

# **Exploring the Role of Social Capital Mechanisms in Cooperative Resilience**

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## **Abstract**

We contribute to research on cooperative resilience by examining how their main advantage of social foundations may facilitate the assembly of resilience capabilities. Drawing from the social capital literature, we focus on the strategies and activities of a nationally known rural cooperative in Indonesia to reveal social capital mechanisms, specifically channeling and targeting social capital, that underlie diverse sets of resilience capabilities. By conceptualizing cooperative resilience according to cooperatives' dual objectives of economic and social viability, we build an empirically grounded framework that encompasses social capital-driven mechanisms that underlie cooperative resilience. Economically, strengthening social capital (channeling) may result in organizational transparency and collaborative work, while widening social networks (targeting) develops velocity and flexibility. Socially, both mechanisms lead to the emergence of individual-level resilience capabilities. Our study informs business research on resilience by conceptualizing it in the context of cooperatives and shedding light on its underlying social capital-driven mechanisms.

## **Keywords**

***Cooperatives; Social capital; Resilience; Grounded theory***

## 1. Introduction

Organizations are increasingly prone to facing disruptive events that can undermine their stability and performance due to growing uncertainty and complexity (Bhamra et al., 2011). In this regard, the notion of resilience has come to the forefront of both academics' and practitioners' interest as an organization's "ability to absorb shocks in the form of extreme events and an adaptive capability to adjust to new circumstances" (Johnson et al., 2013, p. 325). This suggests that organizations should be able to dynamically modify their processes, re-allocate their resource base to cope with disruptions and adversities, and exploit new opportunities (Teece, 2007; Easterby-Smith et al., 2009). In this respect, social capital plays an influential role in facilitating capabilities required for resilience (e.g., Johnson et al., 2013). Viewed as the composition and character of existing social and community relations, social capital has been highlighted as a valuable strategic asset and considered critical to effective collaborative initiatives that promote resilience (Coleman, 1990; Adler and Seok-Woo, 2002; Phyne et al., 2006; Subramony et al., 2018).

In addition, the "economization" movement of cooperatives has led to the growing emergence of direct comparative analyses between cooperatives and for-profit organizations (Böök et al., 1992). On that basis, during economic crises, cooperatives are superior in terms of their ability to provide employment and sustainable income to individuals and communities (Birchall and Ketilson, 2009; ILO, 2013). Therefore, despite their inherited challenges, including access to financial capital, capacity building, and market access, cooperatives can be more resilient compared to other types of enterprises (Birchall and Ketilson, 2009). The importance of resilience is even more profound within cooperatives located in developing countries because they are generally more exposed to political, economic, and climate crises than cooperatives in the developed world (Birchall, 2004). Moreover, being regarded as a "social capital-based organization" (Valentinov, 2004), the social foundation of cooperatives

has been recognized as the main comparative advantage, compared to other ventures (Spear, 2000). The commitment of members, intrinsically based on mutual trust and reciprocity, has been a key component in shaping the performance of cooperatives (Ruben and Heras, 2012). Cooperative scholars have emphasized the importance of social capital and attempted to link the term to cooperatives' development and performance (e.g., Valentinov, 2004; Nilsson et al., 2009).

However, although the relationship between social capital and resilience has received increasing scholarly attention, existing research has failed to illuminate the fine-grained and nuanced mechanisms for how organizations should deploy social capital to build capabilities required for resilience. While extant research alludes to a critical linkage between social capital and resilience, it has not proposed how social capital is connected to resilience, or what behavioral mechanisms link them. Similarly, despite widely accepted acknowledgment of cooperatives as resilient organizations, scant attention has been paid to the nature of cooperative resilience. The same applies to social capital, the main foundation of cooperatives, and how it can allow the bundling of capabilities required for their resilience. Hence, a nuanced and in-depth understanding of the interactive relationship between social capital and resilience is pivotal for organizations to better prepare and develop capabilities to cope with and even thrive amid uncertainties and adversities.

We aim to uncover the underlying mechanisms of social capital within a rural cooperative located in the developing country of Indonesia, that result in their resilience capabilities. Thus, to fill the theoretical gaps identified above, we pose our research question: *How can cooperatives strategically utilize social capital to build resilience?* To address it, we conducted an in-depth case study of a nationally known rural cooperative in Jembrana, Indonesia, that has displayed resilience through its ability to recover from adversities and furthermore, still be capable of competing and succeeding on a global scale. We chose to take

a qualitative approach to this study for two reasons. Firstly, the focal phenomenon of cooperative resilience has not been theoretically explored. While the understanding of resilience capabilities of for-profit organizations has been rapidly developed, the dual objectives of cooperatives (i.e., economic and social viabilities) challenge firstly, the traditional definition of resilience in organizational studies and secondly, the applicability of the capacity required for cooperative resilience. Secondly, we aim to develop a contextualized and nuanced understanding of how social capital can be utilized strategically by organizations to develop the capabilities for resilience; regarding cooperatives in rural areas, this strength provides a unique context to study how dense social networks in rural communities can be accessed (Johannisson et al., 2002), and strategically deployed to build resilience capabilities.

This study offers two distinct contributions to understanding the relationship between social capital and resilience in the context of cooperative organizations. Firstly, we identify the contributing factors that lead to the deployment and utilization of social capital through experienced adversities. Secondly, we explain and articulate the dynamic nature of the relationship between social capital and resilience that encompasses the cooperatives' dual obligations to meet their economic and social viabilities by identifying two distinct but mutually reinforcing social capital mechanisms: channeling and targeting social capital. This paper begins by reviewing the literature on resilience, how it may be applied to cooperatives, and how social capital can be utilized as a strategic resource to achieve resilience. We then present our research context and methodology, followed by a discussion of our empirical findings. Our paper concludes by outlining the study's contribution to the theory and managerial practices, along with future research avenues.

## **2. Theoretical background**

### ***2.1. Towards a definition of cooperative resilience***

Despite a widely accepted acknowledgment of cooperatives as resilient organizations, a consolidated body of literature on the subject is still lacking. To the best of our knowledge, apart from the work of Borda-Rodriguez and Vicari (2014) on rural cooperative resilience, Roelants et al. (2012) on the investigation of European worker cooperatives, and Birchall and Ketilson (2009) work on financial cooperatives and credit unions, only scattered studies have explicitly attempted to explore the resilience of cooperatives. Surprisingly, even the very definition of cooperative resilience is still absent.

Borrowing the concept from management studies, cooperative literature has utilized resilience synonymously as an organization's ability to develop capabilities to cope with shocks and crises (e.g., Birchall and Ketilson, 2009; Roelants et al., 2012; Borda-Rodriguez and Vicari, 2014). However, given their dual nature, we posit that the resilience of cooperatives should not only concern their economic responsibilities that can be captured through an organizational level, but also their social obligations meeting the essential needs of their members.

Firstly, the concept of resilience has traditionally been explored in various fields of study, from material sciences to psychological behaviors (Ponomarov and Holcomb, 2009; Walker et al., 2002), and not until recently has the notion gained significant traction within the field of organizational studies (Duchek et al., 2020). Management scholars have described resilience as a multi-dimensional concept (Santoro et al., 2020) that is represented through an organization's "ability to absorb shocks in the form of extreme events and an adaptive capability to adjust to new circumstances" (Johnson et al., 2013, p. 325) in relation to their economic output. Thus, organizations should look beyond restoration and further embrace a strategic renewal of their processes to keep pace and exploit opportunities (Coutu, 2002).

Secondly, to encompass the social obligation of cooperatives, the literature about vulnerability informs the importance of resilience of cooperative members for their ability to

be agents of change. In this sense, resilience is viewed as a capability to overcome both risk and leverage opportunities captured through actors' vulnerabilities, in turn affected by institutional context and actors' resource dependency (Brown and Westaway, 2011; Nelson et al., 2007). Similarly, in development studies, resilience is defined as sets of behaviors developed over time that depend on available and accessible opportunities allowing actors to "lead the kind of lives they value and have reason to value" (Sen, 1999, p. 18); this informs the conceptualization of resilience in terms of social obligations of cooperatives. Consequently, in achieving resilience, cooperatives should provide transformative activities that enable members to capitalize on their resources both individually and collectively (Jamrog et al., 2006; Coutu, 2002), to hedge experienced risks and exploit opportunities. Thus, the role of cooperatives is implicated in promoting members' empowerment as "a process of transition from a state of powerlessness to a state of relative control over one's life, destiny, and environment" (Sadan, 1997, p. 144), which can be drawn from their unique quality of allowing democratic participation (Majurin, 2012). The entrenched collectiveness characteristic of cooperatives can further add to and enhance the empowerment of members by allowing access to information, knowledge, resources, and opportunities that are communally available (Borda-Rodriguez and Vicari, 2014). It can be defined as an appropriation capacity, as the ability to leverage collective skills and experiences to better prepare for ongoing and future events (Borda-Rodriguez et al., 2016; Borda-Rodriguez and Vicari, 2014).

As summarized above and shown in Table 1, by synthesizing different fields of studies, this discourse provides a basis for exploring how the bundling of organizational capabilities can lead to the emergence of resilience that captures both economic and social obligations in the context of cooperatives. Therefore, we define cooperative resilience as the *organizations' ability to recover from disruptions, maintain dynamic integrity in the presence of ongoing stress, and exploit opportunities that pivot on achieving economic and social goals.*

----- Insert Table 1 here -----

## ***2.2. Social capital as a resource for cooperative resilience***

Social capital theories provide important evidence where trust, reciprocity, and networks play a key role in overcoming actions and constraints (Putnam, 1995; Ostrom, 2014). Viewed as the composition and character of existing social and community relations, social capital has therefore been highlighted as a valuable strategic resource and considered critical to effective collaborative initiatives (Coleman, 1990; Adler and Seok-Woo, 2002; Phyne et al., 2006; Subramony et al., 2018). Maurer and Ebers (2006) note that the conceptualization of the three interrelated dimensions of social capital (i.e., structural, relational, and cognitive) -provided by Nahapiet and Ghoshal (1998)- offers a reasonable and comprehensive conceptualization of social capital that accommodates major concerns in the existing literature.

