored and analyzed by CBIs and PCs. To achieve this, Figure 4 shows the value co-creation lifecycle across taking important factors and variables into consideration.

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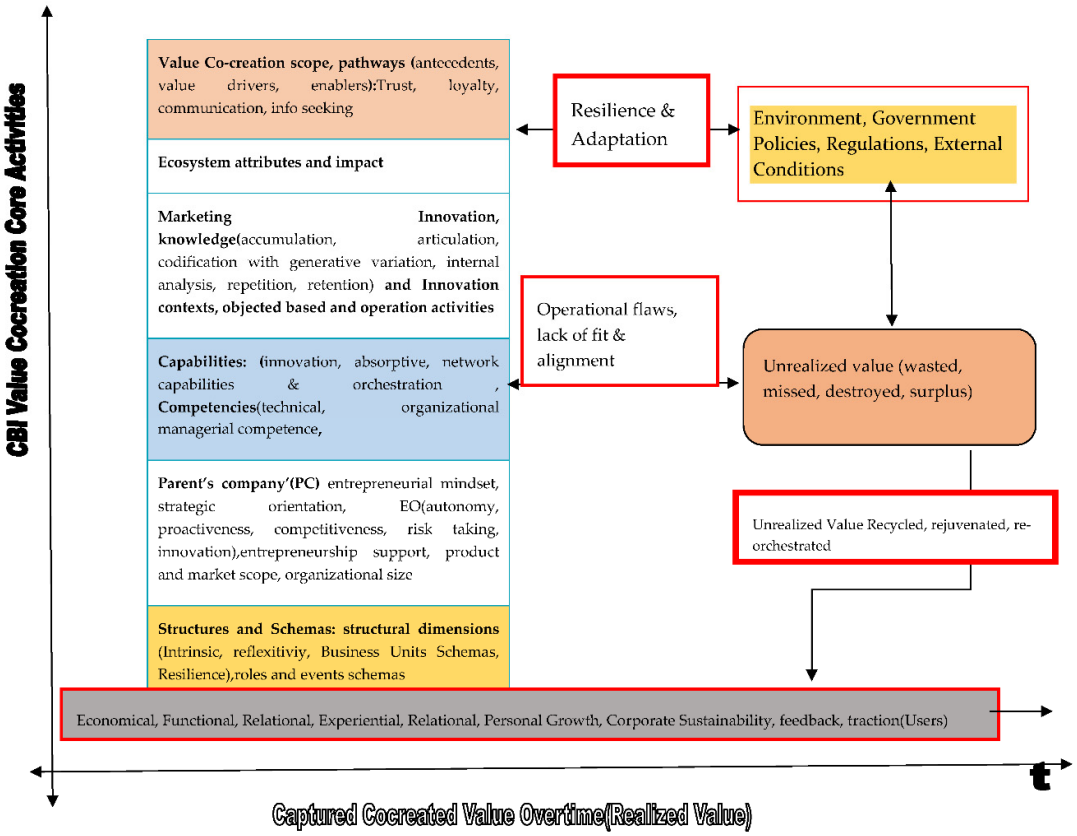

Figure 4. Integrated Model for CBI Value Co-Creation Lifecycle.

Using the integrated Value Co-creation lifecycle as a guide, the total value created is a composition of the ecosystem attributes, parent company' entrepreneurial mindset, orientation (strategic and entrepreneurial), support, market size and scope, capabilities and competencies, structural schemas and dimensions on a multi-level analysis as well as the operational activities(based on implementation, co-ordination, monitoring and control, intelligence (strategic) and environmental policies, regulations, governmental impact, norms and industry standards. In addition to this, network orchestration and impact of stakeholders, capabilities required for developing and orchestration these networks, adaptation and resilience development to the external conditions, stakeholders' impact and the accompanied external conditions schemas. In an ideal environment, this is expected to give rise to **'expected value' (planned value),** however owing to operational flaws, wastage, lack of lean management etc., expected value might not be equal to the realized value. In such cases there would be some uncaptured value(Yang et al., 2017) during the business model value co-creation activities. In such cases, it is expected that the CBIs with their parent company would rejuvenate and re-orchestrate wasted or surplus value back into the system via their operational workflow activities. This is where KPIs and OKRs establishment for the captured value (*economic, relational, functional, personal growth, experiential and corporate sustainability and others*)(Bal et al., 2023) must be developed by each CBI during their value co-creation activities.

