

IDEATING THE FUTURE OF CREDIT UNION AS A PLATFORM (CUAAP)



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This capstone research paper seeks to define a macro-economic framework for a member-centric organization enabled through Credit-Union-as-a-Platform (CUaP) technology. CUaP is the digital transformation of a credit union business model into a platform, open innovation network, or ecosystem, thereby advancing the co-creation of new value propositions and opportunities amongst credit union stakeholders. A quantitative variant of a STEEPLE analysis is proposed to measure the external environment of CUaP. The main contribution of this paper is a new model to address the shortcomings in the measurement and evaluation process of STEEPLE analyses through the incorporation of Exploratory Factor Analysis (EFA), Analytic Hierarchy Process (AHP), and Analytic Network Process (ANP) techniques. The objective is to focus on democratic processes that advance co-creational activities between credit unions and their members, such as gig-workers.

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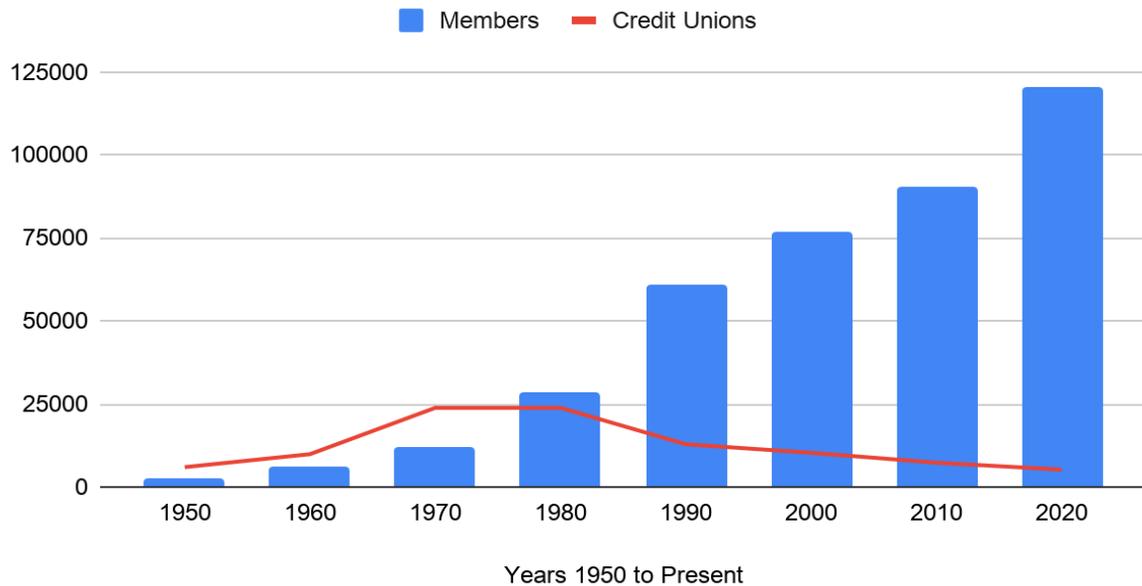
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INTRODUCTION

Despite the disruptiveness of the 21st century, credit unions continue to gain market share; since the first quarter of 2015, credit unions have seen growth in many sectors, including credit cards, personal loans, mortgages, and auto loans (Orem, 2017). This growth is, in no doubt, partially attributed to the long history of the cooperative movement, the dedication of the Rochdale Pioneers, the first credit unions in Germany, and the launch of the credit union sector in North America at the turn of the 20th century. For example, President Franklin D. Roosevelt believed that citizens of limited incomes needed a not-for-profit institution to access credit for "provident purposes." He sought the cooperative business model as a solution with the signing into law the Federal Credit Union Act in 1934 (Roos, 2008).

After the law's passage in 1934, the credit union sector boomed to more than 23,000 establishments. In 1969, however, due to mergers and acquisitions, that number had plummeted to 5,600 in 2018. Although the attrition rate is slowing, expectations are it will continue into 2020, at a rate of 200 to 250 average mergers per year. The vast majority of credit unions that were "merged away" were small, totaling less than 10% of the credit union system assets; however, the real reason behind the shrinking of the credit union sector is the rate of new credit union formation. Unfortunately, the market no longer supports Roosevelt's vision for communities of modest means chartering new credit unions. The number of new credit unions formed in the United States has collapsed from 9,992 during the 1960s to 5,272 during the 1970s, 909 during the 1980s, 113 during the 1990s, 73 during the 2000s, and since 2010, 22 thus far (Nelms & Dopico, 2019; "Historical Timeline," n.d.).

Members and Credit Unions



In 2017, the consumer reporting agency Experian published a report that found only 25% of Americans have one or more credit union tradelines in their credit files. That number drops to 20% among millennials and just 1% of Gen Z Americans, who are currently seven to twenty-one years old (Orem, 2017). Author Kirk Drake (2017) asks what strategies will grow revenues, especially among millennials, when 40% of credit union members close their accounts in the first 100 days due to "bad experiences"?

It is also interesting to note that in 2010, 74% of the difference in bank valuations was due to geography; however, that is no longer the case. In 2017, geography only accounted for 39% of the difference in valuation. Meanwhile, more than 60% of the remainder is explained by the business model, execution, strategy, well-aligned initiatives, and the other levers that banks command (Dietz et al., 2017). This shift is largely due to the Financial Technology (or FinTech) revolution. Companies are leveraging the cloud, payment rails, mobile phone technology, and capital to become niche specialists in sectors that used to be a part of the traditional credit union model. Focusing on creating new, brick-and-mortar branches, ATMs, and similar capital and resource investments is no longer the most efficient means for growth in the credit union sector (Drake, 2017).

Between 2008 and 2010, the sector lost 74 credit unions due to the financial crisis, costing the National Credit Union Share Insurance Fund over \$600 million ("Historical Timeline," 2019). Interest rates and other tailwinds are now recovering, and there is a chance the banking sector may recover roughly half of its

Figure 1: Members vs. Available Branches

"Historical Timeline." National Credit Union Administration, www.ncua.gov/about-ncua/historical-timeline

historical return on equity (ROE). However, retail and corporate customers are more likely to switch their banking to digital companies. If current trends continue, the financial sector may be saddled with an unsustainable ROE of 5.2% by 2025 (Dietz et al., 2017). Focusing on traditional factors such as trust, service, and rates are no longer the best strategy for the credit union sector. The financial market is no longer about credit unions versus banks -- now, it is about competing with Uber and other similar start-ups (Drake, 2017).

Today, despite the emergent success of the FinTech revolution, customers still prefer banks and credit unions over tech companies to manage their money, which allows them to maintain their exclusive access -- for now -- to precious customer data. If this data is used wisely, it is not too far-fetched for the traditional financial holders to use this information to develop network capabilities that will allow them to reach even larger customer bases. Nevertheless, the FinTech revolution is quickly copying the incumbents. If credit unions want to maintain their market share growth, they must adopt digital technologies that allow members to customize their banking experiences. Unfortunately, credit unions generally do not see themselves as technology innovators, and the National Credit Union Administration still has not created a collective structure for product development. To maintain market relevance for the long haul, credit unions and their regulators must play a leadership role in developing new services that meet the needs of younger, tech-savvy members (Drake, 2017).

Millennials Will Not Wait for Credit Union 2.0

Credit unions operate in a safe environment (Drake, 2017); their federally protected nonprofit status in the United States allows them to provide member benefits, such as better loan and deposit rates, which outcompete similar offers from commercial and community banks. Unfortunately, their status has brought on an external governmental threat: the Independent Community Bankers of America's "Wake Up" campaign. Despite the authority of commercial and community banks to establish credit unions (Baumann, 2019; Fetting, 1996), credit unions cannot predicate as external threats loom, which is especially crucial as the FinTech movement advances (Drake, 2017).

A business model known as platforms is leading the way;¹ their omnichannel focus and revenue management systems give consumers access to insider information, such as purchasing behavior, product ratings, cheaper buys, vendor ratings, and consumer attitudes (Evans & Schmalensee, 2016; Drake, 2017). The control digital technologies afford consumers is undeniable. Yet, credit unions are not aggressively

¹ According to David Evans and Richard Schmalensee, 2016, a platform is a business model that helps parties who have something of value to exchange to get together, open and close trades; the primary objective of platforms is to reduce market frictions between consumer types. A Platform is a business strategy that incorporates organizations interacting with, and enabling, external individuals, organizations, and communities to create value through interactions (Altman & Tushman, 2017). Additionally, Govindarajan, Rajgopal and Srivastava, 2018, report that platform organizations are primarily ecosystems; they do not have physical products and they do not have inventories to report. A definition for platform cooperatives is available through Baldry, Douglas, et. al. "Group 1 Post: The Key Components of Platform Cooperativism." Editora web forum 22 March 2019. Brightspace via Saint Mary's University, Comparative Co-op Practice I - Winter 2019, Module 2, <https://smu.brightspace.com/d2l/le/45339/discussions/threads/123891/View>.

pursuing this, nor is the NCUA doing much to provide support in providing a cooperative structure for product development (Drake, 2017).²

According to author Kirk Drake, credit union leadership would much rather maintain their current status quo operations. Instead of taking advantage of the Universal Bank model, a disruptive change emerged from deregulation and allowed banks to bundle retail, transaction, and investment banking products; credit unions are not adapting their not-for-profit missions for modern-day trends. Now in the United States economy, third parties can provide a full-service model, including retail, commercial, wholesale, capital markets, wealth management, and in most cases, insurance (Drake, 2017). These upstart digital banks or neo banks are targeting every market sector, from savings and checking accounts to mobile debit cards, all the while without physical offices, storefronts, and employees (Wilhelm & Mascarenhas, 2019; McAfee & Brynjolfsson, 2018). The rapid advancement of FinTech has caught incumbents off-guard, as big tech makes a platform push to attract customers by juicing up their value propositions with turn-key solutions (Wilhelm & Mascarenhas, 2019; Evans & Schmalensee, 2016; McAfee & Brynjolfsson, 2018).