Being regarded as a “social capital-based organization” (Valentinov, 2004), the social foundation of cooperatives has been recognized as the main comparative advantage compared to other venture firms (Spear, 2000). Cooperative scholars have emphasized the importance of social capital and attempted to link the term to cooperatives’ development and performance (e.g., Nilsson et al., 2009; Valentinov, 2004). The commitment of members that are intrinsically based on mutual trust and reciprocity has been a key component in shaping the performance of cooperatives (Ruben and Heras, 2012). Specifically, the naturally strong ties between actors stemming from the locality of high-density social networks (Putnam, 1995) may provide a “soft cushion” for collaborative ventures development (Ring et al., 2010). This locality provides opportunities for actors to further develop their trust and intimacy in strengthening their social relations (Wulandhari et al., 2021; Kalantaridis and Bika, 2006).

The extant literature has also provided insights into the importance of social capital contributing to cooperatives’ success and survival. When unexpected events or disruptions hit cooperatives, social capital may facilitate their recovery from such adverse events, as trusted

communal partners and stakeholders would act benevolently to resolve the situation (Jia et al., 2020). Likewise, social capital in the context of cooperatives may function as a hedge against adversities, enhance collective action, and enable coherence and intactness against unexpected disruptions (Brewton et al., 2010; Borda-Rodriguez and Vicari, 2014; Borda-Rodriguez et al., 2016).

Extant research increasingly examines the linkages between social capital dimensions and resilience in different contexts, such as post-disaster recovery (e.g., Cox and Perry, 2011; Aldrich, 2012; Jia et al., 2020), supply chains (e.g., Johnson et al., 2013; Polyviou et al., 2019), communities (e.g., Aldrich and Meyer, 2014; Brewton et al., 2010), and individuals (e.g., Santoro et al., 2020). In a post-disaster recovery context, Chowdhury et al. (2018) explored the relationship between social capital dimensions and organizational resilience as predictors of business performance. They found that relational capital can predict the adaptive resilience of tourism firms. Taking a similar approach, Jia et al. (2020) recently discovered that while structural capital improves proactive resilience, relational capital only improves reactive resilience among Chinese firms. At the supply chain level, Johnson et al. (2013) further revealed that the dimensions of social capital might intermingle and play an influential role in facilitating the formative capabilities of supply chain resilience. Polyviou et al. (2019) identified the components of the structural (i.e., small network size), cognitive (i.e., close relationships), and relational (i.e., long employee tenure) social capital dimensions as resilience-enhancing resources for supply chain resilience. In the context of community resilience, Brewton et al. (2010) found that in times of disaster, social capital contributed positively to rural but not urban firm resilience due to the more often readily available social capital in rural communities. Furthermore, in the context of entrepreneurship, Santoro et al. (2020) found stakeholders' engagement served as a substantial resource of social capital, that moderated the relationship between resilience and perceived success of entrepreneurs.



These studies rely on the notion that resilience stems from a pool of individual and communal resources accessible through social capital, protecting organizations from transient disturbance, whose occurrence is difficult to predict and whose effect may undermine organizations (Karhu, 2015). Research on social capital has highlighted trust as a shared cooperative mechanism leveraged against disruptions (Gölgeci and Kuivalainen, 2020). Social capital's structural, relational, and cognitive dimensions increase the likelihood of sharing and exchanging resources (Nahapiet and Ghoshal, 1998). Thus, extant research has proven that social capital can be a strategic resource for organizations, communities, and even individuals to achieve resilience.

However, while previous research has mainly focused on the direct causal relationships between social capital dimensions and resilience, current literature does not explain *how* social capital can be deployed to achieve resilience. In particular, it is still unclear how social capital, being the main foundation of cooperatives, may unfold and facilitate the resilience of such unique types of organizations. The most recent body of knowledge on cooperative studies echoes the existence of such a theoretical gap and encourages further research to explore this issue (Deng et al., 2021). Our paper takes a preliminary step toward closing this gap by uncovering the mechanisms by which social capital can be utilized as a strategic resource that facilitates and fosters cooperative resilience.

### **3. Methodology**

#### ***3.1. Research design***

Given the nature of our research question, we consider critical realism a fitting methodological lens for our study. We aim to add to the existing literature of resilience and social capital within the context of cooperative by providing a middle-range (i.e., contextualized) theory, as opposed to a “grand” theory (Boudon, 1991). Middle-range theorizing is deemed appropriate in addressing specific local-level problems (Birchall, 2004), through data gathered from the field

within construction practices (Jia et al., 2017). This view permits a comprehensive investigation of both context and process issues by combining different theoretical approaches and different levels of analysis (Blundel, 2007). The inquiry goes beyond the observable that moves towards underlying mechanisms of any study, and therefore yields a deeper understanding of any social situation.

In identifying these mechanisms, the exploration of the issue in question involves a retroduction process, a form of inquiry that consists of a combination of deductive and inductive reasoning (Archer et al., 2013). It is believed that instrumental theories generated through inductive research are highly unlikely to be driven solely by empirical data without acknowledging existing theories (Green Stuart et al., 2010). Retroduction thus concerns the identification of “the basic prerequisites” for what is actual or empirically observed (Danermark et al., 2002, p. 20), moving the inquiry further by using the classic critical realist metaphor of “depth” (Ritz, 2020), that is guided by pre-existing theoretical considerations, while remaining open to emerging findings (Merton and Merton, 1968).

Traditionally known to be interested in contextualizing actions within broader social structures, grounded theory has been employed to fulfill the requirement of critical realism, which requires a focus on structures and agencies (Menzies, 2012). The grounded theory approach is particularly useful in “studying behavior and change, understanding problematic, intricate, little-known social phenomena, and being flexible enough to allow theory to emerge from data” (Gligor et al., 2016, p. 94). Thus, as this focal study seeks to uncover behavioral and social mechanisms involved in translating social capital into cooperative resilience, the grounded theory approach is deemed suitable.

We utilized a case study design to investigate a contemporary phenomenon about the limited extent of information over which the researchers had little control (Yin, 2009). While our case is situationally grounded, we meet the dual criteria of rigorous case design by also

seeking generalizability achieved by data triangulation through collecting information from different perspectives (Corbin and Strauss, 2008). To ground our study, we searched for a local cooperative in a rural area in a developing country that met the resilience criteria and had already been considered successful. We identified a cocoa producer cooperative located in Bali, Indonesia, that met our indicators. The agricultural sector of a developing country was an ideal context for studying how social capital could benefit rural cooperatives' success and resilience. We were given access to study different actors within (cooperative committee and members comprise three categories of men, women, and young farmers) and across the cooperatives (a partnering NGO and government officials). This created an opportunity to examine how a cooperative can interact with actors within and outside its boundaries to deploy social capital mechanisms. This single case study was chosen because it permitted an in-depth and rich investigation of the study's phenomena compared to multiple case designs (Siggelkow, 2007; Yin, 2009).

### ***3.2. Study context and case description***

In 2020 the total population of Indonesia recorded by the Central Bureau of Statistics of Indonesia (*Badan Pusat Statistik*, known as *BPS*) reached just over 270 million, from which 80% reside in rural areas that rely on agriculture and farming as their main income (Badan Pusat Statistik, 2020). Cocoa is one of Indonesia's main exported agricultural commodities and considered valuable for employing rural communities by encouraging regional economic growth (Fahmid, 2013). Though one of the largest cocoa producers globally, Indonesia's cocoa production is generally regarded as problematic. In particular, the main issue of low-quality beans is a result of farm-level economic problems, such as the minimum knowledge required for good agricultural practices, and improper management (Moriarty et al., 2014; Fahmid, 2013). Consequently, cocoa farming has been less productive and competitive compared to other types of crops (KPMG, 2013).

One of the attempts to improve agricultural produces in rural settings is to develop farmers' groups. Farmers' groups in Indonesia can be identified as a "collection of farmers, ranchers, or planters formed based on a mutual interest in a common social environment with similar resources and commodities, to improve and develop their members' livelihoods" (Rustinsyah, 2019, p. 2). Though essentially an informal institution, the legitimation of farmers' groups can be performed through several modes of officialization, one of which is to obtain the legal entity of a cooperative. Accordingly, the formation of a cooperative as a formal institution may allow farmers to obtain better market access (World Bank, 2008), and concurrently strengthen their bargaining power (Castella and Bouahom, 2014).

Our case study is based on a cocoa farmers group that suffered a "free-fall" or bankruptcy in 2009 but gained significant traction through its effort to rebuild a legal entity as a formal cooperative institution. *Koperasi Kerta Semaya Samaniya*, or KSS, is a Jembrana-based cocoa producer cooperative located in Bali's Westernmost region, Indonesia. Due to its distinct soil characteristics compared to other regions globally, cocoa produced from this region has a unique scent that cannot be found elsewhere, a considerable advantage with prospects of successful cocoa production. Based on data reports from the Jembrana Regency Government, the region consists of 6,070.34 hectares of cocoa plantations, producing around 2,000 tons of cocoa beans yearly, making Jembrana's farmers' primary crop (Pemerintah Kabupaten Jembrana, 2015).

