



Linnæus University

Sweden

Master's Thesis

Fostering Cooperative Resilience during the COVID- 19 Pandemic

*A case study on coffee cooperatives' operations in
Honduras during the 2020 COVID-19 pandemic*



Author: Cecilia Widman

Supervisor: Chris High

Examiner: Jonas Ewald

Term: HT20

Subject: Peace and Development Work

Level: Master

Course code: 4FU42E



ABSTRACT

This study investigates the resilience of coffee cooperatives and producer organizations in the context of the COVID-19 pandemic and explores their adaptations to the context in relation to their livelihood capitals. The changes to their operations are analyzed through the contexts of shocks, trends and stresses and how they perceived these threats. The topic of research is relevant given the economic and social importance of cooperatives in these communities and potential impacts to their operations during COVID-19, which is likely to have long-term impacts locally and within the global setting.

There is a lack of consensus regarding the classification of cooperatives as resilient organizations, with much of the previous research focusing on financial crisis or natural disasters. Furthermore, the COVID-19 pandemic has been an unprecedented event on a global scale with far-reaching impacts into social, economic and political spheres, and examining these effects is still a developing realm within academic research. The relationship of coffee producers and their organizations within the global commodity chains renders such organizations particularly vulnerable to the effects of COVID-19 and government policy interventions. Investigating how coffee cooperatives in Honduras have been operating throughout the COVID-19 pandemic assesses their potential capacity for resilience by examining how they have been impacted and the manners in which they have overcome these challenges. This further allows for increased understanding of cooperative resilience and ways in which cooperatives' capital have the potential to impact their resilience.

This research follows an abductive qualitative case study and utilizes semi-structured interviews from various coffee cooperatives and organizations in Honduras as primary sources with existing literature as secondary sources. The interviews were conducted remotely. The findings include accounts from cooperatives and producer organizations, which focus primarily on coffee production, in addition to reports from a privately owned coffee production enterprise and a cooperative member. The Vulnerability Context and Asset Pentagon, components of the Sustainable Rural Livelihoods Framework as described by the Department for International Development, were used to analyze the data, along with variables to assess organizational resilience. The study finds that investments to organizations' human and social capital were prioritized and heavily relied upon during this crisis and the more established organizations had a larger range of resources from which to draw upon. Nevertheless, by continuing to develop and expand on human and social capital, cooperative organizations can increase their capacity for resilience.

KEY WORDS: Cooperatives, resilience, asset pentagon, COVID-19





ACKNOWLEDGEMENTS

First, I wish to express my sincere gratitude to my supervisor, Chris High, whose guidance and support was crucial throughout this research and was always there to steer me in the right direction.

I'd also like to recognize my parents and sisters for their constant encouragement and support. I'd also like to thank my boyfriend for always making me smile, especially when I needed it most.

Lastly, I'd like to thank the participants of this study, who so kindly and openly discussed this extremely challenging period with a complete stranger an ocean away. I can't put into words how much your accounts and determination moved me, and I hope to one day have the chance to thank you all in person. Thank you.

Cecilia Widman, January 2021



TABLE OF CONTENTS

ABSTRACT	2
ACKNOWLEDGEMENTS	4
LIST OF ABBREVIATIONS	7
LIST OF FIGURES AND TABLES	8
LIST OF APPENDICES	8
1. INTRODUCTION	9
1.1 PURPOSE OF STUDY AND RESEARCH QUESTIONS.....	11
1.2 THESIS STRUCTURE.....	12
2. REVIEW OF RELEVANT LITERATURE	13
2.1 COOPERATIVES IN DEVELOPMENT SETTINGS.....	13
2.1.1 <i>Coffee Cooperatives</i>	14
2.2 COOPERATIVES DURING CRISIS PERIODS	15
2.3 RESILIENCE IN COOPERATIVE ORGANIZATIONS.....	16
2.4 THE RESEARCH GAP	17
3. THEORY AND ANALYTICAL FRAMEWORK	19
3.1 RESILIENCE IN ORGANIZATIONAL STUDIES	19
3.2 ANALYTICAL FRAMEWORK.....	20
3.2.1 <i>Sustainable Rural Livelihoods Framework</i>	20
3.2.2 <i>Vulnerability Context</i>	21
3.2.3 <i>Asset Pentagon</i>	22
3.2.4 <i>Variables for Understanding Resilience</i>	24
3.2.5 <i>Criticisms of SRL and the Asset Pentagon</i>	26
4. METHODOLOGY	27
4.1 RESEARCH DESIGN	27
4.2 DATA COLLECTION	27
4.2.1 <i>Semi-structured Interviews</i>	27
4.2.2 <i>Sampling and Sample Size</i>	28
4.2.3 <i>Use of a Research Assistant</i>	29
4.2.4 <i>Texts and Documents</i>	29
4.3 ETHICAL CONSIDERATIONS.....	30
4.4 LIMITATIONS AND DELIMITATIONS.....	30
5. FINDINGS	32
5.1 TRENDS.....	32
5.2 SHOCKS.....	34
5.2.1 <i>COVID-19</i>	34
5.2.2 <i>El Toque de Queda</i>	38



5.2.3 <i>Bioseguridad</i>	43
5.3 STRESSES	47
6. ANALYSIS AND DISCUSSION	50
6.1 VARIABLES TO UNDERSTANDING RESILIENCE.....	50
6.1.1 <i>Threats Presented by Trends</i>	50
6.1.2 <i>Threat Presented by Shocks</i>	51
6.1.3 <i>Threats Presented by Stressors</i>	52
6.2 THE ASSET PENTAGON	53
6.2.1 <i>Human Capital</i>	53
6.2.2 <i>Natural Capital</i>	55
6.2.3 <i>Social Capital</i>	56
6.2.4 <i>Financial Capital</i>	58
6.2.5 <i>Physical Capital</i>	59
6.3 DISCUSSION	59
7. CONCLUSION AND RECOMMENDATIONS.....	62
7.1 CONCLUSION.....	62
7.2 RECOMMENDATIONS.....	64
8. REFERENCE LIST.....	65