Unfortunately, millennials will not wait for credit unions to understand them. They are highly mobile, technically savvy, and enticed by new ways to conduct their banking. Millennials shop and make buying decisions differently from previous generations not exposed to digital technology from infancy. Young Millennials (age 18-21) and Mature Millennials (age 26-30) are most eager to try non-traditional modes of payment. Mature Millennials also prefer using mobile wallets and mobile money, while Young Millennials prefer peer-to-peer payment platforms, such as Venmo. The advent and adoption of communication technology have established apparent differences between a Millennial at age 29 and a Boomer at age 29, including differences in tone, frequency, and media. As a result, the Millennial generation has more spending power and technical acumen than any generation before them, and their successors, Generation Z and Generation Alpha will only surpass them (Marous, 2018).

Nevertheless, a recent Gallup poll reports that Millennials have a higher share of their income with their primary bank, also more than any previous generation. Additionally, when banks and credit unions engage Millennials, they deposit 25% or more into their accounts. Although millennials have more access to banking channels than any other generation, they also have fewer satisfying interactions. The same Gallup poll suggests that over a quarter (27%) of young people would instead not visit their branch, and only 14% prefer to bank in person. They also do not trust their banks to understand them, look out for them, or reward them. While partially caused by being a more demanding segment, they are also the most ignored by the industry (Marous, 2018).³

² The lack of participation of credit unions in the platform revolution is questionable because technology is aggressively changing the landscape of traditional business. As organizations adopt platforms, open/user innovation, and ecosystems as business strategies, open and cooperative business models will gain importance (Altman & Tushman, 2017; Wikipedia Contributors, 2020a; Wikipedia Contributors 2020c).

³ Millennials are no longer customers alone; they are developers too; platforms, open/user innovation, and ecosystems leverage external individuals and entities, which are frequently complementors and have interdependencies between them, to

Not long after a lackluster debut on the New York Stock Exchange in 2019 (Isaac, 2019), Uber introduced a new FinTech strategy: Uber Money. The objective is to offer both their riders and drivers additional value, "all at Uber speed." Instead of weekly payments or cashing out through Instant Pay, Uber will deposit driver and courier earnings in real-time. Additionally, drivers may be eligible for an Uber Debit Account & Uber Debit Card, powered by the third-party provider, Green Dot (Hazlehurst, 2019). According to Peter Hazlehurst, Head of Uber Money, nearly 40% of drivers rely on Uber's rideshare service for most of their income. Additionally, 60% of Uber drivers go negative on their accounts six times a month. In other words, rideshare drivers, otherwise known as gig-workers, have unique banking needs due to:

- 1) Inconsistent and unpredictable income patterns;
- 2) Credit needs;
- 3) Health (and other) insurance needs; and,
- 4) Tax requirements.

Hazlehurst's objective for Uber Money is to provide a wide range of financial services to a relatively narrow segment of consumers, first for Uber's drivers, then for other gig-workers. While other neo banks compete with incumbents on price, Uber structures its loans on drivers who make more trips, thereby improving overall trip volume. Data derived from how drivers manage their cash flows and income will enable the Uber Money team to make quick lending decisions. Although Uber has not yet launched its lending program, they are exploring a wide variety of lending products favorable to gig-workers, including a microloan program (Shevlin, 2019).

Millennials are happy to work with FinTech companies, such as Uber, to slice off pieces of the credit union's legacy business model. They have proven capable of leveraging cloud-based platform technology to target niche sectors (Drake, 2017); meanwhile, FinTechs are successfully attracting venture capital, \$24.6 billion after the first three quarters of 2019 (Toplensky, 2019). Unfortunately, credit unions are struggling to compete with the rise of non-traditional market entrants because a process or framework for adopting financial technology is absent from their business models. More specifically, credit unions need a business model upgrade rather than merely using advanced tactics.

The traditional approach follows a build-market-sell configuration, where first they produce a product, then they market it, and finally hope to sell it. On the other hand, technology-based companies like Tesla follow the exact opposite model: market-sell-build. Here marketing replaces the product as the central business driver, and the scope of the marketing campaign emphasizes the customer experience (Sweezy, 2017). The objective is to understand better the jobs customers perform on a day-to-day basis and use that

create value. Whereas such strategies and derived benefits were once central to the firm, users and others that innovate, select, produce, and perform roles now do so externally (Altman & Tushman, 2017).

insight to inform the business model innovation process. Consumers are now demanding experiences; products and the stores that once sold them may be looking back on better days (Rudegeair & Hoffman, 2019).⁴

WHAT DOES A CREDIT UNION AS A PLATFORM ECOSYSTEM LOOK LIKE?

From 1929 to 1999, the Glass-Steagall Act kept commercial and investment banking separate (Rickards, 2012). However, at the conception of Universal Banking (UB), industry leaders began demanding deregulation (Kagan, 2020). Unfortunately, banks in the United States do not have the same access to FinTech strategies as their European counterparts because of aspects of the Glass-Steagall Act that remain in effect (Kagan, 2020; Wikipedia 2019a). As such, FinTech companies in North America are running away with all of the advantages, receiving 71% of the \$78.6 billion invested globally in financial technology (Khalil, 2016). Thus, deregulation is exposing the traditional financial sector to never before seen external threats because authority and seniority are fundamental to their legacy cultures. The desire to be centrally prominent in customer relationships has caused the banking business models to become excessively complicated, and consequently, their financial technology offerings have become unstable and unpredictable (Allen & Blakstad, 2017).

Nevertheless, the FinTech revolution has proven that customer service improves when networks intersect and overlap. The connectivity that multi-sided platform technology provides allows financial institutions to network between customers, service providers, and financial services, including disintermediated services where the repository is not part of the value chain. The rewriting of operating models has emphasized joint activity amongst a range of actors, including suppliers, partners, customers, and independent inventors (Chesbrough, 2003; Nambisan & Sawhney, 2011). In other words, the network-centric focus of today's financial sector is causing a shift away from the offering of tangible goods to the exchange of service that occurs when an actor uses their skills and capabilities for the benefit of another actor (Vargo & Lusch 2004, 2007). For example, the network-centric focus of Amazon allows platform intermediaries to co-create with millions of customers. Amazon captures data and facilitates network connections through customers browsing recommendation engine suggestions, customer reviews, book samples, and through the contribution of comments and reviews (Schrage, 2016a; 2016b; May, 2014; Brynjolfsson, 2013).

The emergent Banking as a Platform (BaaP) strategy (i.e., ecosystem banking) fundamentally redefines the financial institution.⁵ Thus, for banks and credit unions to navigate the changes brought about by the FinTech movement, they must allow customers to become active participants in their operations through the following:

⁴ Credit unions -- and other cooperative organizations -- have norms, such as existing identity, cultures, behaviors, assets, organizational structures, and processes. These norms modify a credit union's ability to adopt platform, open/user innovation, and ecosystem strategies (Altman & Tushman, 2017).

⁵ Banking as a Service (BaaS) is now compared analogically to the Cloud Stack. The first layer in the stack is Infrastructure as a Service (IaaS), which includes enabling software and hardware, such as server and communication technology. The second layer is Banking as a Platform (BaaP) followed by FinTech as a Service (FTaaS), and Human as a Service (HaaS). For more information, please visit Wikipedia contributors. "Banking as a service." Wikipedia, The Free Encyclopedia. Wikipedia, The Free Encyclopedia, 19 May. 2020. Web. 28 May. 2020.