Following KSS's efforts to rebuild their legitimacy after their initial bankruptcy, they became a nationally known cooperative that received the government's appreciation with the Mental Revolution award (Indonesia Eximbank, 2019). This resulted from KSS's scrutiny of certain aspects of their activities: "1. fundamental actions that have been taken; 2. providing change and positive impact (impactful) on the community; and 3. presenting spaces of social justice to the surrounding community" (ibid, p. 1). In 2019 KSS was also inaugurated as a

Foreign Exchange Village by LPEI, a “Special Mission Vehicle” of the Ministry of Finance, to support national exports and national production capabilities that are highly competitive, encourage SMEs’ development, and scale cooperatives to develop export-oriented products (ibid). This initial step increases exports on the scale of SMEs and cooperatives by optimizing each region’s commodities in Indonesia. The achievements of KSS provide us with a unique context of a “resilient” cooperative that has been able to flourish despite reoccurring disruptions. Consequently, this case study warrants further investigation into how social capital as the primary attribute of the cooperative develops their resilience.

### ***3.3. Data collection and analysis***

We collected data within three months from August to October 2019, primarily from semi-structured interviews; a logic sampling of data was collected from actors, from within and outside the cooperative, who are involved and contributed to the successfulness of KSS. The data was collected from different perspectives, including the cooperative committee (5), cooperative members that include men, women, and young farmers (30), local NGO representatives (5), and government officials from the cooperative and agricultural departments (2) (see Table 2). A total of 42 semi-structured interviews were conducted, with questions about the nature of social capital within the organization and how it may have contributed to the construction of resilience capabilities. The analytical focus of this study concerns the mechanisms to which social capital is strategically deployed, reflected in the cooperative’s strategy and activities. We further investigate their impact on two modes of resilience capabilities on individual and organizational levels. Therefore, the selection of samples purposely focused on the cooperative committee and farmer members to understand the resilience capabilities within different levels. At the same time, other actors were included to verify and further explore the social capital mechanisms employed by the cooperative.

----- **Insert Table 2 here** -----

The semi-structured interview format allowed us to perform a direct comparison analysis across informants systematically, while unstructured questions were useful in providing probes to gain unexpected findings (Weick, 1988). The interviews were undertaken face-to-face by one of the authors utilizing the native language of Indonesia, “*Bahasa Indonesia*”, and on average lasted between 35 to 60 minutes. We further placed a transcription-translation protocol that aimed to achieve conceptual equivalence and minimize semantic equivalence (Marín and Marín, 1991), ensuring that no information was omitted during the data translation. Thus, our initial transcript was produced in the source language and then translated to English before conducting the analysis. With one Indonesian-speaking researcher in our team, our transcriptions in Indonesian and English could be analyzed simultaneously, allowing the discussion of both the original and translated version of our transcriptions (Santos et al., 2014). Furthermore, our data were triangulated through field observations, followed by two group discussions with the cooperative committee. Secondary data of the cooperative’s reports and documentation were also utilized to objectively verify our data further.

In analyzing our interview data, group discussions, documentation, and field notes, we employed coding techniques (Glaser and Strauss, 1967), thematic analysis (Braun and Clarke, 2006), and pattern matching logic (Yin, 2009). Firstly, to find similar text passages, one researcher used coding identifiers of social capital dimensions (relational, cognitive, and cognitive) from Nahapiet and Ghoshal (1998), along with strategies and activities undertaken in relation to social capital. Another researcher deployed a similar technique to identify resilience capabilities at organizational and individual levels. We elucidated the data analysis process by combining similar codes and linking them to higher-order themes of social capital mechanisms and cooperative resilience, as shown in Fig. 1. In some cases, where the identified text passages did not fit any of the coding schemes, another coding category was devised and affixed to a new theme, which played an essential role in the theory-building approach

(Eisenhardt, 1989). This involved an iterative coding process and theme revisions until the researchers finally arrived at saturation point. We then conducted several meetings to agree upon the final theme structure that involved a second coding process by another researcher to ensure internal validity and reliability (Morse, 1997); we further identified and agreed upon the structure to which the social capital mechanisms are connected to resilience capabilities. This process also allowed us to reach theoretical saturation whereby no further learning, knowledge, or insights emerged from the dataset (Lee, 1999), thus providing rigor in the data analysis processes (Armstrong et al., 1997).

----- Insert Fig. 1 here -----

## **4. Findings**

### ***4.1. Turning adversities to opportunities – enabling factors to the access of social capital***

Our empirical analysis reveals that social capital does play a significant role in contributing to the resilience capability of the cooperative. Before explaining our findings on the mechanisms to which the cooperative deploys social capital as a strategic resource, it is important to set up the enabling factors that help the organization to realize social capital through experienced adversities. We found three distinctive contributing factors to the deployment and utilization of social capital: (a) institutional voids and market absence faced by the cooperative in realizing the need for social capital (creation of structural); (b) the opportunity presented to the cooperative through their failures in forming social capital (creation of cognitive); (c) the ability of the cooperative to reshape perceptions and mobilize their resources when accessing social capital (creation of relational).

Our research indicates that the cooperative faced functional pressures from their external environment mainly stemming from institutional voids. Although institutions consisting of formal rules and informal norms are formed to increase stability within social exchanges (North, 1995), absent or weak ones can generate institutional voids resulting in the

amplification of uncertainty within a business environment (Chadee and Roxas, 2013). This was one of the pressures experienced by KSS, where like most developing economies, the Indonesian governmental system failed to empower and support cooperative enterprises. One of the recurring statements was that the aid granted to KSS was not “*tepat guna*”, not appropriate to the needs of the farmers. Official requests of funds and machinery sent to the government were also ignored, leaving the farmers with false hopes.

Moreover, poor market availability that reflects the institutional void further exacerbates the functionality of the cooperative. Since KSS could not sell their products in a timely manner, most farmers stated they would rather sell their products to middlemen operating within the regions as “*an easy way to get money*”. This market shortcut negatively impacted the cooperative’s bargaining power in formal markets when selling products to legitimate buyers. Coupled with KSS’s inability to manage its financial and membership expectations properly, these issues led to bankruptcy. Farmers were forced to stop their operations from 2009 to 2011.

However, the absence of both market and institutional assistance places pressure on the cooperative to seek alternative solutions to support structural needs required for functional purposes. Studies have shown that when institutions are weak, actors will resort to strong informal and personalized networks of influence based on mutual goals and trust (Puffer et al., 2010). We found that through the adversities concerning institutional voids, KSS realized the need to turn to their impersonal networks, thus serving as a starting point upon which structural social capital could be built.

Our analysis also showed that the cooperative faced political pressures stemming from their initial failure as a functioning organization. Politically, due to this mismanagement, the cooperative also faced credibility and legitimacy issues that the farmers expressed through their publicly known acronym of KSS, adapted by the public from “*Kerta Semaya Samayina*” to



*“Koperasi Sakit-Sakitan”* meaning the “sick cooperative”. When asked about the “former” cooperative, many farmers stated that they felt deceived by KSS because of obvious corruption.

However, KSS discovered an opportunity within these shortcomings to rebuild the perception of the cooperative, leading to the successful access to social capital to further mobilize their resources. The cooperative’s early attempts to exploit this opportunity involved strategically pivoting on the shared narratives, created through the difficulties and failures to align their organizational visions and practices with their social expectations. This was achieved by acknowledging the farmers’ distrust and further genuine empathy for their discontent and problems. More importantly, in an attempt to change the “sick cooperative” perception, clear communication pathways were consistently created through a door-to-door system to foster closeness by emphasizing shared values in building farmers’ welfare within the Jembrana region.

In relation to social capital, the cooperative’s ability to turn difficulties into opportunities also led to the formation of a cognitive dimension of social capital, through shared values and narratives showcased by a new sense of the spirit of *“modal berani”* or capital of braveness. As described by one of the cooperative committee members:

*“We didn’t have any capital. We didn’t even have farmers. We only have a capital of braveness. It even came to the point where we made our first proposal and presentation that we wanted to rebuild the cooperative, they [the local government] said that ‘this is a good idea, good program, but it is impossible to be done.’ [...] but we didn’t give up, we used it as a whip for us, for courage, for believing that we can do it, like that we showed them all that we can.”*

Moreover, this also strengthened the relational dimension of social capital based on improved trust amongst farmers towards the cooperative image. Although there were no official procedures, KSS was able to exploit the opportunities identified through their failures by demonstrating their commitment to rebuilding the cooperative. In doing so, KSS exhibited an act of symbolism to display its capacity and ability to revamp the cooperative by weeding

out former committee members and recruiting credible people to fill their positions. By slowly establishing good faith, trust and a sense of obligation were then developed through the cooperative and farmers, thereby strengthening the relational dimension of social capital. This rippling effect of social capital dimensions played a crucial role in allowing the access and mobilization of resources within the cooperative's social network. As articulated by one of the farmers, this bond has led to sharing his personal resources with others:

*“Yeah, that’s why here, I help them. For example, buying them patches of land until 5-10 acres. ‘This is the money, later, when your cocoa production is successful, just pay me with your cocoa, without any interest, for free.’ [...] I do not want to ask for interest. That is how much I care here. [...] However, it also builds our respect for each other. I know that they will help me in other ways as well.”*

In effect, the committed bonds created between the cooperative and farmers provided a starting point to which social capital could be accessed, mobilizing their available material and immaterial resources within social networks. The discussed findings above consequently led us to posit the following propositions:

***P1a:*** *Adversities in relation to institutional voids motivates cooperatives to form and turn to social capital to establish alternative structural support.*

***P1b:*** *Adversities can be utilized by cooperatives as an opportunity to form cognitive and relational social capital through the creation of shared narratives.*

#### ***4.2. Utilizing social capital as a strategic resource – channeling and targeting social capital***

In the above section, we have elaborated how the cooperative could turn adversities into the realization, formation, and access of social capital. In our data collection, we further explored the extent to which social capital can be translated into the resilience of cooperatives. Our analysis identified two underlying mechanisms regarding how the cooperative has strategically deployed social capital in supplementing resilience capabilities, namely *channeling* and *targeting*. We define channeling as the strengthening of available social capital, whilst

targeting includes the effort to build or expand the networks to enhance social capital. On the basis that cooperatives should fulfill the dual criteria of meeting their social and economic viabilities, we will first articulate our findings regarding the effects on an individual level resilience, followed by its effect on an organizational level.