LIST OF ABBREVIATIONS

CLAC	Coordinadora Latinoamericana y del Caribe de Pequeños Productores y Trabajadores de Comercio Justo
CONSUCOOP	Consejo Nacional Supervisor de Cooperativas
COVID-19	Severe Acute Respiratory Syndrome Coronavirus 2
DFID	Department for International Development
GDP	Gross Domestic Product
ICA	International Co-operative Alliance
ICO	International Coffee Organization
IHCAFE	Instituto Hondureño de Café
IWCA	International Women's Coffee Association
NGO	non-governmental organizations
NPI	non-pharmaceutical interventions
SENASA	Servicio Nacional de Sanidad E Inocuidad Agroalimentaria
SINGAR	Sistema Nacional de Gestión de Riesgos
SRL	Sustainable Rural Livelihoods
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNDP	United Nations Development Program
WHO	World Health Organization



LIST OF FIGURES AND TABLES

Figure 1: Asset Pentagon

Figure 2: Adapted Analytical Framework

Figure 3: Global Coffee Prices 2010 – 2020

Table 1: Reported Cases within Cooperatives' Departments

LIST OF APPENDICES

Appendix 1: Interview Guide

Appendix 2: Interview Coding Sheet

Appendix 3: Honduran policies in response to COVID-19



1. INTRODUCTION

The International Cooperative Alliance (ICA) defines a cooperative as “people-centered enterprises jointly owned and democratically controlled by and for their members to realize their own common socio-economic needs and aspirations,” and today, they provide a variety of roles and services within their communities (ICA, 2018). In the development field, there has been sustainable advocacy for local participation, ownership, and empowerment to create and maintain sustainable rural community development. Encouraging cooperative development is crucial for mobilizing local resources and creating business structures that ensure resources are reinvested into the community. Furthermore, evidence has shown that cooperatives and producer organizations are more resilient during times of crisis and can be useful tools in helping communities persevere through crises (Parnell, 2001).

Cooperatives serve their members through various means, including increasing bargaining power, providing access to markets, delivering better product information and innovation, through risk-sharing and decreasing transaction costs, and communal ownership of shared facilities (Balgah, 2019.) Cooperative organizations link economic, cultural and social needs together; empower their members and give them a platform to advocate their own interests within a market that has historically delimited them (Torgenson et al., 1998).

This is evident when examining cooperative organizations in coffee production, which is the third most valuable internationally traded agricultural commodity (Loker and Smith, 2012). Coffee production is embedded in a traditional system where a few actors dominate exportation from the producing countries, and producers remain at the low-value end of the commodity value chain. Producers face a number of challenges when reaching their market: coffee is primarily grown in rural areas of lesser developed countries, where infrastructure may be limited and access to financial services is low. Their income relies on fluctuating international coffee prices, and there is always the risk of plant disease or natural disasters destroying their crops. Small individual producers are unlikely to have access to the necessary transformation services in the value chain nor have access to services to export their own crop, and instead rely on third parties (Ibid).

Honduras is an excellent example of how cooperatives and specifically those focusing on coffee production, can develop and transform a national economy.



While initially a weaker link in the global coffee trade, today Honduras is the largest coffee producer in Central America, the third-largest in the Americas, and the fifth largest in the world (IHCAFE, 2020). Coffee production accounts for a third of the total agricultural GDP, and in 2020, Honduras exported 409.4 million kilograms of coffee from the 2018 -2019 harvest with an export value of \$950 million ((Bunn et al., 2018: IHCAFE, 2020: Gomez, 2020).

Approximately 85% of Honduran coffee producers are associated with institutions (Bunn et al., 2018). According to the *Consejo Nacional Supervisor de Cooperativas* (CONSUCOOP), there are currently 179 cooperatives primarily devoted to coffee production in the country (CONSUCOOP, 2019). They offer a range of services and benefits to their members, with the commercialization of coffee being the most valued advantage of being part of an organization (Álvarez, 2018).

Like all nations, Honduras has been heavily impacted by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), commonly known as COVID-19. With high transmissibility and infectivity, governments were urged to adopt strict non-pharmaceutical interventions (NPIs), ranging from recommended social distancing measures to restricted movement and self-isolation (Wang et al., 2020). Honduran interventions have included nationwide lockdowns and other restrictions, which began on March 16th and were extended throughout the summer and autumn (Ham, 2020).

In rural areas, the livelihoods of the self-employed and wage workers are especially vulnerable as agri-food supply chains and markets have been heavily disrupted due to lockdowns (FAO, 2020b). In the early months of the pandemic, coffee-producing countries in Latin America had already reported significant decreases in labor supply for harvest due to social distancing and lockdown measures. In several countries, transportation has been severely restricted, causing delays in exportation, in addition to shortages of staff in warehouses and ports, which further slows the export process (IWCA, 2020).

Social distancing measures and travel restrictions limit farmers' access to public extension services and technical assistance provided by coffee buyers and international and non-governmental organizations (NGOs) (Hernandez et al., 2020). There are also limited health services and transportation within the remote communities where coffee is grown (Carmenate-Milián et al., 2017). Without significant support, self-employed producers may continue to work



without taking the necessary precautions to reduce their risk of exposure or transmission (FAO, 2020b).