- An integration of network-centrism into their business models
- A connection to others through knowledge, expertise, experience; and,
- Pursing new partnerships to provide a full-service menu (Allen & Blakstad, 2017, pages 164-165)

Integrating network centrism implies the need to take advantage of networks instead of competing or acquiring neo-banks. Financial sector incumbents need to explore how to break down barriers between their institutions, suppliers, and customers to adopt standards and inter-ledger protocols that allow blockchains to securely and privately inter-communicate. As technology gains support from the global financial community and regulators, ecosystem banks and other similar platform strategies will enable value-creating exchanges between their otherwise siloed customer groups (Altman & Tushman, 2017, page 26). Whereas, in the past, credit unions could practice customer relationships that gave them a cynosure in provisioning credit for "provident purposes," customers and clients (i.e., members) are now assets worthy of innovative investment. As people, processes, and technologies grow ever more interconnected and interoperable, credit unions must seek opportunities for constant development and improvement to adapt (Schrage, 2016a; 2016b; May, 2014; Brynjolfsson, 2013).

The financial sector has enjoyed decades free of punishment from consumers. Banks have survived and thrived because of their scale and exclusive (if not near-monopolistic) access to payment schemes and central banks. Nevertheless, small, more agile organizations that focus more intently on innovative approaches are indeed and efficiently raising customers' expectations, siphoning off business as a result (Allen & Blakstad, 2017, pages 113-119).⁶

Connecting customers to the bank's or credit union's store of knowledge, expertise, experience, and scale is an emanating distinction to organizations attached to full ownership of services (Allen & Blakstad, 2017, pages 164-165). Today's financial sector is about growing trust and establishing a consensus-based

⁶ In a recent webinar, Jim Marous, Co-Publisher of The Financial Brand, Jake Tyler, CEO of Finn AI, and Dan Semmens, Head of Data and Artificial Intelligence at ATB Financial discussed the impact of COVID-19 on the financial sector. Marous, Tyler and Semmens report an expanded use of virtual communication resources since March 1st, 2020 -- the beginning of the U.S. lockdown. Marous is of the belief that demands for omni-channel integration and customer experience improvement will increase. To listen to a recording of the webinar, please visit "How COVID-19 Heightens the Need for Digital Solutions in Banking." *The Financial Brand*, 6 May 2020, thefinancialbrand.com/webinars/how-covid-19-heightens-the-need-for-digital-solutions-in-banking/. On June 2nd, 2020, Jim Morous will co-host a webinar with Shelly Photiades, VP, Financial Services Strategy at Epsilon to discuss the importance of connecting with customers through multiple devices during the COVID-19 pandemic. To learn more, please visit "How to Connect with Consumers across Devices Post COVID-19." *The Financial Brand*, 5 May 2020, [thefinancialbrand.com/webinars/how-to-connect-with-consumers-across-devices-post-covid-19/?n](https://thefinancialbrand.com/webinars/how-to-connect-with-consumers-across-devices-post-covid-19/). Additionally, Co-op Financial Services reports an upsurge in demand for contactless payment methods since the beginning of the pandemic, as concerns increase around use of physical POS transactions and cash money. To learn more, please visit Services, CO-OP Financial. "How COVID-19 Is Strengthening Contactless Payment Adoption Among Members." *Insight Vault*, 1 May 2020, blog.co-opfs.org/covid-19-strengthening-contactless-payment-adoption-among-members/?utm_source=blog&utm_medium=a.

transfer of value between customers and banking personnel. Thus, an ecosystem bank enables Fintech players to flourish, giving their customers unprecedented choice, personalization, and means to co-create financial value (Allen & Blakstad, 2017, pages 164-165; Schrage, 2016a; 2016b; May, 2014; Brynjolfsson, 2013).

An alternative description for ecosystem banking is a "marketplace" that enables and supports transactions between independent supply- and demand-side participants (Täuscher & Laudien 2017). In other words, a marketplace where participants form partnerships to share information; in essence, as they co-create value, they become a full-service bank. As a result, banks and credit unions can challenge FinTech enterprises by focusing on their core services while customer-to-customer partnerships support additional services demanded by other customers (Täuscher & Laudien 2017; Allen & Blakstad, 2017, pages 164-165).

With the repeal of the Glass-Steagall Act, the evolution of Universal Banking, and the wide adoption of financial technology, the financial sector is facing an unprecedented level of market disruption and changing customer expectations. Technical specialists and visionaries are recreating services that used to belong to the financial industry, and these services are ultimately better able to solve problems for end customers. Customers, individually and collectively, are voting with their wallets and taking their business to the providers who can present a higher quality of knowledge, expertise, experience, and scale in the format that suits them better (Allen & Blakstad, 2017 pages 113-119).

At this juncture, the ecosystem banking model remains conceptual as additional maturity, in parallel with the evolution of the ecosystem itself, is required. Despite the lack of stability amongst neo-banks, the future of customer and partner enablement through ecosystem banking appears bright. Therefore, the credit union sector needs to recognize that engaging in financial technology is not a threat; it is an opportunity (Allen & Blakstad, 2017, pages 164-165; Drake, 2017; Kew & Stredwick, 2005; Altman & Tushman, 2017, page 27).

Enabling the Gig-worker with Financial Technology

Platforms create a "fluid economy," where technology helps dedicated contractors devise streamlined ways to connect to customers (Ehrlichman, 2018). The widespread use of software applications to help people conduct their day-to-day lives is proof that the Information and Technology Age Revolution fundamentally changes the nature of work, labor structures, and the attitudes of employers and employees. The cloud makes the future more predictable. For the first time in history, gig-workers like rideshare drivers have achieved liquidity, i.e., assurance that a transaction will occur without significant variation in cost. Drivers no longer have to forecast for their future success. The Uber and Lyft platforms bridge connections between riders and private-for-hire drivers, thus making the dispatch process significantly more efficient and convenient (Wood, 2018; Evans & Schmalensee, 2016; McAfee & Brynjolfsson, 2018). Platforms, open innovation, and ecosystems are ushering in a new genre of productivity; we have entered into an age where digital access, algorithms, and analytics are facilitating and accelerating individual performance (Schrage, 2016a; 2016b; May, 2014; Brynjolfsson, 2013).

Despite the wild success of the gig-economy platforms, their disruptive tendencies have also hurt gig-workers, especially in accessing health insurance and using operational budgets to pay for necessary living

expenses. Additionally, they face disproportionately high insurance deductibles relative to pay, "the phantom boss dilemma," and the inability to set their prices and accept payments for service. With literally no control over the cash flow of their businesses, gig-workers are failing to save for retirement (Evans & Schmalensee, 2016; Weiner, 2015; Campbell, 2014; Aaron, 2018; Fish, 2018; Grant, 2017). The sheer popularity and sudden growth of the gig-economy may tempt pretensions of permanence. However, with everything that is wrong with it, there is little evidence to suggest that this new, fluid gig-economy is a fixed phenomenon; it is highly subject to change (Ehrlichman, 2018).

From the early beginnings of "Grand Distributor"⁷ to the modern network-integrator of resources, brokers, fixers, and interagents have maintained a critical driving force in the development of the whole of society (Heilbroner, 1962; Hicks, 1969). Since the beginning of the 21st century, technological developments have disrupted distribution arrangements away from central control by wholesalers to the newly emerging wholesaler economy (Olsson, Robert, et al., 2013).

Although many online marketplaces appear similar to retailers, the Web's most successful companies, such as eBay, Amazon, and Alibaba, are, in fact, brokers with extensive reach, charging a fee anytime buyers and sellers connect over their networks. Technology has stimulated a rising interest in "on-demand" fulfillment, which has created a bullish market for start-ups vying to connect shoppers with couriers, for everything from groceries to a twenty-dollar bill picked up from a local automatic teller machine (ATM). The wholesaler economy has even caused some academic circles to claim it as the most significant economic event since the Industrial Revolution (Brown, 2014; Ho, 2018).

Online brokers have also spurred the emergence of micro-contract-based services. Economists tend to think of wholesalers as people or organizations that sell to reduce the total cost of a transaction. However, platforms like Uber, Airbnb, TaskRabbit, and Etsy have developed marketplaces for interactions between individual providers and their customers for short-term, one-shot exchanges of service and value. As a result, the roles of people and organizations are changing more frequently now than ever before. Business models, legal structures, and positions are now wholly "up in the air" as more and more people and organizations adopt ecosystem supply chains and partnerships. Careers are no longer fixed and linear as they have been traditionally for permanent employees. Now, gig-workers must frequently revise their careers without critically essential benefits, such as holidays, sick pay, mortgage discounts, and training.

Unfortunately, the early entrants in the wholesaler economy have shown little regard for the labor rights of gig-workers by attempting to combine employment and contractor roles. Developing an equitable gig-economy requires advancing historic contractor rights, such as pricing control, the ability to purchase

⁷ The "Grand Distributor" was an all-purpose organization that existed in the colonial period and before the industrial revolution. These businesses sold all types of goods and carried out all the basic commercial functions by acting as "exporter, wholesaler, importer, retailer, ship-owner, banker and insurer." Grand Distributors maintained broad engagement to secure the supply of goods from geographically distant sources (Olsson, Robert, et al., 2013; Heilbroner, 1962; Hicks, 1969).

advertising, marketing, and rents (Allen & Blakstad, 2017; Semuells, 2018; Heller, 2017; Charlton, 2015; State of Oregon).