#### ***4.2.1. An effect on individual resilience capabilities***

This section aims to illuminate how the two social capital mechanisms can promote the creation and maintenance of the members' individual resilience as an important facet of empowerment for communities in developing countries.

***Channeling.*** In the case of KSS, the strengthening of social capital was based upon addressing the needs of customarily neglected areas of the farmers' community - women farmers. The goal regarding women farmers was to build equality amongst both women and men within farming and family decision-making. Like many other rural communities, the role of women in the region of Jembrana is still traditionally skewed towards managing household responsibilities and occasionally helping their husbands with farm activities, albeit with limited power in decision-making (Mullatti, 1995). This issue is further amplified due to the strong Hinduism-based traditions of Balinese people (McDaniel, 2020), obligating the head of the family to attend time-consuming ceremonies for one to two full days weekly, thus obliging women to carry out household activities. Through female inclusion, KSS believe that this farm time and productivity gap can be mitigated, as explained by the head of the cooperative:

*“What we hope is that the women here know how the process in the farm should be like teamwork. But also, the men that couldn't even cook before can cook. So, there is equality that is built between all of us. Here in KSS, we want to give equal opportunities. [...] No one will feel left behind or inferior to one another. If the women have equal knowledge, when the husband is not home, the wife can actually do the job.”*

Changing the traditionally ingrained values and roles of women in society has been emphasized by development scholars as an onerous task (Beath et al., 2013). However, in our

analysis, we found that KSS has been able to modify the underlying social structures by giving equal opportunities for women to learn and contribute to farming activities. This has been achieved by simply including women in their weekly meetings, asking them politely to “just bring food” to the meetings as means of initially acquainting them with a male-dominant environment. Over time, growing familiarity has given women the confidence to be actively involved in farm group learning processes, resulting in their empowerment and resilience.

In general, KSS further deployed informal methods to increase the trust and attractiveness of the cooperative. For example, our interviewees frequently expressed a new sense of “ignited spirit” within the farmers group through the mantra of “we are partners” that KSS often displays to farmers. The cooperative further utilizes methods such as selecting farmer “champions” or best-performing farmers that have become farmers’ aspirations due to publicly celebrated inaugurations. Moreover, the intensive door-to-door technique and socialization enhance the experiential learning of farmers, creating informed individuals and at the same time strengthening the bonds between them.

**Targeting.** KSS’s second approach in building on the networks of their social capital stemmed from the realization that they lacked appropriate resources and knowledge to fully unlock their farmers’ potential. As a result, KSS sought assistance from a local Balinese NGO, Kalimajari, that specializes in community development through cocoa farming. Having the same mission as KSS to increase Jembrana’s farmers’ welfare, Kalimajari was ready to offer a credible helping hand in terms of knowledge, expertise, and resource mobilization. Together, they formed a gender program to strengthen women’s participation in cocoa farming through communal learning. A woman farmer expressed her new sense of empowerment and self-efficacy after the gender-strengthening program:

*“Before, I did not know anything about how it [farming] works. I just stayed home and received the money from my husband. Say sometimes he brings back Rp10,000, and he gives me Rp1,000. I just said thank you. Because I did not know anything. But now, it’s impossible. We [women]*

*cannot be fooled anymore. [...] I know how much roughly our plants will yield and how much money we will get out of it. [...] Because I know how it works."*

Moreover, the strategic expansion of their society also involves incorporating young farmers as means to preserve the continuum of cocoa farming in Jembrana. Being one of the world's renowned vacation destinations, urbanization to central Bali has become a common practice amongst young Balinese individuals to leave the "poor and dirty" life of farmers. One of the cooperative committee members explained that this has resulted in a significant decline of cocoa farmers, reflected in the high percentage of middle-aged men (40 years upwards) *in situ*. With the help of Kalimajari, the cooperative has been able to further expand its networks and successfully secure funds from international NGOs to support its education programs for young farmers. The head of KSS described the importance of these programs:

*"We are our own boss. No one's here to tell us what to do." [...] This is what we are trying to build. So that later, our farmers and their children can concentrate on improving [the perception of farming] and be our successors. We have a scholarship program together with Kalimajari and UTZ. We show the kids that they can become our ambassadors, promote and deliver, and pass to the world what we are doing here in Jembrana. To be something they are proud of."*

In the context of rural communities, resilience can be defined as the expansion of freedom that allows actors to "lead the kind of lives they value and have reason to value" (Sen, 1999, p. 18). Our analysis revealed that the blend between the mechanisms of targeting and channeling social capital has resulted in the development of individuals' adaptive capability to turn to resources within their social networks that reflect this freedom (Sen, 1999). At the same time, it "builds on the foundation of the resilience of members of that organization" (Riulli and Savicki, 2003, p. 228). Through their ability to face risks and insecurities, individuals further display their sense of entitlement to access education and healthcare, as well as social opportunities such as participation in the farming community in their social networks.

Moreover, through previously identified mechanisms, individuals cultivate relatedness that centers around their connections towards each other, displaying a form of resilience (Wexler et al., 2013). This relatedness is summarized in a young farmer's statement:

*“If there is anyone, I mean anyone who degrades farmers. I will be the one who steps up. I will put my body on the line. [...] We have many examples here, our own neighbor that invented a new clone for cocoa farming. So, if there is anyone who's saying that farmers can't do anything, they're just stupid. They're wrong.”*

Altogether, we find support for our second proposition that resilience within the individual or personal level can be cultivated through the social capital mechanisms that a cooperative strategically deploys:

***P2: Cooperatives that utilize channeling and targeting social capital mechanisms can lead to the promotion and maintenance of individual resilience.***

#### ***4.2.2. An effect of organizational resilience capabilities***

In our data collection, we further explored the extent to which the mechanisms of social capital acted as a facilitator in building resilience at an organizational level. Our analysis indicates two resilience capabilities that emerged from channeling social capital: transparency and internal collaborative works. Whilst targeting social capital resulted in the resilience capabilities of flexibility and velocity. While we dichotomize our findings into two separate capabilities within the two mechanisms of social capital for the interest of clarity, it should be noted these two capabilities within each mechanism may intermingle and overlap in practice.

##### ***4.2.2.1. Transparency and collaborative works through channeling social capital***

***Transparency.*** As mentioned above, KSS's attempt to strategically strengthen its social capital involves trust-building activities resulting in a high level of organizational transparency proven to be a salient component of resilience (Al Balushi, 2021). This activity's simple but effective means involves undertaking “*rapat akhir tahun*” or end-of-the-year meetings that act as a vessel for members to exchange information. In these meetings, KSS fully transfers its

operational activities and plans to its members. This includes educating farmers on the market's current trend and their potential collaborative partners. Importantly, exceptional meetings known as "*rapat luar biasa*" are often deployed to resolve faulty practices identified by members, to increase the level of trust towards the cooperative. This process further strengthens the relational dimension of social capital within the group, explained by one of the farmers:

*"If there is any objection from anyone, we can make a gathering called the 'exceptional meeting'. Say the farmers feel that they should have a higher selling price in the cooperative, they [KSS] will make that meeting for us. That is why here in our cooperative, we want to walk together with the farmers, you see. So that KSS will profit, and so will the farmers. So that we as a cooperative can operate transparently."*

Due to the reoccurring misbehaviors of members, such as non-compliance with formal written rules, KSS also imposes sanctionable actions to increase the level of transparency. As explained by the head of KSS, selling cocoa products to middlemen and inserting bad quality cocoa beans can diminish the bargaining power of the farmers. This is one of the frequently mentioned misconducts that results in temporary discontinuation of farmers' membership. Indeed, this act of sanctioning is viewed as a method to ensure that organizational transparency promotes the level of trust, commitments and further restores the reputational damage of the cooperative (Auger, 2014). This outcome is summarized by a woman farmer as follows:

*"We know our buyers want quality. [...] We have farmers inside, of course, who are playing us – trying to mix the bad quality beans with the good ones. We do not want that kind of behavior. It is like we [ones who are complying with the rules] have worked very hard to ensure our quality but will negatively impact such behaviors. We want everyone to be committed to this. No exception."*

**Collaborative works.** Within resilience literature, collaboration is often considered a key capability that ensures organizations and communities can cope with risks and uncertainties (Rogers et al., 2016; Gabler et al., 2017). In the context of cooperatives, our study revealed that collaboration could be built by strengthening social capital. In the case of KSS, we identified

that both formal and informal methods of strengthening their social capital allow internal collaboration amongst members.

Formally, KSS often initiates workshops to gather farmers from across Jembrana located within a farm of a chosen member to create an ambiance of “closeness”. Run by experienced farmers, these workshops focus on knowledge transfer amongst peers by utilizing hands-on methods. As a form of trust-building activities to strengthen their social capital, these workshops are also utilized as an opportunity to showcase the cooperative’s dedication in seeking potential markets for their members. The essence of this method is the cultivation of collaboration within their group, explained by one of the cooperative members:

*“We want to show that we are very serious about seeking markets for us. That is why we always aim to have international events, like last time was the cocoa festival for South-East Asia that we tried to bring to Jembrana. There was also a festival for buyers, where we introduced our farmers straight to our buyers. The essence is so that our farmers will want to work together to achieve this, through helping each other.”*

Concurrently, informal socialization through coffee breaks and lunches initiated by KSS further facilitates knowledge exchange between members (Cousins et al., 2006; Roscoe et al., 2019). Having experienced the positive effect of these gatherings, our respondents explained that members put forward more initiatives to share their assistance with one another. As explained by one of the young farmers, this led to increased collaboration within their practices:

*“Well, now, I think it is also because we know that our efforts won’t go to waste. [...] For example, in my house, the farm behind my house, we always get together. [...] So, this week, we go to A’s farm to help him increase the quality of his farm products. Next, we will go to B’s farm, then C’s. I won’t say that we’re helping their workload, no. It’s more the fact that everyone’s just so keen to share their knowledge and accomplishment now. The essence is knowledge sharing. So, by being there, we kind of get something more valuable in return.”*



Through the discussion of our above findings, we find support regarding the resilience capability of transparency and collaborative works:

***P3a:** In the form of a channeling mechanism, cooperatives utilize social capital to build transparency of processes and collaborative works.*

#### **4.2.2.2. Flexibility and velocity through targeting social capital**

Although the cooperative was able to establish a functional organization, it cannot achieve resilience individually. KSS further develops relationships with other actors, including local government (cooperative and plantation offices), local and international buyers, and even their competitors in expanding their social networks. Our analysis revealed the two organizational capabilities that emerged from KSS's efforts to targeting their social capital: flexibility and velocity.