The potential role that cooperatives can play during crisis situations should be fully considered during the COVID-19 pandemic. They can contribute considerably to capacity building, facilitating local ownership and sustainability, all of which are necessary for durable solutions within affected populations (Parnell, 2001). Cooperatives are attributed with creating and sustaining employment, alleviating poverty, and enhancing social protection and community development, which have the potential to reduce the impact of a crisis (Ibid).

This gives reason to believe that during the COVID-19 pandemic, cooperatives can be extremely instrumental in distributing accurate information and building community resilience through holistic approaches that ensure all segments of the society are included (ILO, 2020b). As smallholder coffee producers across the globe represent a historically vulnerable population, it is imperative to understand how their own collective initiatives have supported them by during these unprecedented events.

1.1 PURPOSE OF STUDY AND RESEARCH QUESTIONS

COVID-19 has presented a complex environment in which cooperatives must operate. Not only are coffee cooperatives operating in a global economic arena that has decreased significantly since 2019, but their members are also required to work with restricted movements, and they are operating in an agricultural and export sector for which COVID-19 has presented unique challenges.

There is still the need for empirical-based research to develop the field of organizational-level resilience and recognize potential resilient characteristics within organizations and supply chains (Bharama et al., 2011). In the context of COVID-19, reports on the impact of lockdown measures and their consequences are mainly limited to grey or media-based research, and at the time of writing (May 2020 through December 2020), scholarly literature on the impact of COVID-19 is still being formed (Béné, 2020). Additionally, there is still a substantial debate on cooperatives' ability to operate as promised and the extent to which they can be regarded as resilient organizations, with much of this debate and literature centered on the financial crisis of 2008 and market volatility (Johnson et al., 2016). As the COVID-19 crisis is still



evolving, there are several research opportunities on the sustainability and resilience capacity of supply chain actors to be explored (Sarkis, 2020).

The objective of this research is to explore cooperative resilience under COVID-19 by analyzing how coffee cooperatives in Honduras have been operating in response to the COVID-19 pandemic and the government's policy interventions. The purpose is to evaluate the potential of their resilience by understanding how they have been impacted and the manners in which they have overcome these challenges. It is suspected that cooperatives' sustainable livelihoods assets have been disrupted due to the shocks and stresses of the pandemic, which will affect their ability to perform their operations. It is also imperative to recognize how coffee cooperatives differ in their responses and for what reasons. The primary research questions for this thesis are:

- 1. How have perceived threats arising from shocks and trends influenced the organizations' responses and changes to their organizational context?*
- 2. How do cooperatives' sustained livelihood capitals influence their responses?*
- 3. How do an organization's sustainable livelihood capitals shape cooperative resilience during a major public health crisis?*

1.2 THESIS STRUCTURE

The thesis's introductory chapter provides a brief overview of cooperatives and the justification for this study. A literature review follows it in the second chapter and further distinguishes the research gap. The third chapter discusses the theoretical concept of organizational resilience and examines components of the sustainable rural livelihoods' framework and adaptations applied to analyze organizational resilience. The fourth chapter describes the research methodology and in the fifth chapter, the findings are discussed, followed by the analysis in the sixth chapter. The seventh chapter includes the conclusion and recommendations on further areas of study.



2. REVIEW OF RELEVANT LITERATURE

As an organizational form, cooperatives have received considerable academic attention (Aragón et al., 2017; Balgah, 2019; Beuchelt and Zeller, 2012; Dongre and Paranjothi, 2020; Hartwich et al., 2010; Johnson et al., 2016; Loker and Smith, 2010; Majee and Hoyt, 2010; Münker, 2012; Parnell, 2001; Torgerson et al., 1998). Cooperatives have a specific focus of their operations; there is the challenge of developing into a successful business while simultaneously aiding members to be more productive. In other contexts, cooperatives are also challenged by addressing broader development and operating in environments that tend not to favor enterprise development (Poole and Donovan, 2014). This chapter explores the different roles of cooperatives, their impacts during crises, factors which can affect their resilience, and specifies the research gap.

2.1 COOPERATIVES IN DEVELOPMENT SETTINGS

In rural settings, where cooperatives can be examined as a facet of rural infrastructure, the benefits of cooperatives, such as decentralized decision-making and local generation and distribution of wealth, can also be considered as a public developmental good (Torgerson et al., 1998). Regarding poverty reduction, cooperatives serve as a tool to help the poor secure a fair share of goods, services, and resources and create wealth members would not be able to individually. They also enable members to act in solidarity when facing social and economic challenges and become more visible and vocal, so other organizations or government agencies may better reach them (Münker, 2012).

Furthermore, they create employment opportunities and build capital in their communities, and build trust among members and strengthen the business and local community (Majee and Hoyt, 2010). Producers can provide themselves with economic benefits and respond to the market pressures better through vertical collective action (Torgerson et al., 1998). There is also evidence that cooperative membership improves farmers' commercialization behaviour, which at the micro-level develops farm productivity and income and, at the macro-level, improves food security and allocative efficiency (Balgah, 2019).

Cooperatives and other community-based organizations have a strong influence on technology adoption practices, and are significant in sharing market information (Hartwich et al., 2010).



Research has found that being cooperative member had additional benefits past monetary value. Members reported feeling increased self-confidence, which also led to increased involvement in community and business activities (Ibid). Loker and Smith (2012) also found increased empowerment among cooperative members and pride in their work. These emotions of empowerment and self-confidence are especially vital during a crisis when people are more at risk of feeling hopelessness and despair. Cooperation and solidarity from being involved in a cooperative may help combat those feelings and are an essential step in the recovery process after a crisis (Parnell, 2001).