Nevertheless, available to gig-workers, as is for any other intermediary in the wholesaler economy, is the ability to connect and diversify services. For example, Alibaba is, among other things, a search engine, a marketplace, and a bank — all under the roof of one company. Gig-workers can continue this platform business trend by aspiring to 'vertically integrate' their businesses in nuanced ways. For instance, once a rider has entered a driver's car, what else can the driver offer that improves the overall riding experience (Young Entrepreneur Council, 2017)?

In Dubai, a ride-hailing application called Careem (now a subsidiary of Uber) launched a fashion line that features 100% locally sourced, culturally-inspired goods. The e-commerce site, dubbed Dukkan Careem, sells t-shirts, sweatshirts, sweatpants, and sweatshirt dresses, along with specialized and seasonal selections. As a result, through the connective abilities of Careem and Dukkan Careem, rideshare drivers can also manufacture, sell, and deliver goods sold on the platform (Hamdan, 2017).

Thus, the "new intermediaries" of the modern wholesaler economy are those who:

- Integrate network-centrism into their business models
- Connect to others through knowledge, expertise, experience; and,
- Through partnerships, provide a full-service menu ("Allen & Blakstad, 2017, pages 164-165)

For gig-workers to integrate their businesses into networks, they will need to explore how to break down barriers to enable value-creating exchanges between their otherwise siloed suppliers and customers. As multi-sided business models, platforms connect producers (supply side) and consumers (demand side); however, gig-workers can participate as both. Thus, if a gig-worker can make strategic choices, focusing on some activities while divesting in others. Therefore, a gig-worker can generate business opportunities by merely choosing a role, temporarily or long-term, in the ecosystem (Olsson, Robert, et al., 2013; Evans & Schmalensee, 2016; Choudary, Parker, Van Alstyne, 2016).

Suppose gig-workers can sustain interactions with producers, consumers, and other gig-workers. In that case, they will improve conditions for learning the business partners' activities and resources, thereby enhancing the partnership's performance, daily operations, and long-term development. Intensive interaction with business partners requires a general shift from arm's-length relationships towards close cooperation (Ford, Gadde, Håkansson, & Snehota, 2011; Weitz & Jaap, 1995). Platform business models transfer value by building consensus and trust between market participants. Thus, if gig-workers focus on physical distribution activities, they can facilitate the sale of what is produced simply by identifying customer needs and then sourcing solutions (Dawson, 2007). As a logistics service provider, gig-workers can enhance the economies of scale by maintaining a determinant position that controls conditions for joint value generation (Olsson, Robert, et al., 2013).

Through partnerships, gig-workers can offer a wide variety of services to their customers, which is becoming increasingly important in today's multi-sided business landscape. As a result, a gig-worker can focus on a core service, such as a marketing organizer for other gig-workers on the marketplace. Different complementary roles include creating sales programs, implementing marketing strategies, or digitizing an inventory management system. What follows is a connected economy where participants form partnerships to share information. In this respect, there is always a clear connection between activity specialization and resource provisioning (Karl Täuscher, Sven M. Laudien 2017; "Allen & Blakstad, 2017, pages 164-165; Kimanyi, 2005).

DEFINING COOPERATIVE SCOPE

In 2017, the founders of RM Cooperative began organizing to integrate gig-workers into an entrepreneurial ecosystem that helps them achieve financial sustainability and improved social mobility (Wikipedia Contributors, 2020b; Laiglesia, 2012). In 2014, the European Cooperative Society published a presentation launching a start-up business cooperative, where entrepreneurs, or "coopreneurs," would collaborate to establish new business opportunities. The presentation motivated the RM Cooperative to take up the neologisms "coopreneurial" and "coopreneur" to inspire gig-workers to mobilize and collaborate toward producing sustainable livelihoods, increasing the self-worth of individual members through the expression of identities and voices, and teaching others to do the same (European Cooperative Society, 2014; Burg & Mann, 2015).

However, platform businesses often struggle to launch and maintain operations successfully because of their high infrastructure costs (Evans & Schmalensee, 2016). As a result, the founders of the RM cooperative are researching strategies, such as Open Banking APIs, blockchain, smart contracts, and cryptocurrencies, to decrease the need for economies of scale. Another possibility to achieve scale is to simply cooperate with another cooperative, i.e., a credit union.⁸ Through such a partnership, the RM membership can help co-create "economies of scope" never before seen in the sector. Economies of scope describe conditions where the long-run average and marginal cost of a company, organization, or economy decreases due to the production of one good that reduces the cost of producing another related good. Therefore, if a credit union(s) were to aggregate consumer data through sophisticated algorithms, in partnership with the technical specialists and visionaries at RM Cooperative, a diversity of products could emerge that significantly increase the network's magnitude (and reduce its costs). Platforms provide the realization of colossal scale and vast scope that would otherwise not happen through a stand-alone operation (Allen & Blakstad, 2017, pages 164-165; Chappelow, 2020).

⁸ Platform, open/user innovation, and ecosystem strategies rarely exist in isolation, and decisions in one product group may have impacts across a firm; decisions regarding how open to make a product represent a strategic leadership challenge for top management teams. Additionally, top management team members may be unfamiliar with platform, open/user innovation, and ecosystem strategies, and difficulties could arise if there is inconsistent understanding across the team ("Altman & Tushman, 2017, page 31).

The membership of RM is eager to partner with credit unions to navigate the changes brought about by the FinTech movement and chart the future of CUaaS technology. However, central to the philosophy of RM is to create a diverse wholesaler ecosystem to advance a wide variety of wholesaler roles for Technology Enabled Gig-workers (TEGs).⁹ With the identification of potential roles in the 'activity' and 'resource' layers of platforms, as suggested by service-dominant Logic (S-D Logic) and the industrial network model (Olsson, Robert, et al., 2013; Evans & Schmalensee, 2016), the founders of RM are confident that any one of our future TEG-members can generate value for partnering credit unions.

Nonetheless, because S-D Logic encourages organizations to "service and serve as many communities" as possible, it does not describe limits to the scope of a cooperative organization, the appropriate market conditions from which that scope is derived, nor the general commitment and patronage of the membership. A plethora of theories exist regarding the definition of a cooperative as a firm, but there is a lack of research on cooperatives' boundaries (Williamson, 1975, 1981; Holmstrom & Roberts, 1998). In 2018, researchers Getaw Tadesse and Gashaw T. Abate of the International Food Policy Research Institute (IFPRI), and Kebebe Ergano of the University of Manitoba, Winnipeg, Canada, sought to explain the type and range of goods and services cooperatives can realistically provide their members. According to their research (2018), the proper economies of scope only exist when the value of services from a cooperative is higher than the comparable values received from services available on the open market, as described by the following formula:

$$Cv = (S_1^0, S_2^0, \dots) > C = (S_1^M, S_2^M, \dots)$$

S_1^0 and S_2^0 denote the provision of services through a cooperative; S_1^M and S_2^M represent the delivery of the same services through open markets. Evidence gathered by Tadesse, Abate, and Ergano (2018) seems to indicate that the most problematic tactic a cooperative can implement is one where it attempts to offer absolute value to its members. Although altruism has its benefits, there are economic forces that ultimately determine a cooperatives' boundaries. Those boundaries demarcate which products and services the co-op can provide to its members and those that remain available through open markets. Furthermore, Tadesse, Abate, and Ergano state that the variety of services could positively or negatively affect the cooperative's performance -- based on the economies of scope criteria established by the above formula (Tadesse, Getaw, et al., 2018).

⁹ While advocates for platforms, open/user innovation, and ecosystems claim the elimination of "middlemen" is necessary to directly connect buyers and service providers, some entrepreneurs are adding intermediaries back into the equation because consumers are experiencing "app fatigue," and many platform processes are too complex, or too personalized for artificial intelligence to offer the simplest solution. These challenges, therefore, create room for the Technology-Enabled Middleman (henceforth, "Technology Enabled Gig-worker" for purposes of inclusivity and refrainment from sexual or gender-based discrimination). TEG startups hybridize the agency model through the leveraging of technology to scale the reach of human concierges. TEG's and customers often communicate through Short Message Service (SMS), which simulates a simple, natural form of communication for the customer (Peckham, 2016). The TEG concept also gains credence from the fact that many technology startups, such as Uber, Airbnb, eBay, and Etsy, are middlemen, i.e., intermediaries between buyers and sellers. Additionally, users that regularly contribute reviews and ratings gain the trust of other users, thus helping businesses conduct sales that would otherwise not happen (Krakovsky, 2015).

If the performance of a cooperative explains the type and range of goods or services provided to a membership (Tadesse, Getaw, et al., 2018), what impact, if any, does the International Cooperative Alliance's Cooperative Values and Principles provide? Is the co-op model's purpose only for defending members against the opportunistic behaviors of the private market (Sexton & Iskow, 1993)? Or, do the values and principles provide a framework for the uplifting of actors in an actor-to-actor ecosystem? S-D Logic is a new market philosophy. Yet, its principles of service, i.e., the process of doing something beneficial for and in conjunction with another entity, reflects commonality with the International Cooperative Alliance's Cooperative Values and Principles.