**Flexibility.** One visible function of targeting social capital is the cooperative's ability to adjust resources in their daily activities, through their capacity to be flexible. A year after their re-inception, KSS initiated a strategy for approaching their targeted stakeholders. In particular, the cooperative deployed synergy workshops aimed at bringing a wide variety of stakeholders together to showcase their vision and mission transparently. This allowed the establishment of connections between private and public bodies that the cooperative refers to as their "strategic partnerships". One committee staff member explained the value of this strategic partnership as:

*"The very first one to help was Solidariter [NGO]. From Germany, [...] and from Indonesia, Exim Bank. Those are the ones we call 'SP' or 'Strategic Partnerships'. Essentially, we want every chance to be a bottom-up approach from the farmers. But we also acknowledge and emphasize that we also need to focus not on downstream but also on upstream aspects of the supply chain. That's why we also build on our relationships with these stakeholders to ensure the availability of the upstream part. It's very important for us to have this holistic approach."*

This indicates that widening their networks allows KSS to achieve flexibility for both tangible and intangible resources. These partnerships not only provided a buffer for their operationality

but also supported what they referred to as “*hulu-hilir*” or end-to-end support within their supply chain. By incorporating different actors to collaborate and support different segments of organizational activities, the continuity of both production and demand is ensured.

**Velocity.** Our analysis identified two aspects of velocity attributes due to the widening of KSS’s social networks: velocity of resources and velocity of information. Firstly, we found that KSS can acquire the necessary resources available within their social networks on time. For example, contrary to the past, local governments are now enthusiastically offering their services to KSS due to their increased credibility showcased by their success. The relationship with local governments built through the strategic partnership program that emphasizes transparency and synergy of stakeholders further increases trust. KSS also emphasized the importance of building good faith associations with their competitors:

*“The other day, the head of the regent of East Kolaka came here from Sulawesi. [...] Then we helped them with their problems: they are struggling to find markets and buyers. They didn’t have enough. We never close our information regarding buyers or anything. [...] They literally cried in front of us. They said that usually, successful organizations are very arrogant. We are not like that. If we can help other cooperatives, other regions, to help the growth of Indonesia as a country, we will do it.”*

This quote suggests that the nationalist values of the KSS allow them to surpass the “friends and enemies” divide. Through this principle, reciprocity with competitors is thus built and serves as an extended helping hand for the cooperative.

Secondly, our analysis showed that through the widening of networks, KSS can acquire information quickly, which is pivotal for their success in being a resilient organization. The information mainly regards the best practices of cocoa farming activities, organization management, and the current market trends that have given KSS a certain edge when competing with other domestic competitors and even internationally. For example, a current trend of cocoa farming that KSS implemented was adding fermentation and further revamping their operations

to incorporate sustainable practices. The cooperative successfully created this change by hinging on the Balinese value of “Tri Hita Karana” or the three reasons for prosperity – harmony with God, people, and the environment. A member of KSS summarized the success and result of this process as below:

*“Organic was quite easy to implement. So, when we are just casually talking to each other, ‘if you want the steps to be organic, you just need to follow it. If you are using chemical products, killing insects and whatnot they [the Gods] will be angry.’ [...] So, when we try to implement something, it is easier to link it with Tri Hita Karana. Everyone understands it. I think we have the basis for changing people’s minds to organic through it. [...] And the impacts, I have to say, everyone was surprised how much money they’re getting more just because of fermentation and being organic. Twice even thrice.”*

From the findings above, we, therefore, posit the following proposition:

***P3b:*** *In the form of targeting mechanisms, social capital allows the widening of cooperative networks that will result in flexibility and velocity.*

As articulated in our propositions, the relationships between social capital and cooperative resilience are shown in Fig. 2.

----- **Insert Fig. 2 here** -----

## **5. Discussion**

### ***5.1. Theoretical contributions***

Previous studies have demonstrated the important role played by social capital in facilitating organizational resilience (e.g., Johnson et al., 2013; Gölgeci and Kuivalainen, 2020). However, there is a lack of literature regarding the question of *how* social capital should be operationalized to build resilience capabilities. Moreover, surprisingly, to the best of our knowledge, the application of resilience in the context of cooperatives is still absent. Only scattered studies have touched upon this topic by directly implementing the borrowed definition of resilience from organizational studies that only emphasize economic outcomes (e.g. Borda-Rodriguez and Vicari, 2014). The most recent body of knowledge on cooperative

studies echoes the existence of such a theoretical gap and urges future research to explore this issue (Deng et al., 2021). Therefore, our study contributes to the conjecture of social capital and organizational resilience research by addressing a key question that stems from the social dynamics of cooperatives underpinning their comparative advantage: How can cooperatives strategically utilize social capital to build resilience? Based on a case study of a rural cooperative that has gained international credibility in Indonesia, we offer an empirically informed framework (see Fig. 2) that establishes the basis for exploring social interactions in the emergence of cooperative resilience. Therefore, our study makes two distinct contributions to existing literature.

Firstly, we identify the contributing factors to the deployment and utilization of social capital through experienced adversities. Existing research has recognized the importance of social foundations to be the main comparative advantage of cooperatives as “social capital-based organizations” (Valentinov, 2004) compared to other types of enterprises (Spear, 2000). There exists a fundamental notion that effective collaborative initiatives critically depend on social capital based on the composition or character of existing social and community relations (Payne et al., 2011). We articulate this notion by elaborating enabling conditions that allow the cooperative to realize and form social capital as a prerequisite to the strategic deployment of their resources. Previous research has demonstrated the significance of cultivating emotional capital such as hope and optimism, likely to influence an organizations’ resilience (Williams et al., 2017). We further advance this notion by highlighting the dynamics and complexity of social capital formalization in rural cooperatives that involve sharing emotions regarding ambiguous and complex adversity as a starting point, whereby actors can relate to and feel strongly about each other. Our findings indicate that the functional pressures from institutional voids lead to the cooperative’s necessity to seek alternative solutions to support their structural needs, thus creating the structural dimension of social capital. Moreover, political pressures

stemming from their failures have also presented an opportunity for the cooperative to rebuild their perception through shared narratives, creating a cognitive dimension of social capital. This has also resulted in a cascading effect of strengthening social capital based on improved trust (Wulandhari et al., 2021; Kalantaridis and Bika, 2006).

Secondly, we explain and articulate the dynamic nature of the relationship between social capital and resilience that encompasses the cooperatives' dual obligations to meet the economic and social viabilities by identifying two distinct but mutually reinforcing social capital mechanisms: channeling and targeting social capital. The first mechanism of channeling social capital involves activities to strengthen the immediate stock of social capital within the organization. Conversely, the second mechanism of targeting social capital denotes the effort to widen the organization's social networks. Therefore, we claim that social capital is more than a metaphor for advantage (Burt, 2005). We advance previous studies through conceptualizing cooperative resilience that concerns their dual obligations. We further elaborate on how the two mechanisms of social capital affect and support the emergence of resilience capabilities at an organizational level to meet their economic viability and at an individual level to fulfill their social obligation.

Economically, our findings further specify that the strengthening of social capital may lead to the emergence of collaborative works and transparency within the cooperative. The widening of their social networks allows flexibility and velocity of tangible and intangible resources. Similar to previous studies, the capabilities identified within our analysis act as facilitators in enhancing resilience at an organizational level (e.g., Borda-Rodriguez and Vicari, 2014; Johnson et al., 2013). For example, through collaborative works and transparency, the cooperative can acquire adaptive capability, which is the ability to adjust resources and interpersonal processes in response to disruption and ongoing stress (Jia et al., 2020; Borda-Rodriguez and Vicari, 2014). Similarly, by rapidly receiving valuable, new information and

knowledge within their expanded networks, the organization can also envision future events beyond their capacity to absorb shocks (Coutu, 2002).

Furthermore, we advance previous research that used social capital to highlight the important role of social relations to explain how some communities perform more efficiently than others (Putnam et al., 1993; Tregear and Cooper, 2016), through the investigation of how social capital may also affect the resilience of cooperative members. Socially, our study identified that both channeling and targeting social capital mechanisms have resulted in increased individual resilience capability, promoting empowerment that allows actors to “lead the kind of lives they value and have reason to value” (Sen, 1999, p. 18). Consequently, this further heightens the collective skills and ability that become inherently available for other members to leverage, resulting in an appropriation capability of cooperative resilience (Jamrog et al., 2006; Coutu, 2002; Borda-Rodriguez and Vicari, 2014; Borda-Rodriguez et al., 2016).

## ***5.2. Practical implications***

The results of our study have several useful, practical implications. Firstly, we highlight enabling “negative” conditions that may act as an avenue that brings actors together to share kindred emotions. Though counterintuitive, when correctly deployed, these disruptions and ongoing stress may be conversely used by practitioners as a common ground or a shared narrative, where actors may develop relatedness and trust through adversity. For example, our results in the case study of KSS show that a cooperative can transform bankruptcy and institutional voids into greater bonding elements within its internal social networks, which allows the formation, strengthening, and access of the group’s social capital. Moreover, we show that through these shared narratives, cooperatives can start to align their organizational visions and practices to the needs of their members and society.