They also have strong community development links and assume goals directed towards the common welfare, which allows them to build strong social networks around shared issues of community development (Palma et al., 2020). This is in practice with the cooperative principle of community concern, and many cooperatives are very active within the community outside of their business roles.

However, there are also a number of criticisms on cooperative organizations on their effectiveness and developmental capacity (Ortmann and King, 2007: Shumeta and D’Haese, 2016: Verhofstadt, E. and Maertens, 2014). In some circumstances, they have been criticized due to unequitable power distribution with larger landholders within the cooperative, narrow-focused solutions which prohibit other ways of aiding members and attempting to transplant cooperatives from one context to another without considering significant social or cultural attributes (Mortiram and Vakulabharanam, 2007).

2.1.1 COFFEE COOPERATIVES

Considering the economic importance of coffee as a tropical crop, often the role coffee cooperatives have in the production and development of coffee-producing communities is extensive (Tucker, 2013).

Cooperatives in the coffee sector may be involved along all stages of production, from providing access to inputs and loans, to organizing the harvest, transportation, and post-harvest processing (Loker and Smith, 2012). Many organizations provide training and organize events catering to different stages of coffee production and marketing, and by focusing on quality control, cooperatives earn higher market prices (Tucker, 2013).

Many producers in Honduras lack the machinery necessary for this, so the green coffee is sent to a local processor, known as a “*beneficio*”, where the



coffee cherry is processed. Sometimes a “*coyote*” or middleman will pick up the coffee to be delivered to the *beneficio*, many of which are large coffee producers (Hartwich et al., 2010). This is often necessary due to the coffee sector’s fragmented structure, and the nature of the small-holder capabilities (Loker and Smith, 2012). Cooperatives serve to remove the roles of *beneficios* and *coyotes* and other third parties in the supply chain to give more authority and control to the producers. They are one of the few options small scale coffee producers have for vertical integration, which helps them gain more authority within the value chain (Loker and Smith, 2012; Torgerson et al., 1998).

When it comes to exportation, some cooperatives work with exporters or directly with retailers, which reduces the organization’s transaction costs and gives them more control over their product (Palma et al., 2020).

In recent years, much of the cooperative research within the coffee sector focuses on the effects of Fair Trade and other certifications and the debate about such certifications’ benefits (Bacon, 2010). Voluntary coffee certifications, like Fairtrade, Organic certified, and Utz, have attempted to de-commoditize coffee and stabilize the effects of coffee price fluctuation for producers (Snider et al., 2017). For smallholder producers, it is often necessary to join a farmer organization to be certified due to the cost and certification process. The organizations, therefore, are often the actors who decide which certifications to secure, which members to certify, new markets to enter, and how profits are distributed (Ibid). Cooperative principles are generally well-aligned with those of certification organizations, and some studies have shown that certifications strengthen and promote participation in farmers’ organizations by assisting in upgrading their processes, products, and services (Beuchelt and Zeller, 2013).

Cooperatives are often the main marketing actor for their members, as most members will sell their coffee beans under the cooperative name. Therefore, cooperatives are also involved in negotiating and selling of the coffee beans to either exporters or directly to roasters (Loker and Smith, 2012).

2.2 COOPERATIVES DURING CRISIS PERIODS

According to Parnell (2001), many of the crises encountered today are the result of entrenched disadvantageous social and economic structures. Due to cooperatives’ and self-help organizations’ nature, their actions during the response or reconstruction process can be essential to fundamental change within the affected populations. Research states that during a crisis,



cooperatives and self-help organizations commonly contribute to the recovery process through: advocacy, providing essential services and employment, strengthen community capacity, increasing disaster preparedness, reducing vulnerability, rehabilitation, reintegration, and reconstruction, facilitating essential change in social, economic and political spheres, peacebuilding, maintaining communication in conflict areas and reducing xenophobia, racism, and tribal and religious hatred (Parnell, 2001).

Memberships in cooperatives surged during the 2007 – 8 financial crisis and debt crisis in 2009 – 17 in Greece; cooperatives were likewise key actors in response to public health epidemics during the AIDS/HIV outbreaks in Swaziland and Vietnam, and during natural disasters responses in Japan and Australia. They were also crucial in the post-conflict environment in Sri Lanka and Rwanda (ILO, 2020a).

Birchall and Ketilson (2009) examine the resilience of the cooperative business model during the financial crisis and found that they have a comparative advantage compared to other business types. The comparative advantages are based on membership and the emphasis on providing benefits for its members, rather than increasing profits. Other advantages vary depending on the cooperative; producer cooperatives enable self-employment while harnessing strength in numbers to survive in the market. This includes banking cooperatives as well as farming cooperatives that adopted new roles and duties during economic crises periods (Ibid).

Cooperatives also inherit social responsibility as an intrinsic element as their principles require them to be accountable to their members and the community in which they operate. However, it is important to consider that while the cooperative organizations' principles align strongly with those of social responsibility, the impact of their social responsibility is contingent on management (Aragón et al., 2017).

2.3 RESILIENCE IN COOPERATIVE ORGANIZATIONS

Research on cooperative organization resilience determined that a cooperative's resilience centers on its multi-dimensionality and the collective capacity of “membership, networks, collective skills in governance, innovation and engagement with governments” (Johnson et al., 2016: 1).

Member commitment is a crucial feature, as cooperatives are membership organizations, and it is contended that the more a member can benefit from a



cooperative, the more loyal they will be (Münker, 2012). Münker (2012) also emphasizes that cooperatives' roles should be to meet the needs of its members, not the needs of others, which is crucial considering how often NGOs or other international organizations spur a cooperative's foundation. An organization's size can also affect its members' response and engagement, as does trust within the group (Johnson et al., 2016). The relationship between the governance structure, strategy, and performance is also critical (Poole, 2014).