A mathematical and algorithm could be synthesized and a proposition made such that: ''**the sum total of value co-created could be defined as the integral sum of the ecosystem attributes, capabilities, competencies, structural schemas impact, entrepreneurial (mindset, orientation, support), adaptive and resilience indices, continual learning and knowledge facilitation for transformation, degree of fitness with co-creation partner(in this case the UBI) etc. excluding operational deficiencies, lack of fit with UBI''.**

 doi:10.20944/preprints202603.0743.v1

$$\textbf{Realized Value Captured} = \sum \left(\text{ecosystem attributes, parent company' (PC \& UBI capabilities, competencies, entrepreneurial (mindset, orientation, support)), resilience and adaptive indices, knowledge transformation and innovation indices, degree of fitness (with UBI), structural schema (rigidity and robustness on a multi-level of analysis) } (-) \text{ operational ineffectiveness or deficiencies, degree of unfitness with UBI} \right).$$

Conclusions

This initial study has approached the CBI value co-creation from a holistic and multi-dimensional perspective using cross disciplines extant literatures and based on integrated meta-model approach. The aim of the study is to aggregate existing study and thus provide a concise and dynamic conceptual framework for the CBI value co-creation activities. Three major meta-models are used in this study based on **CBIs core components and functions**, **CBIs Value Co-creation** and **UBIs' Core characteristics, co-creation and capabilities** across different regional contexts and industries. However, there are interesting areas for further research and investigation which would require new investigatory perspectives and examination.

Firstly, most CBI, CBI co-creation studies are case based with few quantitative studies, there is a call and need for more justification of case based studies and also juxtaposing research methodologies i.e., combining qualitative and quantitative methodologies for more development and justification of cases.

Secondly due to the dynamism involve in Value Co-creation the nature of measurement required more longitudinal examination inculcating specific CBIs metrics and important captured value measurements. Performance assessments of CBIs and their co-creation activities are also essential for further studies.

Thirdly a new and upcoming research area is cognitive schemas and their application in different entrepreneurship activities. More studies are required in the area of specific schemas required for the identified core components of the CBI co-creation activities. The MMSST (Taiwo and Provodnikova, 2025) with Dynamic Social Network Analysis (DSNA) including resilience and adaptation application to CBIs would aid further study of socio-human structural dynamism during co-creation. In addition to this how CBIs have transitioned into new business models overtime using analog reasoning and conceptual combination still requires vast areas of studies. New CBIs business models should be identified and how PCs can transition between these business models during innovation and co-creation life cycle and based on their strategic orientation and alignment with UBIs opens up new opportunities for further research areas.

Fourthly, value planned vs value realized discrepancies during co-creation activities necessitate evaluation of the causes of variation and value losses and destruction in CBIs. How these lost values can be re-orchestrated to the CBIs Co-creation value chain and business model innovation still require further clarity and theoretical fundamentals and grounding in data. Different organizational data (with metrics) based on value wastage and losses could be identified and classified into the different losses(value) during co-creation and how organizations prevent these losses during operational activities. In addition to these, other theoretical perspectives of value co-creation (GDL, SDL, Object and goals oriented, Network Orchestration) requires further cross industrial sector and regional contexts examination. How these perspectives differ across industries and regions would aid theoretical generalization.

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Finally, this study contributes to the theoretical conception of CBIs value co-creation by aggregating the core CBIs characteristics, value co-creation models with other BIs like UBIs and a more dynamic model for CBIs value co-creation performance assessments. The study would include the use of a mixed methods research methodology and research approach combining positivism and interpretivism in the study. A synthesized thematic analysis based on AI and human coding would be adapted in the study. First generated set of coding is shown in the appendix below and would be further elaborated in subsequent studies. Further studies would include Machine learning, AI and Mathematical Algorithm applications to Schemas and value co-creation metrics. Socio-structural analysis using MMSST would also be applied to CBI and UBIs value co-creation data analysis.

Appendix A

Extant literatures on ModeIs I (CBI Corporate Antecedents Classifications and Capabilities) and Model II (CBI Value Co-creation).