According to Sidney Pobihushchy, the Cooperative Values and Principles emerged from the experience of community life. This experience emphasized dignity for all life on Earth, not just human life (2003). It is "... on the leaders and members of the cooperative organization and its business to fulfill the objective of community (Pobihushchy, 2002)." Furthermore, according to Tom Webb, the "cooperative difference" is rooted in the practical application of the values and principles, and it is the presence of this difference that affirms the cooperative value proposition; the absence of Cooperative Values and Principles is what undermines and weakens the cooperative business model (Webb, 2006). Thus, as Pobihushchy and Webb seem to imply, cooperatives, CUaaP, and a coopreneurial gig-economy cannot be defined by economic impetus alone. To accurately portray the CUaaP model and the coopreneurial economy surrounding it, conjoining a moral boundary to theories regarding the economic boundaries of cooperatives is required to derive "cooperative value" thoroughly. In other words, if combined are the co-creational activities of S-D Logic and the International Cooperative Values and Principles, then possibly, an optimum, community-centered quality for CUaaP is discovered.

Dan Ariely's research regarding the aberrancy of the human moral code is applied to support the theories of Pobihushchy and Webb. Dr. Ariely is the James B. Duke Professor of Psychology and Behavioral Economics at Duke University and a founding member of the Center for Advanced Hindsight. In 2009, he delivered a TedTalk that discussed why people cheat. Ariely started with whether cheaters are some of a few bad apples or if cheating is endemic; his research pointed to the latter; however, the people studied only cheated a little bit. Ariely presumes that people hold on to an internal 'fudge factor' where people ultimately want to feel good about themselves and will only cheat if they can still feel good about themselves afterward. Ariely and his research team then asked, "what can we do to shrink the fudge factor?" While Ariely and his colleagues tried tempting subjects into cheating, they also asked those same subjects to recall the Ten Commandments or the Massachusetts Institute of Technology (MIT) Honor Code. Surprisingly, the recall of values and principles inspired subjects not to cheat. Thus, Ariely's findings seem to affirm the importance of values and principles in shaping the objectives of a cooperative organization (Ariely, 2009). It is with this insight that the RM Cooperative expands upon the formula introduced by Tadesse, Abate, and Ergano (2018), redefining the criteria for the economies of scope of a cooperative organization with the following equation:

$$C_v = (S_1^0, S_2^0, \dots) > C = (S_1^M, S_2^M, \dots) \text{ is true if } (M_L^N > L_M^N)$$

Value is added to S_1^0 and S_2^0 , as long as M_L^N is greater than L_M^N . In other words, when a co-op offers the appropriate number of services, and the membership is reminded consistently of its morality over convenience ($M_L^N > L_M^N$), overall cooperative value increases, and therefore, it is more competitive than similar products and services available on open markets. Henceforth, Credit Union as a Platform (CUaaP) is a range of co-creational activities that fall within limits imposed by the International Cooperative Values and Principles. Thus, members integrate and densify boundary resources to optimize the viability of their communities, i.e., their service ecosystem.

A FRAMEWORK FOR GENERATIVE DEMOCRACY

The types of dynamics discussed above show the significance of activities in distribution (increasing specialization), resources in distribution (increasing resource sharing), and actors in distribution (changing relationships). However, what can a gig-worker do in the current distribution context to efficiently and effectively use resources and undertake activities if unforeseen events hinder conditions for interaction and relationships with other actors (Olsson, Robert, et al., 2013)?

Technology is creating ever more efficient banking services and generating new business opportunities. The devices used to access this technology are revolutionizing the way customers buy products, both in the retail and commercial sectors (Goulding & Abley, 2019). Financial institutions are no longer offering a simple product-related experience. Instead, they focus on orchestrating a broader set of capabilities, including services from partnering firms to create new value-creating resources for customers (Dietz et al., 2017). At the same time, the multi-channel experience, an approach that attempts to maximize the performance of individual channels, was famous only for a short while. The omnichannel experience has taken hold, allowing customers to choose how they want to interact; and this way, allowing banks to improve those interactions (Schrage, 2016a; 2016b; May 2014; Brynjolfsson, 2013). Those channels, in turn, are connected to a platform that integrates all devices and services connected to it, producing a seamless banking experience ("Relationship Management in Banking...").

Ideating the Future of Credit Union as a Platform (CUaaP)

To help credit unions adopt the 21st-century landscape's banking features through CUaaP, the founders of RM Cooperative introduces a modified framework (based on Alqahtania & Uslay, 2020).

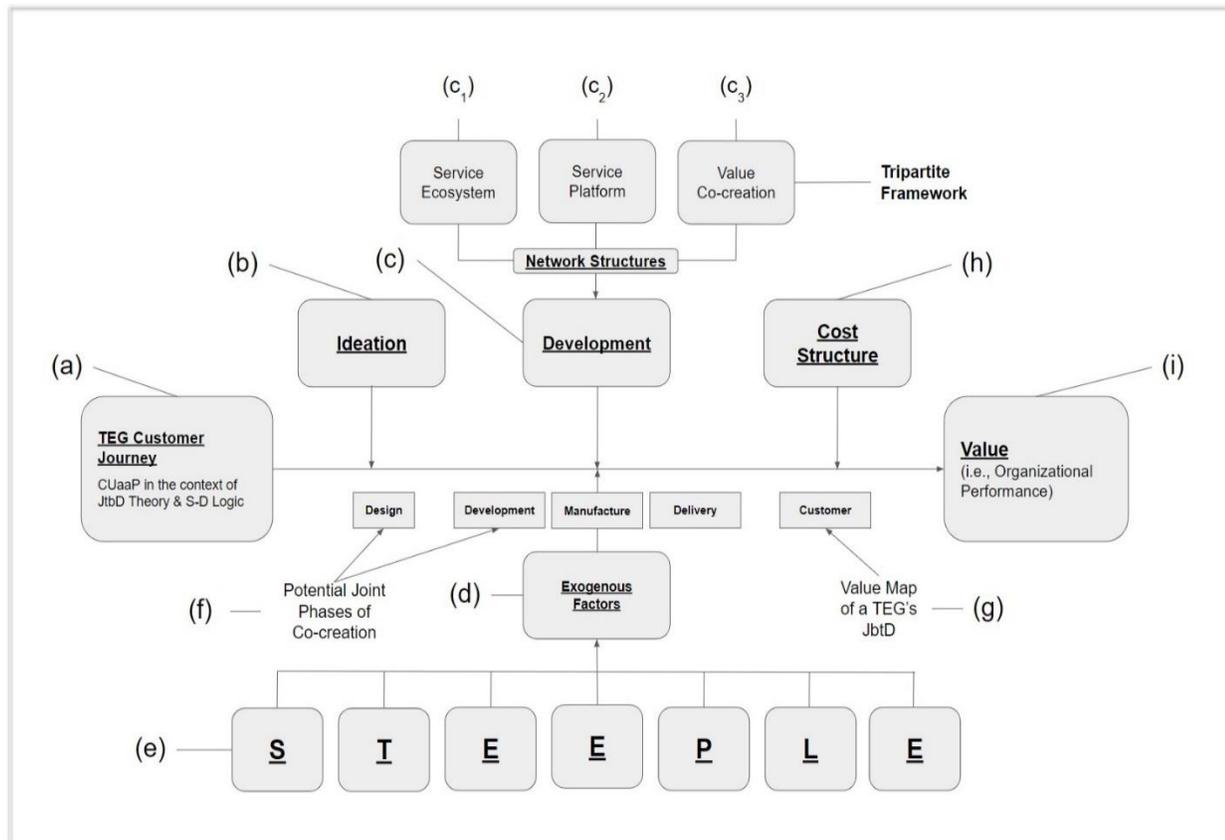


Figure 2. Generative Democracy Framework for a CUaaP Ecosystem

A) TEG Customer Journey

The customer journey of the TEG is about expanding a credit union's menu of services through co-creative actions by both the service provider and the customer (Altman & Tushman, 2017; Grönroos & Voima, 2013). Therefore, the TEG, at least conceptually, will take a more significant membership role than what the typical credit union value proposition attracts (Howard, 2018). Instead, what is required is an intensive co-creation process, where members, suppliers, and other players further strengthen their mutual links, utilize joint efforts to leverage new competencies, as well as commencing new opportunities and market innovations (Hakansson, H. & Snehota, 1995; Ramaswamy & Prahalad, 2004). Additionally, the TEG Customer Journey is expressed further by credit unions (i.e., platform intermediaries) adhering to a moral standard that treats their stakeholders as equals (Webb, 2006). The Cooperative Values and Principles can provide such

guidance.¹⁰ Also, the TEG's journey must directly experience specific Cooperative Values and Principles, namely 'Voluntary and Open Membership,' 'Democratic Member Control,' 'Member Economic Participation,' and 'Autonomy and Independence.'¹¹ In other words, a TEG does not join a credit union to access lower fees; instead, it is about democratically innovating and complimenting to the credit union experience, solving problems that may or may not belong to the credit union (Altman & Tushman, 2017; Howard, 2018; Ribeiro, Monteiro & Luttembarck, 2018).