The importance of knowledge sharing between local actors and external actors to gain education, "means to cope with changes, of better use of available resources and how to mobilize additional resources" is also crucial regarding cooperative resilience (Münker, 2012: 54). Networks can facilitate trade and innovations, but they can also lead to aid- or path dependency if they do not encourage collective capabilities (Johnson et al., 2016). This was also confirmed by Palm et al. (2020), who studied cooperatives as agents for rural governance in Honduras and found that their work with the primary resource in their communities enhanced their networks with other local actors. Tucker (2013) also noted the importance of cooperatives' relationships with international aid organizations when factoring in their success.

Innovation is important for cooperatives to operate in changing market conditions as it is a powerful tool that allows them to negotiate. Due to the environment in which many rural cooperatives operate, updating technologies and other innovations can require significant investment; however, it enables resilience when there is a correlation between collective action, multiple sources of information, global value chains, and access to credit (Johnson et al., 2016).

A conducive government environment is also vital, meaning a state's economic, political, and legal system allows for the cooperative activities, protection of property rights and the independence of a cooperative from the ruling government structure (Münker, 2012). Cooperatives are able to be more successful when they can operate autonomously (Johnson et al., 2016). A facilitating education, transportation, and utility infrastructure are also important (Münker, 2012).

2.4 THE RESEARCH GAP

The current COVID-19 crisis is unlike any other previous natural disaster for a number of reasons: the global scale of its impact, which also includes



significant health, economic and social implications; its significant timescale, as the disease is still continuing to spread and evolve into more contagious mutations; and the inability for any single agency, neither international organization nor national governments, to tackle it effectively and efficiently (Dongre and Paranjothi, 2020).

Dongre and Paranjothi (2020) examine cooperative responses within the Asia Pacific region and found that organizations were mainly focusing on relief measures, and some were preparing longer-term responses. As their research focused on a large geographical scale, it incorporated cooperatives from developed and developing countries. They further identified a need for more analytical studies (Ibid).

Johnson et al. (2016) state that there is still a debate on cooperatives' ability to be regarded as resilient organizations, and more emphasis on resilience research should be given to cooperatives in developing countries. There are already reports of cooperatives taking action regarding COVID-19, to ensure safe working conditions and enhance worker protections, contributing to supply chain stabilization and production innovation and adaptation (Dongre and Paranjothi, 2020: ILO, 2020a). Some governments have utilized cooperatives' strengths by establishing cooperative response committees and creating partnerships to adapt products and services to COVID-19 related essentials (ILO, 2020b). However, reports of cooperatives operations during COVID-19 are primarily restricted to gray or media-based literature (Béné,2020: FAO, 2020a: FAO, 2020b: ILO, 2020a; ILO, 2020b: Sarkis, 2020), and analytical research on the implication of the pandemic is still emerging (Dongre and Paranjothi, 2020: Sarkis: 2020). This research addresses the gap within the field of cooperative research regarding the impact of COVID-19 and adds to the emerging academic literature on the implications of COVID-19 as identified by Dongre and Paranjothi, (2020).



3. THEORY AND ANALYTICAL FRAMEWORK

This research utilized the theory of organizational resilience and a framework adapted from components of the Sustainable Rural Livelihoods (SRL) framework and variables to understand resilience.

3.1 RESILIENCE IN ORGANIZATIONAL STUDIES

Organizational studies refer to the social structures and processes in, on, and between organizations, which typically have a formally defined membership, and their objectives are based on the expectations of stakeholders (Hutter, 2011). In organization theory, resilience is described as the characteristic or capacity of organizations to maintain operational despite the presence of adversity, whether it be internal or external, or the ability to recover from unprecedented events (Sutcliffe and Vogus, 2003). Sutcliffe and Vogus (2007) proposed the creation of a theory of organizational resilience as existing organization theory inadequately explained resilience concepts. They clarified that a resilience perspective would illuminate a new way of analyzing organizational structures, arguing that organizations are more efficacious than some of the perspectives provided in organizational theory (Sutcliffe and Vogus 2007).

For this paper, the definition of resilience from Sutcliffe and Vogus (2007) will be followed: “the maintenance of positive readjustment under challenging conditions such as the organization emerges from those conditions strengthened and more resourceful” (1). Such “challenging conditions” can refer to either exogenous shocks, such as scandals or crises, or ongoing strain or stress (Ibid).

Regarding organizational resilience, it is important to explore *how* organizations respond to a threat or shock, rather than characteristics that may distinguish them from non-resilient organizations (Sutcliffe and Vogus, 2003). Instead, a resilience approach would observe continuous monitoring of their environment to detect unexpected events in a timely manner and react appropriately (Sutcliffe and Vogus, 2007).

It is also important to note that resilience itself is relative and ever-changing, as exhibiting resilience in one situation may not equate to resilience over time or other circumstances (Sutcliffe and Vogus, 2003). Therefore, building competency is believed to make one more broadly adapted to the environment, and therefore more likely to have the knowledge to allow one to act when



resilience is needed (Ibid). Thus, resilience trusts on an organization's processes, structures and practices which allows them to promote competence, restore efficacy and encourage growth, despite mediating jolts and stresses (Sutcliffe and Vogus, 2007). The ability to learn and draw from past experiences is likewise crucial for developing organizational capabilities (Sutcliffe and Vogus, 2003). As it is not possible to measure resilience as a single component or within a single time frame, this study explores how cooperatives invest in their resilience capabilities through the adaptations to their assets during the COVID-19 pandemic.