MODEL II

Article	**Description**	Key Lessons	**Future Research Agenda**
The Role of Corporate Incubators as Invigorators of Innovation Capabilities in Parent Companies(Gonthier and Chirita, Journal of Innovation & Entrepreneurship, Vol. 8, No. 8, 2019	Based on a qualitative study of 4 Corporate Incubators (1 Canada and 3 in Belgium) using the Resource-Process-Value(RPV) Model, learning and knowledge lifecycle (accumulation, articulation and codification) with generative variation integrative analysis, replication and retention.	Relative impact of RPV on Innovation Capabilities via CBIs knowledge spillover and PC's learning and knowledge cycle via accumulation, articulation and codification of both implicit and explicit, tacit and codified knowledge)	
Corporate Startup Co-creation for Innovation and Societal Change, Anieka Steiber, Sverker Älange	Case study on FirstBuild a Appliance Incubator		Gap exist on further development of metrics

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	established with the regional University for startups creation and new products development. Explanation of key metrics used by FirstBuild for CBI assessment: Financial Performance, ROI, Product acceptance, Users' or customers' feedback, Sales Platform traction, Innovation Metrics		and performance assessments for CBIs. While Innovation, Financial, Users' Feedback are essential metrics, Further metrics are required for specific CBIs and Parent company' Entrepreneurship activities
Accelerating Corporate Innovation ecosystem. The 'Iexprivia' Business Incubator Case Study. Journal of Engineering & Technology Management.Vol.74,Oct-Dec 2024,			
How can Corporate Social Business Incubators foster Open Social Innovation. (Qualitative Evidence from Spain)			
The Network Orchestration of Accelerators for value creation (Siska Novirastanti et., al,2024. IEEE Transactions in Engineering Management, Advanced Online Publications	Qualitative Case Study of an Accelerator based on the Network Activity Theory with(Network Orchestration dimensions	Impact of Network Orchestration on PC and Accelerator' activities such as: Novelty, Complementarities, Efficiency and Lock-in(retention) based on Structure,	

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	such as knowledge mobility, appropriatability network stability, innovation coherence and leverage identified).	Network Governance	
The Impact of Entrepreneurial Ecosystem on value Co-creation in SMEs: The moderating role of Marketing Innovation. Verea Silva Carlos, Joao Almeida, Fillipe Sampaio Rodrigues, Aangela C. Macedo and Pedro Mota Veiga. MDPI, Administrative Sciences,15(12),475 , 2024	A Multi-Method(*not Mixed Method*) using both Qualitative and Quantitative Studies on SMEs value co-creation with Corporate Organizations.	Important Variables like Entrepreneurial Ecosystem(with Actors like Academic, Researchers, Consultants, Competition), Entrepreneurial Mindset impact on the value creation activities with Marketing Innovation as control variable	
Incubator Involvement in the Startup Corporate Brand Co-creation. A qualitative study of the creative industry startups in the Creative Plot Incubator Sweden. Masters Thesis Ljupcho Gjavochaviv, Tomas Sulzickis			
Unlocking value co-creation in Entrepreneurial Ecosystems through vital role of Institutions (Yako Inada), Administrative Sciences; MDPI. 24th April ,2024, Vol. 14,No 5, 82	Value Co-creation with University-Industry and Government based on a Qualitative Case Study of Students' collaborative co-creation	Qualitative Study of Co-creation using 'COIL': An Interactive and Engagement platform for University and Industry co-creation. University Students were engaged in real-live business	

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	activities between Japanese and Canadian Government	problem solving and product development with Industries.	
Open Innovation with value co-creation from University–Industry Collaboration. Robert O. Hinjisa et.al, Vol. 8, Issue 1, March 2022			
UE Co-creation and Performance within Brazilian Innovation Environment(Gustavo P. Dos Santos, Serje Schmidt, Manuela A. Goncalves, Maria Cristina Bohnenberger (4-8 deout de 2021)XLV Encontro da ANPAD)	Based on a qualitative study of a Southern Brazilian CBI. With CBI beneficiaries and related capabilities and competencies(Image, reputation, Satisfaction, Technical Competencies required during co-creation that facilitate benefits such as Stakeholders' Corporate Benefits, Partner Firms and Innovative Environment Benefits.	Identified variables relative to Value Co-creation and Beneficiaries: Technical Competencies, Image, Reputation, Organizational(Managerial) competencies, Satisfaction, Reputation. Further extension and generalization of research to other regions and countries.	
Value Co-creation and Co-production in Startups Corporation relationships. Understanding Startups expectations. (Tila Tavola, University , Vaasa, Finland)	Discussions on Stakeholders and Private CBIs and Startups Incubatees) expectations		