B) Ideation

Service-dominant (S-D) logic and effectuation theories support conceptualizations of a product as something that is in constant evolution (Sarasvathy, 2008; Alqahtania & Uslay, 2020). However, the RM Cooperative believes Alqahtania's and Uslay's model is missing a conception for the quality of raw ideas in the innovation context. Thus, the founders of the RM Cooperative lean on the explorations of Laura J. Kornish, Associate Professor of Marketing at the Leeds School of Business, University of Colorado, and Karl T. Ulrich, CIBC Professor of Entrepreneurship and e-Commerce at the Wharton School of the University of Pennsylvania (2014). Kornish and Ulrich believe that a connection between raw ideas and the resulting innovation exists. In other words, the raw idea and its quality at the outset of the innovation process significantly impact organizational performance (2014).

C) Development

The conceptual framework of Kornish and Ulrich recognizes that the value of an innovation emanates from numerous sources, including the raw idea, the marketing and entrepreneurial practices of organizations, and exogenous factors (2014). Social psychology, innovation management, and other scientific fields have thoroughly examined creativity and ideation, initially with the concept of 'brainstorming' (Osborn, 1957; Diehl and Stroebe, 1987; Mullen et al., 1991). Kornish's and Ulrich's research claims that ideas increase when people work individually, especially when the expected outcome is not different between individuals and teams (2011). However, a study by behavioral economists Mariano Sigman and Dan Ariely found that, after reaching consensus, the collective decisions of groups are significantly more accurate than answers by individuals (2017). Regardless, the impact of decisions made in the development process, including marketing, remains a subject of inquiry, as various activities and findings contribute to value creation (Kornish & Ulrich, 2014). Below are domains the RM Cooperative has identified as potential steps of product and service innovation in the platform, open innovation, and ecosystem context:

a) Network Structures

¹⁰ Define ICA values and principles?

¹¹ The RM Cooperative believes the Cooperative Values Principles are not uniformly experienced through a cooperative's business model. Instead, the principles of 'Education, Training, and Information,' 'Cooperation among Cooperatives,' and 'Concern for Community' are Key Activities in a co-op's business model. Meanwhile, the principles of 'Voluntary and Open Membership,' 'Democratic Member Control,' 'Member Economic Participation,' and 'Autonomy and Independence' are expressed in a co-op's value proposition, i.e., the member-facing aspects of the co-ops business model. Our viewpoint regarding the Internation Cooperative Values and Principles is best represented through our modified Business Model Canvas, viewable here:

The opinion of the RM Cooperative is that the term "network structures" is akin to the Key Partnerships, Activities, and Resources blocks of Strategyzer's Business Model Canvas (Osterwalder & Pigneur 2013). Thus, we modify Alqahtania's and Uslay's concept of "Network Structures" by eliminating their premises of size and strength. Their interpretation of diversity is unchanged. We also supplement their theories with ideas explored by Blakstad and Allen (2017), and Olsson, Gadde, Hulthén (2013), namely:

- i) ***Integrating network-centrism implies the need to take advantage of networks.*** Credit unions and their supporting gig-workers will need to avoid the temptation to compete or acquire neo-banks. Instead, they need to focus on creating partnerships with suppliers and other customers by breaking down barriers between them. The founders of the RM Cooperative prefer this definition over "size" because describing the value of interpersonal or inter-organizational relationships cannot be done by existence alone. The RM membership does not believe a firm's "centrality" in a network provides any direct advantage. In lieu of "size," the RM Cooperative adopts the use of data to both understand and leverage the power of crowds. Uber does similarly; the basis of their business model is 'anyone with a car' who is willing to give someone a ride to where they need to go. Uber holds a vast database of drivers in all the cities in which it operates. As follows, it can instantly match a rider with the most suitable driver (Marr, 2015). Therefore, rather than rely upon interpersonal or inter-organizational relationships or a firm's centrality within a network, CUaaP participants must use metrics. An example measurement is the rate of interaction success, which helps determine what activities encourage gig-workers and other members to participate in the ecosystem (Choudary, Parker, Van Alstyne, 2016).
- ii) ***Connecting to others through knowledge, expertise, and experience*** describes the fortitude of a firm's ties within a network. Using data helps discover what customers want and when optimal demand for knowledge, expertise, and experience will happen (Allen & Blakstad, 2017, pages 164-165). Platform business models transfer value by building consensus and trust between market participants (Dawson, 2007). If participants can sustain interactions, they will invariably improve conditions for learning of the partners' activities and resources. As a result, they will enhance the partnership (Ford, Gadde, Håkansson, & Snehota, 2011; Weitz & Jaap, 1995). Therefore, the RM Cooperative will work with credit union leadership and management to develop interaction-centric education. Through tracking platform engagement, transactions enabled, and value created for complementors, we will grow trust and consensus-based transfer of value within the CUaaP ecosystem (Altman & Tushman, 2017).
- iii) ***Through partnerships, provide a full-service menu*** refers to the variety of a firm's ties within a network. It describes the results from the sharing of information, co-creation, or the enablement of networks. Therefore, the RM Cooperative's only change to Alqahtania's and Uslay's concept of "diversity" is in name only. However, to describe diversity, i.e., the value of partnerships in the context of CUaaP, we include Tom Webb's notions of a multi-stakeholder cooperative. Although platform co-ops are often described as a new type of cooperative business model (Sholtz, 2014; Sullivan, 2015), describing them as a channel that allows a membership, who have a distinctive stake in the success of a cooperative, to interact is by and far a more accurate interpretation (Webb 2006; Evans & Schmalensee, 2016; Choudary, Parker, Van Alstyne, 2016).

D) Exogenous Factors

Determining what forms of co-creation are most successful depends on addressing many unknowns. In other words, exogenous factors could, for better or worse, disrupt a cooperative's ability to create value (Kornish & Ulrich, 2011 & 2014). For example, decisions made by a competitor could positively or negatively impact the RM Cooperative and participating credit unions and gig-workers (Rosenthal, 2014). If we do our research, read websites, interview former and current customers, and formalize our ideas through development, discrepancies caused by exogenous factors could be measured and potentially controlled (Leonard, 2016).

E) STEEPLE Analysis

The RM Cooperative agrees with professors Alqahtania and Uslay that macro-level environmental factors moderate organizational performance. However, the RM Cooperative believes a broader measure of environmental forces – beyond market turbulence, technological turbulence, competitive intensity, supplier power, and market growth – is required. Thus, the RM Cooperative enhances measures used by Alqahtania and Uslay with a STEEPLE analysis.^{12, 13, 14}

The framework also presents cause for conducting two STEEPLE analyses, an initial analysis for the ideation of co-creative activities – as represented by the "Provider Sphere," and a second for execution – as characterized by the "Value-in-Exchange" and "Value-in-Use" phases of co-creation. According to Alexander Osterwalder of Strategyzer, all businesses need separate metrics for ideation (i.e., innovation) and execution (2013). Unfortunately, most enterprises apply execution metrics to innovation projects, a recipe for disaster (Osterwalder, 2017). Thus, we believe a STEEPLE analysis that does not distinguish between these two phases is wholly inadequate.

F) Provider Sphere: the creation of value-in-exchange

¹² A STEEPLE analysis is one variant of a popular management method, the PEST analysis, for evaluating the external environment of an organization. A thorough definition is available at Wozniak, Krzysztof. "STEEPLE Analysis." CEOPedia Management Online, CEOPedia, 1 Dec. 2019, ceopedia.org/index.php/STEEPLEanalysis.

¹³ There are seven categories in a STEEPLE analysis: Social, Technological, Economic, Environmental, Political, Legal, and Ethical. The RM Cooperative applies Alqahtania's and Uslay's market turbulence, competitive intensity, supplier power, and market growth to the Economic category. Meanwhile, technological turbulence is applied to the Technological category.

¹⁴ The STEEPLE analysis is essentially an expanded SWOT analysis, where Strengths, Weaknesses, Opportunities and Threats are considered through its seven categories. However, the RM Cooperative supplants the seventh category, "Ethical" with "Educational," preferring to discuss ethical choices in a manner similar to the SWOT ISCTE Business School model, or SWOT_i. In the SWOT_i model, values or ethics are central to a strategic formulation lens, and are considered before an organization scrutinizes its Strengths, Weaknesses, Opportunities and Threats. Additionally, all SWOT analyses are framed by strategic pillars where environmental, social, and economic concerns are analyzed. To expand on this novel concept, the RM Cooperative uses the STEEPLE analysis, with categories Social, Technological, Economic, Environmental, Political, Legal, and Educational as the strategic pillars. Our variation of the SWOT_i model is viewable here: <https://bit.ly/3qqa9dg>. For more information about the SWOT_i model, a definition is available at Pereira, Leandro & Pinto, Miguel & Costa, Renato & Dias, Álvaro & Gonçalves, Rui. (2021). The New SWOT for a Sustainable World. *Journal of Open Innovation Technology Market and Complexity*. 7. 1-32. 10.3390/joitmc7010018.