3.2 ANALYTICAL FRAMEWORK

For this research, a customized framework was constructed and used to analyze the findings. It is based on the livelihood resources of the Sustainable Rural Livelihoods (SRL) framework and examines changes using selected dimensions identified by Gerard Hutter (2011) to understand organizational resilience. The SRL framework and *Asset Pentagon* was chosen as the primary analytical structure for this research due to the concept that “resilience is more likely when individuals have access to a sufficient amount of quality resources (i.e., human, social, emotional and material capital)” (Sutcliffe and Vogus, 2003; 9). Having access to the necessary assets allows organizations to develop competencies to respond to shocks and stresses (Sutcliffe and Vogus, 2003). In addition to the framework, Hutter's theory examines how the organizations perceived and responded to the shocks and stresses, as specified in the research questions. Furthermore, *the Asset Pentagon* and the variables to organizational resilience supply a multi-dimensional approach, which is necessary to analyze cooperatives as multi-dimensional organizations (Johnson et al., 2016).

3.2.1 SUSTAINABLE RURAL LIVELIHOODS FRAMEWORK

The SRL Framework is a structure for analyzing sustainable livelihoods, outlined with five central indicators: (1) contexts, conditions, and trends, (2) livelihood resources, (3) institutional processes and organizational structures, (4) livelihood strategies, and (5) sustainable livelihood outcomes (Scoones, 1998). When conducting any analysis of sustainable livelihoods, the objective is to consider, given a specific context, what combination of livelihood resources results in the ability to pursue different livelihood strategies that must also operate within contextual institutional processes and produce sustainable outcomes (Ibid).



Conway and Chamber's (1992) working definition of a sustainable livelihood is that a livelihood is composed of capabilities, assets, and activities required for the means of living. All livelihoods are vulnerable to shocks and stresses, and therefore, the ability to withstand and cope with pressures and impacts is required to make a livelihood sustainable. The sustainable element also implies that the individuals or communities in question can maintain or even improve current and future skills when overcoming stresses or crises (UNDP, 2017). It includes the ability to pursue resilient livelihood strategies without undermining the natural asset base and is a holistic manner to recognize the multiple influences on people and the relationships between them (Scoones, 1998). The framework can be applied across a range of scales, from an individual to a community or a nation (Ibid). Due to its practicality in this regard, it can also be employed to an organization, and in this case, a cooperative.

3.2.2 VULNERABILITY CONTEXT

While still incorporating and honoring ideas from the SRL Framework outlined by Chambers and Conway (1992) and Scoones (1998), the framework also draws on the components of the *Vulnerability Context* and the *Asset Pentagon* from the Department of International Development (DFID).

The *Vulnerability Context* structures the external environment in which people must operate and is similar to the *Context, Conditions, and Trends* in Scoones' framework (1998). It comprises of trends, shocks, and seasonality (DFID, 1999). In this research, stresses are used in place of seasonality, although certain aspects of seasonality may also be considered as stresses. Trends include demographic trends, resource trends, politics, technological trends, and national or international economic trends. They tend to be more predictable and can significantly impact rates of return of selected livelihood strategies (DFID, 1999). Shocks are sudden impacts that are unpredictable, such as: health shocks, natural disasters, economic shocks, conflict, or crop and livestock health shocks or asset loss (Conway and Chambers, 1992: DFID, 1999). Due to the potential severity of COVID-19 and the unprecedented policy responses governments took to curb its spread, this research includes policies in response to COVID-19 in shocks. Additionally, many of the policies were intended to be short-term, making their categorization into the shocks classification appropriate. Stresses are pressures that are generally cumulative and can be more predictable, including seasonal shortages,



declining resources, or the availability of work (Conway and Chambers, 1992: DFID, 1999).

Scoones (1998) states that the ability of a livelihood to cope and recover from such stresses and shocks, also referred to as resilience, is a fundamental component of sustainable livelihoods. Since different types of shocks and stresses result in different responses, assessing resilience and the adaptations used to cope require a range of factors. For this research, the variables used to analyze changes in the livelihood assets derive from Hutter's (2011) elements to understand social resilience in natural hazards, and these are further explained in section 3.2.4 Variables for Understanding Resilience.

3.2.3 ASSET PENTAGON

According to Scoones (1998), assets or resources are the 'capital' base that people use to establish their livelihoods, and they may be material, social, tangible, or intangible. He identified four different capital categories: natural, economic, human, and social (Ibid). The DFID recognized physical capital as an additional asset (DFID, 1999).

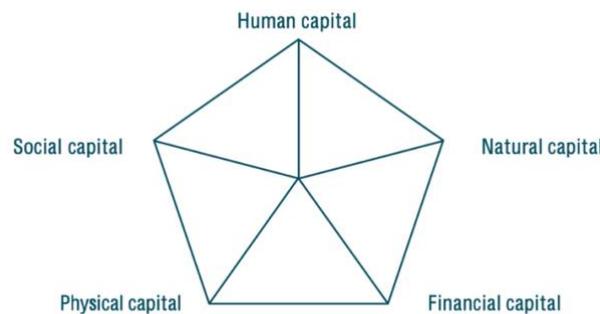


Figure 1: Asset Pentagon (DFID, 1999:5)

HUMAN CAPITAL

Human capital represents the skills, knowledge, good health, and capability of work that facilitate people to engage in different livelihood approaches. It is often considered a building block necessary to achieve different livelihood outcomes, as lack of education or poor health and sickness can derail attempts to strengthen other capitals (DFID, 1999). As human capital is a multidimensional concept, it should be considered that its stock value cannot be solely based on pre-existing knowledge or experience. Therefore, the ability



to acquire new knowledge should also be considered in human capital evaluation (UNDP, 2017).