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	such as: Flurry, Implicit and Explicit		
Service Dominant Logic Perspective on Technology Based Business Incubator (Eka Yuliana, Utomo S Putro, Pri Hermawan & Astri Ghina. Cognet Business and Management, 2024: Vol. 11, No.1, 2826986	A Qualitative Single Case study based on an Indonesia TBI with transition from GDL(Goods Dominant Logic) to Service Dominant Logic(SDL)		Extension to other regional contexts required
Collaborative Value Co-creation from a Stakeholder Perspective: A Literature Review. Anik Shekhar Bal, Hongxiu Li, Jonna Käpylä and Nina Helander. Journal of Creating Value, 2023,9(2) 259-274. SAGE	A review of Value Co-creation (VCC) viewed from a stakeholder' perspective. Extract from different journals and literatures from Marketing, Innovation, Business Management and Entrepreneurship.	Identification of Expected and Realized Value based on Stakeholders' perspectives. These include: Economic, Experiential, Functional, Relational and Corporate Sustainability Values. Accompanied and related variables too each are also value were also stated such as economic(financial, industry and revenue growth) experiential based on intrinsic and extrinsic),sustainability(environmental, social and human).	
Corporate Startup Collaboration: A Managerial decision making framework			

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based on a systematic literature review. (13th,Nov. 2024,Vol.19: Fehhat Demir, Martin Lukes)			
Goals and Objects in value co-creation within healthcare innovation networks. (Anastatia Pojltov and Tujia Marnela). Journal of Business and Industrial Marketing. Vol. 40, No. 6, 2025	An Object activity and goals oriented value co-creation research in the Healthcare Industry using qualitative case study examining actors including hospital healthcare workers, innovation ecosystem, incubator managers	Identification of Value Co-creation enablers, drivers and antecedents as well as Object based themes: e.g., facilitation, identified	Further Cross Industry extension of research required and as well as the application of the Object oriented activities to other industries or industrial sectors.
How Corporates collaborate with UBIs using New Corporate Acceleration Programs. Insights from the Pollihub Alberto Marzano,2016, Politechnico, Milano)	Discuss on Polihub a privately owned Corporate Accelerator established by three companies including in collaboration with a major University in the region (Milano Politechnico).	Extensive discuss on the Corporate Accelerator' synergy with the Parent Companies and Incubatees based on the expected goals stakeholders' goals	
Co-creation and Innovation in Higher Education institutions. A Systematic Literature Review and Research			

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Agenda Tiago Olivera, Helena Alves, Joao Leotai). International Journal of Education Management(2024); 38(3),(839-873)			
Creating Shared Value in Organizations – A Case Study of a Corporate Incubator. Adam WEINERT, Robert BANAS, Lukasz WOJTOWICZ, Radoslaw LUFT. Scientific Paper of Silesian University of Technology, Organization and Management Series No.205, 2024	A qualitative case of a Corporate Business Incubator(CBI) based in Poland based on CSV (Creating Shared Value) between the parent company Amira Group and Universities (2).	CSV outlined as a Value Co-creation model for socio-economic benefits. The study illustrates how Universities and the Parent company via the CBI implement CSV based on the goals, strategic alignment and ensuring CSR(corporate social responsibilities) and also Sustainability vis-à-vis PC'(Parent Company' brand reputation)	
Startups in a Corporate Accelerator. What is satisfying; What is relevant and what can Corporates improve (Tobias Gutmann, Cornelius Maas, Dominik Kanbacha, Stephan Stubner). April 20, 2020, International Journal of Entrepreneurship and Innovation Management. Vol.24, No. 6			
From Selection to Circularity: How Stakeholder Co-creation transforms Incubation(JBV Insights., Vol 25, June 2025)			
Viable System Model as a Framework for value Co-Creation Service System. Analysis of Technology based Business Incubator (Eka Yuliana, Utomo Sarjomo Putro, Pri Hermawan and Astri Ghina. (Journal Manajemen Indonesia)	Based on a qualitative study on a Telecom based Corporate Incubator in Indonesia. The Viable System	This involved the analysis and application of the five (5) core BSM system: Workflow and System Implementation, Co-ordination,	