Secondly, we further articulate social capital mechanisms that may help cooperative decision-makers build resilience capabilities within the organization. From a practical

viewpoint, in terms of developing individual resilience capability, the strengthening of social capital or social networks should be tailored accordingly to match each targeted group's needs. For example, our study within the context of developing countries showcased the still existing gender divide in the community. To resolve this, the cooperative committee could pivot on the community's value of *Tri Hita Karana* as an opening and shared ground thereby conveying their messages and learning. Practitioners should pay close attention to cultural strengths that may provide a pathway for clear communication channels for members of cooperatives. To deploy social capital effectively and ensure the emergence of organizational resilience capabilities, we highlight the need to balance the strengthening and widening of social networks. Our findings indicate that both mechanisms may lead to outcomes of cooperative resilience capabilities (e.g., channeling leading to transparency and collaborative works, where targeting leads to flexibility and velocity). Nevertheless, practitioners should be cautious about employing them in practice. The pitfall of an overly embedded network -insular reliance and exclusion of strategically important external actors- that impedes collective learning capability may be avoided by adopting a balanced approach.

### ***5.3. Limitations and future research avenues***

Several limitations should be considered within this study. Firstly, a single case design and a mid-range theory-building approach was adopted to explore social capital's role in facilitating cooperative resilience. The generalizability of the findings within this research cannot be claimed within different or wider research contexts. Secondly, there is a need for future studies to validate the propositions offered in this study, and at the same time, provide further generalization. This can be achieved either through a quantitative survey method or through a qualitative multiple-case design within other contexts. Such studies could further refine our propositions to identify whether different types of underpinning social capital mechanisms,

including their effects on resilience capabilities, and configurations change by different contexts such as developed nations or other emerging countries.

Furthermore, case studies deliberately investigating “the dark side” of social capital (Nooteboom, 2007), could be very valuable for understanding conditions that may be harmful to the development of resilient cooperatives, such as overly embedded social networks and social capital maintenance costs. Past research has highlighted the caveats of highly dense social relations known as bonding capital (Putnam, 1995) associated with embedded localities. Such “overly embedded” networks may lead to the overreliance upon actors’ counterparts and exclusion of critical outside actors, leading to the stagnation of ideas and inertia. Collecting primary data concerning these failures may be challenging since decision-makers prefer to discuss success stories and may deflect problems by criticizing external contexts (Schutt, 2006). Nonetheless, Piekkari et al. (2008) explicitly commend the search for “negative” or “deviant” cases. There is considerable potential for theory development when following this approach in the domain of both social capital and cooperative resilience research, especially when short-term economic priorities conflict with long-term social priorities. The potential insights from negative cases and failures have clearly not been sufficiently exploited (Piekkari et al., 2008), and a more critical stance of researchers is required. Rigor in developing theoretical generalization of social capital in cooperatives may be further strengthened by comparing these deviant cases with “normal” cases by constant comparison.

## **6. Conclusion**

This paper identified the social capital mechanisms that lead to cooperative resilience in rural settings of Jembrana, Indonesia. We identified conditions that facilitate the organization’s realization and formation of social capital through experienced adversities. Our study suggests that understanding how social capital should be utilized strategically, in accordance with the cooperatives’ dual obligations of meeting their social and economic obligations, is important



to advance the research on cooperative resilience. We hope that our study serves as a starting point from which scholars can build on the inquiry of how social capital can strategically be deployed to build resilience capabilities. In particular, our exploratory study offers an attempt to illuminate the complex relationship between social capital and resilience in the context of cooperatives, thus serving as a genesis for further theoretical refinement and empirical validation.

## References

- Adler, P. S. & Seok-Woo, K. 2002. Social Capital: Prospects for a New Concept. *The Academy of Management Review*, 27, 17-40.
- Al Balushi, M. 2021. How internal transparency impacts organizational resilience. *International Journal of Quality & Reliability Management*, 38, 1246-1263.
- Aldrich, D. P. 2012. *Building resilience: Social capital in post-disaster recovery*, University of Chicago Press.
- Aldrich, D. P. & Meyer, M. A. 2014. Social Capital and Community Resilience. *American Behavioral Scientist*, 59, 254-269.
- Archer, M., Bhaskar, R., Collier, A., Lawson, T. & Norrie, A. 2013. *Critical Realism: Essential Readings*, New York, Routledge.
- Armstrong, D., Gosling, A., Weinman, J. & Marteau, T. 1997. The Place of Inter-Rater Reliability in Qualitative Research: An Empirical Study. *Sociology*, 31, 597-606.
- Auger, G. A. 2014. Trust Me, Trust Me Not: An Experimental Analysis of the Effect of Transparency on Organizations. *Journal of Public Relations Research*, 26, 325-343.
- Badan Pusat Statistik 2020. *Perkembangan beberapa indikator sosial-ekonomi Indonesia*. In: STATIK, S. L. D. P. (ed.). Indonesia: Badan Pusat Statistik.
- Beath, A., Christia, F. & Enikolopov, R. 2013. Empowering Women through Development Aid: Evidence from a Field Experiment in Afghanistan. *The American Political Science Review*, 107, 540-557.
- Bhamra, R., Dani, S. & Burnard, K. 2011. Resilience: the concept, a literature review and future directions. *International Journal of Production Research*, 49, 5375-5393.
- Birchall, J. 2004. *Co-operatives and the millennium development goals*, Geneva, ILO.
- Birchall, J. & Ketilson, L. H. 2009. *Resilience of the cooperative business model in times of crisis*, Geneva, Switzerland, International Labour Organization, Sustainable Enterprise Programme.
- Blundel, R. 2007. Critical realism: a suitable vehicle for entrepreneurship research? In: Neergard, H. & Ulhoi, J. (eds.) *Handbook of Qualitative Research Methods in Entrepreneurship*. Cheltenham: Edward Elgar.
- Böök, S. A. k., Treacy, M. & Prickett, M. 1992. *Co-operative values in a changing world: report to the ICA Congress, Tokyo, October 1992*, Geneva, The International Co-operative Alliance.
- Borda-Rodriguez, A., Johnson, H., Shaw, L. & Vicari, S. 2016. What Makes Rural Co-operatives Resilient in Developing Countries? *Journal of International Development*, 28, 89-111.
- Borda-Rodriguez, A. & Vicari, S. 2014. Rural co-operative resilience: The case of Malawi. *Journal of Co-operative Organization and Management*, 2, 43-52.
- Boudon, R. 1991. What Middle-Range Theories Are. *Contemporary Sociology*, 20, 519-522.
- Braun, V. & Clarke, V. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101.
- Brewton, K. E., Danes, S. M., Stafford, K. & Haynes, G. W. 2010. Determinants of rural and urban family firm resilience. *Journal of Family Business Strategy*, 1, 155-166.
- Brown, K. & Westaway, E. 2011. Agency, Capacity, and Resilience to Environmental Change: Lessons from Human Development, Well-Being, and Disasters. *Annual Review of Environment and Resources*, 36, 321-342.
- Burt, R. S. 2005. *Brokerage and Closure: An Introduction to Social Capital*, New York, Oxford University Press.
- Castella, J.-C. & Bouahom, B. 2014. Farmer cooperatives are the missing link to meet market demands in Laos. *Development in Practice*, 24, 185-198.

- Chadee, D. & Roxas, B. 2013. Institutional environment, innovation capacity and firm performance in Russia. *Critical perspectives on international business*, 9, 19-39.
- Chowdhury, M., Prayag, G., Orchiston, C. & Spector, S. 2018. Postdisaster Social Capital, Adaptive Resilience and Business Performance of Tourism Organizations in Christchurch, New Zealand. *Journal of Travel Research*, 58, 1209-1226.
- Coleman, J. S. 1990. *Foundations of social theory*, Cambridge, Harvard University Press.
- Corbin, J. & Strauss, A. 2008. *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*, Thousand Oaks, CA, SAGE.
- Cousins, P. D., Handfield, R. B., Lawson, B. & Petersen, K. J. 2006. Creating supply chain relational capital: The impact of formal and informal socialization processes. *Journal of Operations Management*, 24, 851-863.
- Coutu, D. L. 2002. How resilience works. Harvard Business Review.
- Cox, R. S. & Perry, K. M. 2011. Like a fish out of water: reconsidering disaster recovery and the role of place and social capital in community disaster resilience. *Am J Community Psychol*, 48, 395-411.
- Danermark, B., Ekström, M., Jakobsen, L. & Karlsson, J. C. 2002. *Explaining Society: Critical Realism in the Social Sciences*, New York, Routledge.
- Deng, W., Hendrikse, G. & Liang, Q. 2021. Internal social capital and the life cycle of agricultural cooperatives. *Journal of Evolutionary Economics*, 31, 301-323.
- Duchek, S., Raetze, S. & Scheuch, I. 2020. The role of diversity in organizational resilience: a theoretical framework. *Business Research*, 13, 387-423.
- Easterby-Smith, M., Lyles, M. A. & Peteraf, M. A. 2009. Dynamic Capabilities: Current Debates and Future Directions. *British Journal of Management*, 20, S1-S8.
- Eisenhardt, K. M. 1989. Building theories from case study research. *Academy of Management Review*, 14, 532-550.
- Fahmid, I. M. 2013. Cocoa Farmers Performance at Highland Area in South Sulawesi, Indonesia. *Asian journal of agriculture and rural development*, 3, 360-370.
- Gabler, C. B., Richey Jr, R. G. & Stewart, G. T. 2017. Disaster Resilience Through Public-Private Short-Term Collaboration. *Journal of Business Logistics*, 38, 130-144.
- Glaser, B. & Strauss, A. 1967. *The discovery of grounded theory. Strategies for qualitative research*, Chicago, Aldine Publishing Company.
- Gligor, D. M., Esmark, C. L. & Gölgeci, I. 2016. Building international business theory: A grounded theory approach. *Journal of International Business Studies*, 47, 93-111.
- Gölgeci, I. & Kuivalainen, O. 2020. Does social capital matter for supply chain resilience? The role of absorptive capacity and marketing-supply chain management alignment. *Industrial Marketing Management*, 84, 63-74.
- Green Stuart, D., Kao, C.-C. & Larsen Graeme, D. 2010. Contextualist Research: Iterating between Methods While Following an Empirically Grounded Approach. *Journal of Construction Engineering and Management*, 136, 117-126.
- ILO 2013. Resilience in a downturn: The power of financial co-operatives. Geneva: ILO.
- Indonesia Eximbank. 2019. "Desa Devisa" Indonesia Eximbank Won 2019 Mental Revolution Award [Online]. Indonesia: Indonesia Eximbank. Available: <https://www.indonesiaeximbank.go.id/news/detail/desa-devisa-indonesia-eximbank-won-2019-mental-revolution-award> [Accessed 02 May 2020].
- Jamrog, J. J., McCann, J. E. I., Lee, J. M., Morrison, C. L., Selsky, J. W. & Vickers, M. 2006. Agility and resilience in the face of continuous change. American Management Association.
- Jia, A. Y., Rowlinson, S., Loosemore, M., Xu, M., Li, B. & Gibb, A. 2017. Institutions and institutional logics in construction safety management: the case of climatic heat stress. *Construction Management and Economics*, 35, 338-367.