NATURAL CAPITAL

Natural capital refers to the natural resources available which a person may use to construct a livelihood strategy. There is a wide variation in the resources that contribute to natural capital, from intangible public goods, such as the atmosphere and biodiversity, to divisible assets used for production, like trees and land. The livelihoods approach furthers the examination of natural capital to also include the structures and processes that determine how natural capital is used, created, and valued (DFID, 1999).

SOCIAL CAPITAL

Social capital is best understood as the social resources people draw upon to achieve objectives within their livelihoods (UNDP, 2017). These include vertical or horizontal networks and connectedness, membership to formal groups, and relationships of trust and reciprocity. All of these attributes are interconnected and lower the costs of working together (DFID, 1999). Social capital can also provide a buffer to shocks or act as an informal safety net and compensate for insufficient other kinds of capital (UNDP, 2017).

ECONOMIC CAPITAL

Economic capital is the financial resources people use to achieve their livelihood objectives. Available stocks can be held in several different forms, whether in savings or liquid assets, and represents consumption, as well as production. It is very versatile since it can be converted to other types of capital and can be used for the direct achievement of livelihood outcomes (DFID, 1999). However, some forms of assets cannot be obtained directly through financial capital, such as well-being or knowledge (UNDP, 2017). It is also the least available capital to the poor and cannot independently resolve problems deriving from poverty (DFID, 1999: UNDP, 2017).

PHYSICAL CAPITAL

Physical capital represents the basic physical goods to support livelihoods and includes basic infrastructure like access to roads, adequate water supply, and access to information and affordable energy (DFID, 1999). The United Nations Development Program (UNDP) also includes producer goods in physical capital, which are the tools and equipment that increase productivity (UNDP, 2017). Physical capital is especially significant when reducing



poverty, as lack of access to certain services results in deterioration of human health and well-being. The opportunity costs of poor infrastructure can impede attempts to increase other capitals and can also negatively affect on human capital, as it can restrain people's productive capacity due to the increased time and energy necessary to meet their basic needs (DFID, 1999).

These five resources can be represented by the *Asset Pentagon*, which offers a visual representation of peoples', or in the case, a cooperatives' assets and how they can change (DFID, 1999). Pentagons can be useful to identify specific entry points for interventions, but they should not be used to attempt to quantify all assets (DFID, 1999). Additionally, differing perceptions of the value of the different capitals should be considered when conducting research (UNDP, 2017). A single capital can also generate multiple benefits and may affect the outcomes of other types of resources (DFID, 1999). For this reason, the pentagon is a good visual representation of the different relationships between capitals that may occur. Although time is not included in the framework, time should be included in the analysis to show the changes in assets and access to assets (Ibid).

3.2.4 VARIABLES FOR UNDERSTANDING RESILIENCE

The analysis is further complemented with selected variables for understanding resilience as constructed by Hutter (2011). Hutter (2011) initially categorizes seven variables to understand social resilience within the context of natural hazards. Due to time limitations and applicability, two of these elements were chosen as analytical tools.

The first respect from this framework focuses on the type of change in the organizational context and whether it can be characterized as "*incremental*" or "*radical*" (Hutter, 2011). In this case, incremental does not only refer to size, and while it can indicate continuous, evolving change with small adjustments, it may also refer to the knowledge or experience an organizational member may have about a context (Hutter, 2011; Weick and Quinn, 1999). Having prior experience results in the ability to react in a timely, controlled manner (Hutter, 2011). Radical change refers to an event or context where there is difficulty in understanding it due to the complex nature and novelty of the situation in relation to the preexisting founding beliefs and knowledge within the organization (Ibid). The second dimension used is the perception of the threat and if it is perceived or unperceived. A threat consists of "an environmental event that has impending negative or harmful consequences for the entity" (Straw et al., 1981:502). It is at the center of an



organizational crisis and should not be understood solely as an occurrence where the time pressure is high (Hutter, 2011).

Although the term ‘social resilience’ is used in Hutter’s research note, the paper itself often points to the concept that organizational resilience is directly influenced by social resilience, and they should not be isolated. Furthermore, Hutter advocates that empirical work on theory building on this topic should begin without a precise definition of social resilience; instead, an applicable definition will be devised by those researchers and practitioners during the actual work (2011). Another rationalization for using Hutter’s research note as a tool is that social resilience within the situation of natural hazards can be understood as an occurrence that incorporates social systems at various scales and multiple ecological systems (Ibid). This would also include the cooperative and producer organization systems.