There are likely several moments within a credit union's operations that may become opportunities for co-creation with TEG's. Here co-creation is about the mutual development of value (Grönroos & Voima, 2013), which could imply a coequal adoption and implementation of values and principles among network participants (Webb, 2006). A point of warning, however. The above framework may signify linearity as if co-creation happens in a particular order or sequence; however, the opposite is true. Co-creation is organic, ever-changing, and intermittent (Grönroos & Voima, 2013). Thus, it is better to view CUaaP as an inventor or enabler, allowing customers or members to act on value-creation opportunities (Normann & Ramirez 1993, p. 67).

G) Value-in-exchange (singular event)

Here value-in-exchange is when the entire co-creative experience of CUaaP becomes a singular event; the expansion of the credit union's menu of service now presents moments where a customer can select a product or service that resulted from the co-creative process (Grönroos & Voima, 2013).

H) Co-creation of value-in-use

As a reminder, if a credit union is the owner (or part-owner) of a platform, its proprietorship ought not to suggest that it keeps all the value for itself (Jacobides et al., 2019). Instead, value-in-use refers to how the TEG measures the quality of the co-creative experience, for better or worse (Grönroos & Voima, 2013).

I) Cost structure

Like the 'Cost Structure' building block in Strategyzer's Business Model Canvas (Osterwalder & Pigneur 2013), this part of the model describes expenses most critical to the CUaaP ecosystem. However, platforms, open innovation, and ecosystems have significantly different cost structures from their traditional, linear counterparts. Operating costs tend to be modest because platforms, open innovation, and ecosystems do not manufacture tangible goods or hold inventory (Choudary, Parker, Van Alstyne, 2016; McAfee & Brynjolfsson, 2018). Traditional product firms protect their revenue streams like diamond mines, thereby creating barriers to entry. Platforms, open innovation, and ecosystems, on the other hand, balance the interests of marketplace participants and reduce barriers by subsidizing costs for individual players (Edelman, 2015; Van Alstyne, 2019).

Subsidization will be the most significant cost a CUaaP ecosystem may incur; however, subsidizing too much or too little could capsize the operation (Gawer, Yoffie, & Cusumano, 2019).

J) Value or Organizational Performance

The RM Cooperative agrees with Alqahtania and Uslay that realizing opportunity and value co-creation happens alongside network partners. The theories of S-D Logic, effectuation, and contingency provide a basic definition for the contextual fit of organizational development, i.e., network structures, entrepreneurial practices, and marketing, in attaining optimum co-creational performance (2020). In other

words, during the pursuit of opportunities and gathering of stakeholders, the compilation of resources (Stevenson & Gumpert, 1985; Stevenson & Jarillo, 2007), as well as the consumption of a service (Grönroos & Voima, 2013) manifests benefits for all co-creational participants. Thus, organizational performance, i.e., value, is the measurement of the totality of the journey, as network operators and their partners generate ideas, develop, refine, and execute models, address exogenous factors, and minimize costs (Alqahtania and Uslay, 2020).

THE STEEPLE MODEL AND METHODS

CUaaP is a channel and a method for developing cooperative customer relationships that ultimately increase a credit union's external focus. Thus, credit unions must enable interactions amongst gig-workers who can design, innovate, contribute, and compliment the CUaaP ecosystem. Personnel challenges may arise as credit union leadership adopts interaction-centric metrics, especially if their newfound focus causes hiring shortages in other departments. Additionally, CUaaP may embolden credit unions to adopt a hybrid strategy between traditional product and service offerings, thereby creating more personnel stress. Clear communication is critical, especially when leadership presents new interaction–centric methods and metrics. If a credit union is unaware of the need to track appropriate ecosystem metrics, it will not acquire help from relevant expertise (Altman & Tushman, 2017).

Credit unions that adopt CUaaP will conduct business and interact with their business environment differently than financial institutions that maintain their conventional business models. As credit unions undergo shifts in their business strategies towards CUaaP, fundamental changes in culture, practice, and position in the meso-economy are likely to occur. One way for credit union leadership to adopt CUaaP is to consider platforms, open innovation, and ecosystems through a strategic lens (Altman & Tushman, 2017).¹⁵

While platform strategies vary along a few dimensions, they all require organizations to reach outside their boundaries to interact with and benefit from external individuals and groups. For example, on a societal level, Uber completely changed conceptions of transportation simply because they strategically engaged with and facilitated interactions with external entities (Altman & Tushman, 2017). Therefore, environmental analysis is critical for developing and maintaining a sustainable competitive advantage, identifying opportunities and threats, and cooperative solutions with ecosystem partners (Yüksel, 2012).

Ultimately, strategic analysis is concerned with the strategic position of an organization. Therefore, credit unions will need to understand what is going on in the environment to encourage collaboration with members. Also, how will these collaborations affect the credit union and its activities? Thus, a strategic analysis of platforms, open innovation, and ecosystems must form a view of the critical influences on the present and future well-being of the network and its participants. Therefore, a STEEPLE analysis will allow credit unions to consider variables that may give rise to opportunities or pose threats. The challenge is to distill the complexity of critical environmental impacts for strategic choice (Kew & Stredwick, 2005). Strategic capability is about identifying strengths and weaknesses by considering the credit union's Key Resources, Key Activities, and Key Partnerships, as it engages a CUaaP ecosystem (Kew & Stredwick, 2005). An additional function of a STEEPLE

¹⁵ Clarify meso-economy...

analysis is to provide data and information to enable credit unions and CUaaP participants to predict situations and circumstances the ecosystem may encounter (Yüksel, 2012).

There are tremendous forces at play in the macro-environment, including culture, history, ideologies, values, science & technology, education, legal, political, and demographics that may directly impact the operability of CUaaP, as well as the entirety of the financial sector. However, the present design for STEEPLE analyses only provides a general idea about the macro-environment and the situation of a company or network. The first problem is the lack of a quantitative approach to measurement. Usually, STEEPLE analyses have qualitative structures. Thus, STEEPLE evaluations do not allow factors constituting the business environment to be objectively or rationally analyzed. Secondly, STEEPLE analyses are described theoretically as holistic, and the measurement and evaluation dimensions do not reflect universality, especially when the studied factors are generally measured and evaluated independently. This deficiency is troubling because not all elements in the external environment will have an equal influence on commercial activities. Finally, another issue in regards to the holism of STEEPLE evaluations is the interactivity of environmental factors. For example, an economic element may have socio-cultural implications, or a political or legal event may cause ecological detriment. An organization conducting a STEEPLE analysis ought to consider an approach that measures the inter-dependence of the factors that make up the macro-environment (Yüksel, 2012).

The remainder of this paper will discuss a model developed by professor İhsan Yüksel of the Department of Business Management at the Kırıkkale Üniversitesi in Kırıkkale, Turkey (2012). He addresses the shortcomings of the measurement and evaluation process of a PESTLE analysis. A PESTLE analysis is virtually the same as a STEEPLE analysis. However, it does not include a measure for 'Ethics.'¹⁶

While this paper discusses this STEEPLE variant, Yüksel's work is important because it integrates environmental factors and sub-factors through Analytic Hierarchy Process (AHP)¹⁷ and Analytic Network Process (ANP)¹⁸ techniques. However, we supplant Yüksel's use of Decision Making Trial and Evaluation Laboratory (DEMATEL) process,¹⁹ which he uses to determine the relationship between factors and sub-factors,

¹⁶ Describe RM's changes to the STEEPLE analysis

¹⁷ Analytic Hierarchy Process (AHP) was developed by T.L. Saaty in 1971 – 1975 while at the Wharton School of the University of Pennsylvania, and is considered a general theory of measurement used to derive ratio scales from both discrete and continuous paired comparisons. AHP primary concern is the departure from consistency, reflecting the relative strengths, preferences, and feelings regarding the comparisons. For more information, please refer to Whitaker, Rozann. (1987). The Analytic Hierarchy Process – What It Is and How It Is Used. Mathematical Modelling. 9. 161-176. 10.1016/0270-0255(87)90473-8.

¹⁸ Analytic Network Process (ANP) is a generalization of AHP; however, ANP is represented by a network, as opposed to a hierarchy. Decision-making problems often do not fit structurally within a hierarchy because high-level elements and low-level elements often interact and depend on each other. The objective is to determine the priorities of elements in a network, and what alternatives may be available that ultimately justify the validity of an outcome. For more information, please refer to Saaty, Thomas & Vargas, Luis. (2006). The Analytic Network Process. 10.1007/0-387-33987-6_1.