- Jia, X., Chowdhury, M., Prayag, G. & Hossan Chowdhury, M. M. 2020. The role of social capital on proactive and reactive resilience of organizations post-disaster. *International Journal of Disaster Risk Reduction*, 48, 101614.
- Johannisson, B., Ramírez-Pasillas, M. & Karlsson, G. 2002. The institutional embeddedness of local inter-firm networks: a leverage for business creation. *Entrepreneurship & Regional Development*, 14, 297-315.
- Johnson, N., Elliott, D. & Drake, P. 2013. Exploring the role of social capital in facilitating supply chain resilience. *Supply Chain Management: An International Journal*, 18, 324-336.
- Kalantaridis, C. & Bika, Z. 2006. Local Embeddedness and Rural Entrepreneurship: Case-Study Evidence from Cumbria, England. *Environment and Planning A: Economy and Space*, 38, 1561-1579.
- Karhu, S. 2015. The parallels of family business research and cooperative studies. *Journal of Co-operative Organization and Management*, 3.
- KPMG, A. N. V. 2013. Moving the bars: Sustainability brought to the forefront in the cocoa chain. *KPMG Evaluation of the 2008–2012 Cocoa Improvement Program*. The Netherlands: KPMG, IDH, Solidaridad and UTZ Certified.
- Lee, T. W. 1999. *Using qualitative methods in organizational research*, Broadgate, London, SAGE Publications.
- Lengnick-Hall, C. A. & Beck, T. E. 2005. Adaptive Fit Versus Robust Transformation: How Organizations Respond to Environmental Change. *Journal of Management*, 31, 738-757.
- Lengnick-Hall, C. A., Beck, T. E. & Lengnick-Hall, M. L. 2011. Developing a capacity for organizational resilience through strategic human resource management. *Human Resource Management Review*, 21, 243-255.
- Liamputtong, P. 2013. *Qualitative Research Methods*, Victoria, Oxford University Press.
- Majurin, E. 2012. How women fare in east African cooperatives: The case of Kenya, Tanzania and Uganda. *The Cooperative Facility for Africa (CoopAfrica)*. International laboroffice-Daereselam: ILO.
- Marín, G. & Marín, V. B. 1991. Research with Hispanic populations.
- Maurer, I. & Ebers, M. 2006. Dynamics of Social Capital and Their Performance Implications: Lessons from Biotechnology Start-ups. *Administrative Science Quarterly*, 51, 262-292.
- McDaniel, J. 2020. Mysticism among the Pedandas of Bali. *Religions*, 11, 585.
- Menzies, M. B. 2012. Researching scientific entrepreneurship in New Zealand. *Science and Public Policy*, 39, 39-59.
- Merton, R. K. & Merton, R. C. 1968. *Social Theory and Social Structure*, New York, Simon and Schuster.
- Moriarty, K., Elchinger, M., Hill, G., Katz, J. & Barnett, J. Cacao Intensification in Sulawesi: A Green Prosperity Model Project. 2014.
- Morse, J. M. 1997. "Perfectly Healthy, but Dead": The Myth of Inter-Rater Reliability. *Qualitative Health Research*, 7, 445-447.
- Mullatti, L. 1995. Families in India: Beliefs and realities. *Journal of Comparative Family Studies*, 26, 11-25.
- Nahapiet, J. & Ghoshal, S. 1998. Social Capital, Intellectual Capital, and the Organizational Advantage. *The Academy of Management Review*, 23, 242-266.
- Nelson, D. R., Adger, W. N. & Brown, K. 2007. Adaptation to Environmental Change: Contributions of a Resilience Framework. *Annual Review of Environment and Resources*, 32, 395-419.

- Neuman, L. 2011. *Social research methods – Qualitative and quantitative approaches*, Massachusetts, Pearson Education Inc.
- Nilsson, J., Kihlen, A. & Norell, L. 2009. Are Traditional Cooperatives an Endangered species? About Shrinking Satisfaction, Involvement and Trust. *International Food and Agribusiness Management Review*, 12.
- Nooteboom, B. 2007. Social Capital, Institutions and Trust. *Review of Social Economy*, 65, 29-53.
- North, D. C. 1995. The new institutional economics and third world development. In: Harriss, J., Hunter, J. & Lewis, C. M. (eds.) *The new institutional economics and third world development*. London: Psychology Press.
- Ostrom, E. 2014. Collective action and the evolution of social norms. *Journal of Natural Resources Policy Research*, 6, 235-252.
- Payne, G. T., Moore, C. B., Griffis, S. E. & Autry, C. W. 2011. Multilevel Challenges and Opportunities in Social Capital Research. *Journal of Management*, 37, 491-520.
- Pemerintah Kabupaten Jembrana 2015. Perkebunan Kabupaten Jembrana (Plantation Jembrana Region). In: (PLANTATION), P. (ed.). Bali, Indonesia: Pemerintah Kabupaten Jembrana.
- Phyne, J., Hovgaard, G. & Hansen, G. 2006. Norwegian salmon goes to market: The case of the Austevoll seafood cluster. *Journal of Rural Studies*, 22, 190-204.
- Piekkari, R., Welch, C. & Paavilainen, E. 2008. The Case Study as Disciplinary Convention: Evidence From International Business Journals. *Organizational Research Methods*, 12, 567-589.
- Polyviou, M., Croxton, K. L. & Knemeyer, A. M. 2019. Resilience of medium-sized firms to supply chain disruptions: the role of internal social capital. *International Journal of Operations & Production Management*, 40, 68-91.
- Ponomarov, S. Y. & Holcomb, M. C. 2009. Understanding the concept of supply chain resilience. *The International Journal of Logistics Management*, 20, 124-143.
- Puffer, S. M., McCarthy, D. J. & Boisot, M. 2010. Entrepreneurship in Russia and China: The Impact of Formal Institutional Voids. *Entrepreneurship Theory and Practice*, 34, 441-467.
- Putnam, R. D. 1995. Bowling Alone: America's Declining Social Capital. *Journal of Democracy*, 6(1), 1-18.
- Putnam, R. D., Leonardi, R. & Nanetti, R. 1993. *Making Democracy Work*, Princeton, Princeton University Press.
- Ring, J. K., Peredo, A. M. & Chrisman, J. J. 2010. Business Networks and Economic Development in Rural Communities in the United States. *Entrepreneurship Theory and Practice*, 34, 171-195.
- Rioli, L. & Savicki, V. 2003. Information system organizational resilience. *Omega*, 31, 227-233.
- Ritz, B. 2020. Comparing abduction and retrodution in Peircean pragmatism and critical realism. *Journal of Critical Realism*, 19, 456-465.
- Roelants, B., Dovgan, D., Eum, H. & Terrasi, E. 2012. The resilience of the cooperative model: How worker cooperatives, social cooperatives and other worker-owned enterprises respond to the crisis and its consequences. In: CECOP (ed.). CICOPA Europe.
- Rogers, P., Burnside-Lawry, J., Dragisic, J. & Mills, C. 2016. Collaboration and communication. *Disaster Prevention and Management*, 25, 75-90.
- Roscoe, S., Cousins, P. D. & Handfield, R. 2019. The microfoundations of an operational capability in digital manufacturing. *Journal of Operations Management*, 65, 774-793.