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	model from BSM (Stafford Beer' Service Model) based perspective is featured and applied as a Co-creation model.	Monitoring & Control, Intelligence and the Environment. This was applied to the Telekom Indonesia based Corporate Business Incubator(CBI).	
Value Co-creation Dynamic Capabilities and ecological advantages of entrepreneurship Incubation platforms (Chen Lingzi, Zhou Wenhui, Zhou Yifang)			
Incubation as Co-creation Case Study of Proactive Technology Business Development (Eriksson et al., 2019)	A case study of a Regional based Incubator in Finland initiated by the regional government (major shareholder) with Corporate organizations and Universities major incubator management) and based on a Creative Commercialization of Ideas(CCI). Between the incubator management, clients, SMEs and participating corporate	The study elaborates on CCI as a specific Incubator co-creation model used in Nordic region based on the need for problem solving via the Universities selection programs and further pre-incubation based on initial engagement and members of the CCI.	

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	firms(stakeholders.		
Co-creation of Innovation by Corporate and Startups(Vared Holzmann, Haini Rousso, 26th March,2021			
Value Co-creation in Entrepreneurial Ecosystems: Learning from a Norwegian Perspectives(IEEE Africon: Chipo N and Jara S. Grobbelar			
Exploring a corporate entrepreneurship process through an accelerator program and key success factors: A case studies from Bangladesh: Sinin Tabassum et al., School of Business & Engineering, Halmstad University	Case study of 3 Corporate Accelerators and Incubators in Bangladesh based on a qualitative methodology.	RQ1: Why Corporate facilitate startup through accelerator Program in Bangladesh RQ2: How Corporate entrepreneurship facilitates the accelerator process in Bangladesh RQ3: What are the key success factor for Business accelerator in corporate entrepreneurship in Bangladesh	
Corporate Entrepreneurship at the University : the influence of managerial support, autonomy and reward on the innovative behavior of University Professors (Journal of Entrepreneurship in Emerging Economics) Emerald Publishing Ltd. 2021(Gustavo Herminio Salati Marcondes de Moraes, Eduardo Eugenio Spers, Luciano Mendes, Hermes Moretti Riberio da Silva)			
Corporate Entrepreneurship: Organizational design, problems and development prospects(Economy & Forecasting) ZBW,DAS, 2021 Ligononenko Larisa, Mysylink Vlada			

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Dynamics of Corporate Entrepreneurship in Technology companies. A Study of Strategic Practices and Governing Ecosystems by Addankyi Sownya, May, 2024			
MODEL I			
Concept of innovation Transfer from Corporate Incubators. Günther Schuh, Felix Lau, Phillip Bircenkdorf. Conference Paper July 2017 DOI: 10.23919/PICMET.2017.8125367	A Case study and short review on CBI knowledge transfer activities	The knowledge transfer objects and characteristics are identified and defined.	
Corporate incubators as knowledge brokers between business units and ventures: A systematic review and avenues for future research. Michael Kötting,2019. European Journal of Innovation Management. https://www.researchgate.net/publication/346097679	A detailed review of CE and CBI. Using knowledge brokerage and Innovation development as CBI's major function to the PC.		
Corporate entrepreneurship: Current research and future directions Phillip H. Phan Mike Wright, Deniz Ucbasaran, Wee-Liang Tan. Journal of Business Venturing ,2009, Pg.197-205	A CE Review based on CE types: Internal and External Venturing as well as Strategic Renewal. Structural Dimension of Managerial decision making (based on their organizational levels: Mid, Senior managers) and their impact on CE.	Network Capabilities of CEs identified as INC, ONC and PNC. Individual, Organizational and Program Capabilities and their relative importance and impact on CE	