¹⁹ First developed by the Geneva Research Centre of the Battelle Memorial Institute, the Decision making trial and evaluation laboratory (DEMATEL) technique visualizes the structure of complicated causal relationships through matrixes or digraphs. DEMATEL is useful in analyzing the cause and effect relationships among components in a

with an Exploratory Factor Analysis (EFA)²⁰ to create a collection of questions that prioritize Jobs-to-be-Done (JtbD)²¹ within a CUaaP ecosystem (Ribeiro, Monteiro & Luttembarck, 2018). We based this decision on research by Yaser Sobhanifard of Iran University of Science and Technology, who used EFA to form a model of data derived from customers surveyed about their use of financial technology. He then uses ANP to rank the discovered factors and determine priorities for factor improvement ("Consumer Based Modeling of Mobile Service Consumption..."). We believe Sobhanifard's analysis of customers and their use of financial technology is similar to our concept of CUaaP participants, in that they are external to the financial institution (Allen & Blakstad, 2017; Lusch & Nambisan, 2015; Krakovsky, 2015; Olsson, et al., 2013; Peckham, 2017; Ribeiro, Monteiro & Luttembarck, 2018; Tadesse, Getaw, et al. 2018; Vargo, Stephen L., and Robert F. Lusch. 2004). Sobhanifard, however, does not employ a STEEPLE analysis, and for that reason, we refer back to professor Yüksel as necessary.

Steps of the Proposed STEEPLE Analysis for a CUaaP Environment

Our process is in its early stages of development (and it is challenging to be brief); alas, our process begins with establishing cause for two STEEPLE analyses, an initial analysis for the ideation phase of CUaaP development, and a second for execution. According to Alexander Osterwalder of Strategyzer (2013), all businesses need separate sets of metrics for ideation (i.e., innovation) and execution. Unfortunately, most businesses apply execution metrics to innovation projects, a recipe for disaster ("Innovation Metrics vs. Execution Metrics"). Thus, we believe a STEEPLE analysis that does not distinguish between these two phases is wholly inadequate. After that, our STEEPLE model continues with the following steps:

1. An audit of environmental factors, i.e., identifying the STEEPLE factors and sub-factors, and after that, form a hierarchic structure of the STEEPLE model ("Developing a Multi-Criteria Decision Making Model for PESTEL Analysis"; Johnson, Scholes, and Wittington, 2005)
2. Classify factors and sub-factors based on the phases of CUaaP development, i.e., innovation - measuring the reduction of risk and uncertainty, and implementation -- measuring results ("Innovation Metrics vs. Execution Metrics"). In the innovation phase, we will identify principal

system, and solving and complicated, intertwined problems. For more information, please refer to Si, S., You, X., Liu, H., & Zhang, P. (2018). DEMATEL Technique: A Systematic Review of the State-of-the-Art Literature on Methodologies and Applications. *Mathematical Problems in Engineering*, 2018, 1-33.

²⁰ Exploratory Factor Analysis (EFA) is used to discover summary constructs, i.e., factors that summarize the relations among variables. The objective is to reduce the number of variables in an experiment if they can be explained by relationships they have with other variables. For more information, please refer to Goldberg, L. R., & Velicer, W. F. (2006). Principles of exploratory factor analysis. In S. Strack (Ed.), *Differentiating normal and abnormal personality: Second edition*. New York, NY: Springer. (pp. 209-237).

²¹ Jobs-to-be-Done (JtbD) theory is a hypothetical process for discovering value creation opportunities in the realm of the customer. Value creation opportunities are revealed when a customer has problems (jobs) and expects certain solutions as a result of using specific product or service offerings. JtbD can be used to identify opportunities for co-creation, thus affirming the application of Service-Dominant Logic (SDL) as a conceptual framework for the formation of organizational strategies. For more information, please refer to Ribeiro, Áurea & Monteiro, Plínio & Luttembarck, Laura. (2018). "The Use Of The 'Job To Be Done' Methodology To Identify Value Co-Creation Opportunities In The Context Of The Service Dominant Logic." 18. 10.15728/bbr.2019.16.1.3.

opportunities and threats to the CUaaP. Opportunities are represented by instances and events in the market that could improve with credit unions adopting CUaaP:

a. Market competition

- Monopolistic
- Imperfectly competitive
- Fairly competitive
- Well-performing

b. Transaction costs

- High
- Medium
- Low

c. Market failure/Missing Markets (Tadesse, Getaw, et al., 2018)

Threats represent instances and events that could hinder or impair the ability of CUaaP to function:

a. Market Risks

- Identify hazards
- Assess the likelihood of harm occurring and its severity
- Designing, implementing and monitoring measures to eliminate or minimize risk (Kew & Stredwick, 2005)

In the development phase, we use our execution categories, i.e., Network structures:

a. Service Ecosystem

- Integrate network-centrism into the business model
- Cooperative Age

- Size of Membership

- Participation Rate

b. Service Platform

- Connect to others through knowledge, expertise, experience; and,

i. Manufacture

1. Co-op Age

2. Human Resources/Capacity Building

ii. Delivery

1. Channels

2. Revenue

iii. Value Co-creation

1. Through partnerships, provide a full-service menu

2. Driven by the member, and may or may not include the intermediaries

3. Next is a sophisticated analysis of:

- a. Environmental trends that have more of a direct impact on ecosystem participants and their Jobs-to-be-Done (JtbD).

- b. Long-term drivers of change, e.g., trade policies that could expand or contract value co-creation within the ecosystem ("Exploring Corporate Strategy").

4. Determining and mapping the potential interdependences between STEEPLE factors by Exploratory Factor Analysis (EFA)

5. Calculating the interdependent weights by ANP, i.e., develop a "supermatrix" capable of handling the interrelationships between decision levels and attributes.

- a. Scores 1, 3, 5, 7, and 9 correspond to indifferent, weak, slightly stronger, very strong, and absolute importance. The numbers 2, 4, 6, and 8 are employed to facilitate compromise between slightly different judgments (Sobhanifard, 2017; Yüksel, 2012).

6. Determine the STEEPLE sub-factors weights by AHP (Analytic Hierarchy Process), a multi-criteria decision-making technique that performs pairwise comparisons to derive relative importance of the variable in each level of the hierarchy (Görener, 2012).
 - a. AHP was first developed by Saaty (1980); decision-makers respond to questions such as: "which criteria in the macro-environment need attention, and how much more?" Each pair of criteria is judged only once. After that, responses are evaluated using Saaty's 1–9 scale (Sobhanifard, 2017; Yüksel, 2012).
7. Compare the AHP and ANP Results
 - a. Determine the global weights by multiplying the weights in the ANP (step 5) by weights in the AHP (step 6).
 - b. Both AHP and ANP are methods for measuring intangible factors by pairwise comparisons with judgments representing the dominance of one element over another.
8. Evaluating the STEEPLE sub-factors and determining the level of support in the macro-environment by multiplying the global weights of sub-factors by the evaluation values. Depending on the value calculated for the macro environment, the following levels can help inform decisions:
 - a. $0.80 \leq \text{macro environment level} \leq 1.00$: The macro-environment is highly supportive of CUaaP.
 - b. $0.60 \leq \text{macro environment level} < 0.80$: The macro-environment is suitable for CUaaP.
 - c. $0.40 \leq \text{macro environment level} < 0.60$: The macro-environment is moderate for CUaaP.
 - d. $0.0 \leq \text{macro environment level} < 0.40$: The macro environment is not supportive of CUaaP.
9. Identify the competitive position of the CUaaP.
 - a. Continue the analysis by using tools like Porter's Five Forces ("Exploring Corporate Strategy")
 - b. Consider alternatives used by Strategyzer, as discussed in their September 11, 2015 blog post by Nabila Amarsy, "The Toolbox Every Company Needs To Perform Business Strategy & Innovation."

CONCLUSION

By considering Credit Union as a Platform (CUaaP), along with its platform, open innovation, and ecosystem aspects, this paper has successfully explored institutional logic shifts associated with these strategies and implications for strategic leadership. By adopting CUaaP, credit unions must begin seeking cooperative partnerships with their members. The FinTech Revolution can inspire the creation of numerous value-generating opportunities for independent distributors, including Technology Enabled Gig-workers (TEG's). Society is moving away from central control economies to that of a distributed Wholesaler Economy. This paper, throughout, mentions topic areas related to transitioning to these strategies, areas of exploration worthy of additional pursuit. A potential research plan is presented, which will hopefully advance more rigorous empirical and theoretical development methods. The identification of the TEG roles in the activity and resource layers, in addition to the actor layer, justifies the need for further research. Up until this point, platform cooperativism has been an intellectual frame of reference for developing democratically controlled multi-sided cooperative business models. This paper, however, pushes platform cooperativism away from qualitative analysis and towards quantitative analysis by combining a unique STEEPLE Analysis of CUaaP's business environment with the Analytic Hierarchy Process (AHP) and Analytic Network Process (ANP). Hopefully, through responsibility and accountability, we will soon discover how platform co-ops will provide the same convenience and innovation of services as other for-profit platforms, open innovation programs, and ecosystems.

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