- Ruben, R. & Heras, J. 2012. Social Capital, Governance and Performance of Ethiopian Coffee Cooperatives. *Annals of Public and Cooperative Economics*, 83, 463-484.
- Rustinsyah, R. 2019. The significance of social relations in rural development: A case study of a beef-cattle farmer group in Indonesia. *Journal of Co-operative Organization and Management*, 7, 100088.
- Sadan, E. 1997. *Empowerment and Community Planning: Theory and Practice of People-Focused Social Solutions*, Tel Aviv, Israel, Hakibbutz Hameuchad Publishers.
- Santoro, G., Bertoldi, B., Giachino, C. & Candelo, E. 2020. Exploring the relationship between entrepreneurial resilience and success: The moderating role of stakeholders' engagement. *Journal of Business Research*, 119, 142-150.
- Santos, H. P. O., Black, A. M. & Sandelowski, M. 2014. Timing of Translation in Cross-Language Qualitative Research. *Qualitative Health Research*, 25, 134-144.
- Schutt, R. K. 2006. *Investigating the Social World: The Process and Practice of Research*, Thousand Oaks, CA, Pine Oaks Press.
- Sen, A. 1999. *Development as Freedom*, Oxford, Oxford University Press.
- Siggelkow, N. 2007. Persuasion With Case Studies. *Academy of Management Journal*, 50, 20-24.
- Spear, R. 2000. The Co-operative Advantage. *Annals of Public and Cooperative Economics*, 71, 507-523.
- Subramony, M., Segers, J., Chadwick, C. & Shyamsunder, A. 2018. Leadership development practice bundles and organizational performance: The mediating role of human capital and social capital. *Journal of Business Research*, 83, 120-129.
- Teece, D. J. 2007. Explicating dynamic capabilities: the nature and micro foundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28, 1319-1350.
- Tregear, A. & Cooper, S. 2016. Embeddedness, social capital and learning in rural areas: The case of producer cooperatives. *Journal of Rural Studies*, 44, 101-110.
- Valentinov, V. 2004. Toward a Social Capital Theory of Cooperative Organisation. *Journal of Cooperative Studies*, 37.
- Walker, B., Carpenter, S., Anderies, J., Abel, N., Cumming, G., Janssen, M., Lebel, L., Norberg, J., Peterson, G. D. & Pritchard, R. 2002. Resilience Management in Social-ecological Systems a Working Hypothesis for a Participatory Approach. *Conservation Ecology*, 6.
- Weick, K. E. 1988. Enacted sensemaking in crisis situations. *Journal of Management Studies*, 25, 305-317.
- Wexler, L., Moses, J., Hopper, K., Joule, L., Garoutte, J. & and the, L. S. C. C. T. 2013. Central Role of Relatedness in Alaska Native Youth Resilience: Preliminary Themes from One Site of the Circumpolar Indigenous Pathways to Adulthood (CIPA) Study. *American Journal of Community Psychology*, 52, 393-405.
- Williams, T., Gruber, D., Sutcliffe, K., Shepherd, D. & Zhao, E. Y. 2017. Organizational Response to Adversity: Fusing Crisis Management and Resilience Research Streams. *The Academy of Management Annals*, 11.
- World Bank 2008. World development report: Agriculture for development. Washington, DC: The World Bank.
- Wulandhari, N. B. I., Mishra, N., Dora, M. & Samuel, F. W. 2021. Understanding rural Do-It-Yourself science through social learning in communities of practice. *Technological Forecasting and Social Change*, 163, 120411.
- Yin, R. K. 2009. *Case study research: Design and methods (4th Ed.)*, Thousand Oaks, CA, Sage.

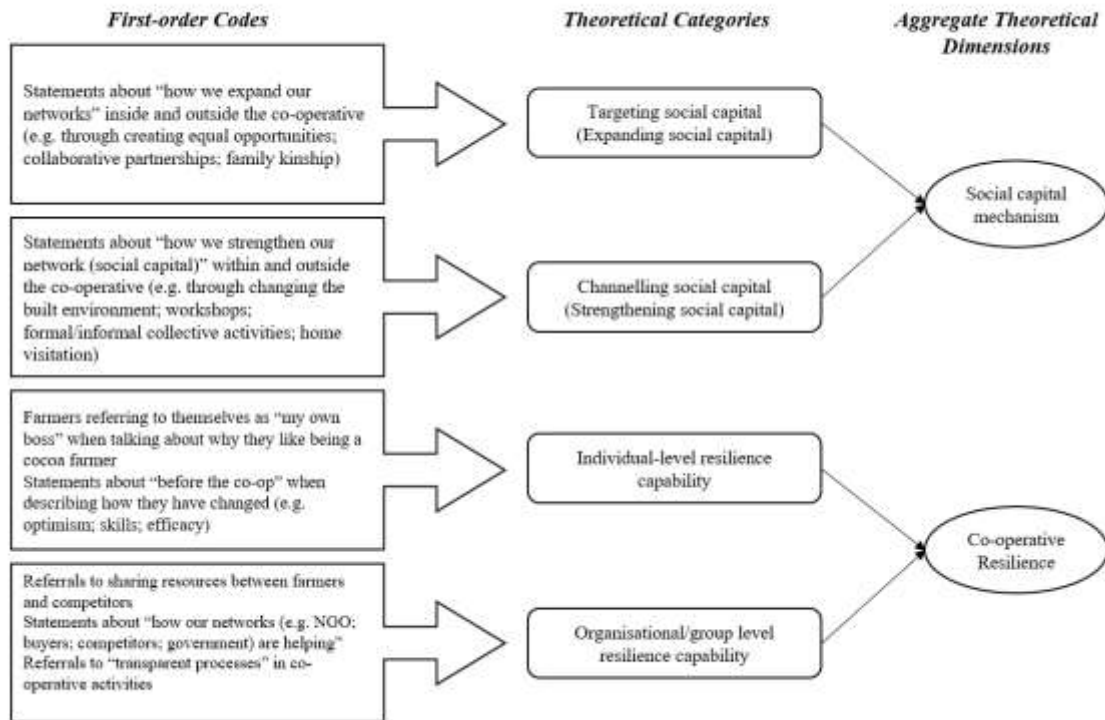
**Table 1.** Definition and capabilities of cooperative resilience

<b>Authors</b>	<b>Resilience definition</b>	<b>Associated capability</b>	<b>Relation to cooperative resilience aspects</b>
Lengnick-Hall et al. (2011); Lengnick-Hall and Beck (2005); Chowdhury et al. (2018)	The ability to adjust resources and interpersonal processes in response to disruptions and ongoing stress	Adaptive capacity	Economic viability
Teece (2007); Easterby-Smith et al. (2009)	The ability to envision future events, beyond the ability to absorb shocks	Strategic renewal	
Jamrog et al. (2006); Coutu (2002); Borda-Rodriguez et al. (2016); Borda-Rodriguez and Vicari (2014)	The ability to leverage collective skills and experiences to better prepare for future events	Appropriation capacity	Social viability
Sadan (1997); Majurin (2012); Sen (1999)	The ability to empower actors to have reasons and willingness to live the life they value	Empowering capability	

**Table 2.** Summary of interview participants and method

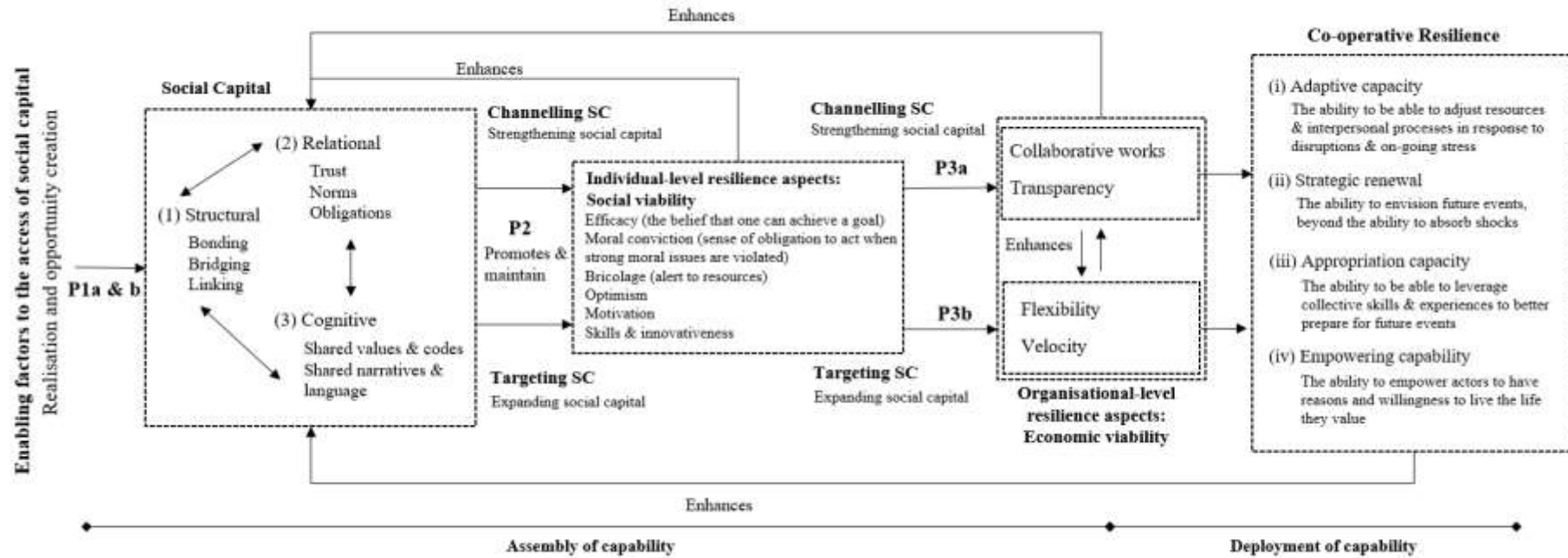
<b>Methods</b>	<b>Participants</b>	<b>Approaches for data collection and analysis</b>
In-depth interviews	Total of 42 semi-structured interviews; 5 cooperative committee, 30 farmer members (15 male farmers, 7 female farmers, and 8 young farmers), 5 NGO member representatives, 2 government officials from the cooperative and agricultural departments	Participants were selected through the snowball sampling method (Liamputtong, 2013). Coding techniques (Glaser and Strauss, 1967), thematic analysis (Braun and Clarke, 2006), and pattern matching logic (Yin, 2009) assisted by NVivo
Focus group discussions	2 focus group discussions with KSS cooperative committee members (male, female, young farmers), local NGO Kalimajari, and government officials	Participants were selected based on the participatory approach (Neuman, 2011). Thematic data analysis (Braun and Clarke, 2006) assisted by NVivo

### *Data Structure Overview*



**Fig. 1.** Overview of the data structure for social capital mechanisms and cooperative resilience





*Fig. 2. An empirically-grounded framework of social capital mechanisms for cooperative resilience*