 doi:10.20944/preprints202603.0743.v1

Corporate Incubators: What Universities can learn from them Journal of Tech Transfer, 31,469-483, 2006. Oliver Becker and Oliver Gassmann.	A thorough classification of CBI and based on their structure, mission, processes and resources.	4 Major CBI types identified based on their incubation approaches. They include: Fast Incubator, Leverage, Market and Insourcing Incubators.	Further investigation include what UBIs can do and how UBIs transform into CBIs incubator types
Perceptions On the Use Of A Corporate Business Incubator To Enhance Knowledge Management At Eskom PD Steyn & ASA du Toit Centre for Information and Knowledge Management, University of Johannesburg. SAJEMS NS 10 (2007) No 1	A Case Study of CE at Eskom; a South African Based Company		
The Role of Entrepreneurial Orientation(EO) in Stimulating Effective Corporate Entrepreneurship Gregory G. Dess, University of Texas at Dallas and G. T. Lumpkin, University of Illinois at Chicago. Academy of Management Executive, 2005, Vol. 19, No. 1	A review of Corporate Entrepreneurship as composed of Corporate Venturing and Strategic Renewal	EO's composition of Risk taking, Innovation capabilities, Competition, Proactiveness and Autonomy and their impact on CE	
Assessing the impact of corporate entrepreneurship in the financial performance of subsidiaries of Colombian business groups: under environmental dynamism moderation. Rodríguez-Peña Journal of Innovation and Entrepreneurship (2021) 10:16 https://doi.org/10.1186/s13731-021-00152-w			
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Evolving corporate entrepreneurship strategy: technology incubation at Philips Simon Ford, Elizabeth Garnsey and David Probert Centre for Technology Management, University of Cambridge, 16 Mill Lane, Cambridge .	A Case study of Corporate Business Incubation at Phillips	Typical selection criteria for startups incubatees in Phillips(disruptive idea, highly scalable to about $100m,team coordination and management.	
Business model innovation in corporate entrepreneurship: exploratory insights from corporate accelerators Maria Urbaniec1 & Agnieszka Żur			
The Effect of Corporate — Start-Up Collaborations on Corporate Entrepreneurship J. P. Coen Rigtering· M. Ayelen Behrens. Review of Managerial Science (2021) 15:2427–2454 https://doi.org/10.1007/s11846-021-00443-2	A structuration view on corporate entrepreneurship based on a positional practice of individual entrepreneur reflexivity and impact on the organizational transformational agency		Research extension to multi- level impact of intrinsic reflexivity on corporate entrepreneurship transformation
The role of corporate incubators as invigorators of innovation capabilities in parent companies. Gonthier and Chirita Journal of Innovation and Entrepreneurship (2019) https://doi.org/10.1186/s13731-019-0104-0	A Discuss on impact of Organizational entrepreneurship mindset, continual knowledge accumulation	A qualitative study based on the RPV view (Resources, Processes and Value) and their impact.	

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	for transformation and innovation and their impact on the Innovation capabilities of the organization		
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The Conflicting Cognitions of Corporate Entrepreneurs Andrew C. Corbett Keith M. Hmielesk. 1042-2587 © 2007 by Baylor University	Examination of the role of Schemas and Cognitive theory in Corporate Entrepreneurs performances. Roles and Events schemas were discussed based on individual awareness, ability and Willingness to utilize ecosystem resources and their willingness to incite their individual cognitive	Further studies required on how Busineess Units(BUs) impact Corporate Organizational performance and decision making	

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Appendix B. Thematic Coding (AI)

Themes	Sub-Codes
1. **Value Co-creation in Collaborative Ecosystem**	• Demand communication Identification • Market Communication promotion • Resource optimization • Platform mediated collaboration • Product Development communication
2. **Dynamic Capabilities Development**	• Opportunity Perception • Model Learning • Market Reconstruction • Resource Configuration • Strategic Adaptability
3. **Ecological Advantage Function**	• Ecological Symbiosis • Ecological Interdependence • Ecological Regeneration • Autonomous Evolution Reverse Incubation

 doi:10.20944/preprints202603.0743.v1

4. Open Business Model Innovation	• Systematic Collaboration Structures • Value Capture through Non-Equity alliances • Business Model Configuration • Lean Startup Integration • Resource Complementarities

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