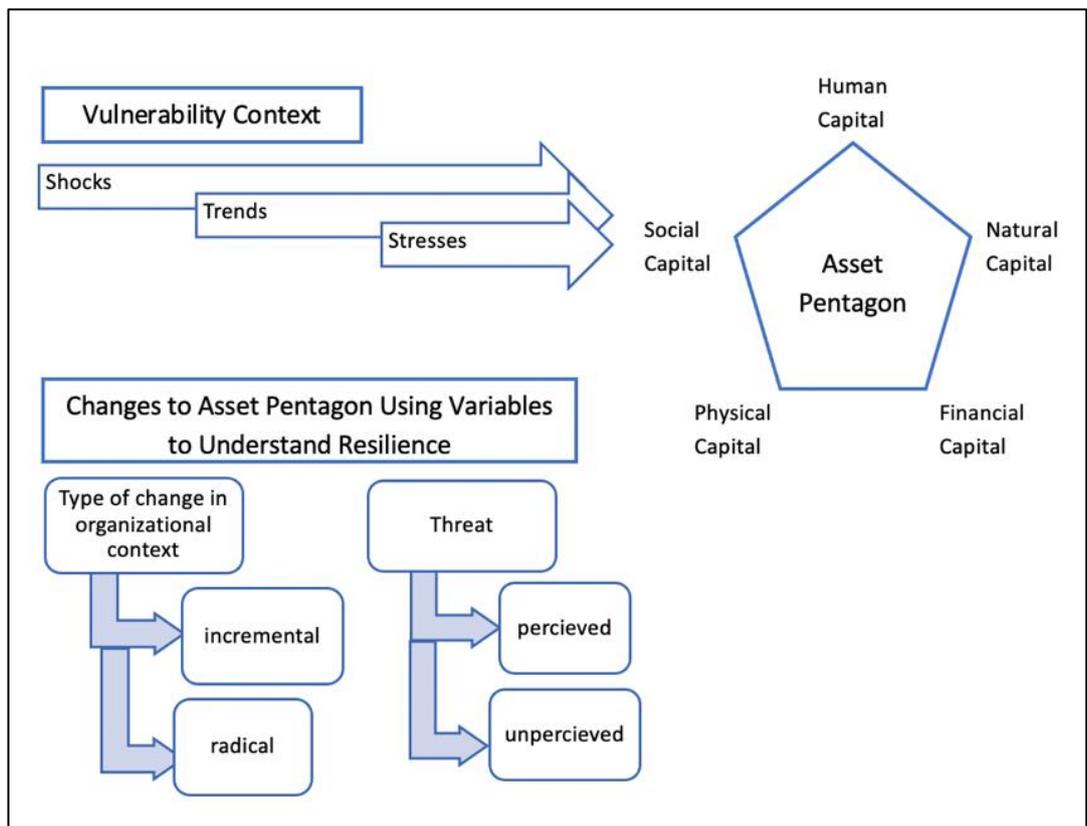


Figure 2: Analytical Framework adapted from DFID (1999) and Hutter (2011)



3.2.5 CRITICISMS OF SRL AND THE ASSET PENTAGON

One of the primary critics of SRL and the *Asset Pentagon* is that it can omit important power relations and can appear inflexible. Likewise, the absence of culture and politics within the framework does not allow for a complete view of the contextual environment, as they can play a decisive role in the livelihood strategies and asset access (McLean, 2015). The simplicity of a framework that examines the complex nature of how people create livelihoods is part of the SRL's appeal. However, this can be misleading if adopted rigidly. It is important that the framework is used flexibly and can be a useful tool for organizing and analyzing ideas (Hinshelwood, 2003). In this research, the framework was primarily used to organize ideas and adaptations produced in reaction to the COVID-19 pandemic and how these responses were affected by the organizations' assets. While power relations still have a role, they were not a focal point in this examination, and therefore the framework was still deemed appropriate to use.



4. METHODOLOGY

The thesis's research is qualitative and analyzed following abductive reasoning based on the use of the analytical framework as a lens to understand understanding cooperatives' actions and decisions (Bryman, 2016). The research was conducted in the form of a case study with the primary source of data stemming from semi-structured interviews. Secondary materials, including, government policies, official statistics, and organizational documents, were also utilized.

4.1 RESEARCH DESIGN

Simons (2012) defines a case study as an in-depth examination from multiple viewpoints to study a specific project, policy, institution, or program in a 'real-life' context. The principal objective is to gain an in-depth understanding of a specific issue to either produce knowledge or inform policy development, professional practice, or community action (Ibid). There are multiple viewpoints from which to analyze these organizations considering the objective of this research is to analyze how various coffee cooperatives in Honduras have been operating in response to the very time-appropriate COVID-19 pandemic and with the government's policy interventions. This is also representative of Simons' (2012) 'real-life' context. Furthermore, the research identifies ways cooperatives are deciding on their responses to contribute to their overall resilience, which aptly addresses the second part of the definition as the knowledge can be used to inform future community action and professional practice.

4.2 DATA COLLECTION

Data collection drew on two principal sources: semi-structured interviews, with cooperatives, producer organizations, and their members; and texts such as government and policy papers, health and medical documents, and academic literature. While a strength of the case study design is the application of using multiple sources and types of data, in this situation, it is also necessary, as government policy records, health statics, and cooperative's organizational documents also must be assessed and triangulated to analyze the cooperatives' responses (Mills et al., 2012). Due to travel restrictions during the research phase of this thesis, all interviews were conducted remotely.

4.2.1 SEMI-STRUCTURED INTERVIEWS



The semi-structured interview method was selected as the research ideas in this subject are vast, and there is an added emphasis on the participants' perceptions and learning through detailed answers (Bryman, 2016). Additionally, specific themes were covered as outlined in the research questions, so the semi-structured design was more suitable than an unstructured interview. Flexibility was also desired, so interviewees could voice their insights on various areas considering what they deemed important (Ibid).

The interview questions and subsequent guide are primarily open-ended questions, which reflected the themes included in the research objective and questions. The general interview guide, which was modified depending on the interview subjects, can be found in Appendix 1. All interviews were conducted in Spanish, and all interviews were conducted remotely using video chat applications and recorded with the participants' permission.

For this research, ten interviews were conducted with the management of cooperatives, producer organizations, a cooperative member, and a private *beneficio*. Producer organizations were determined to be suitable to include for this case study as they still upheld many of the same cooperative principles, prioritizing the economic and social well-being of their members, upholding the democratic processes for organizational governance, education for their member and the community, and cooperation among other like-minded groups. Furthermore, an ICA report on the legal framework of Honduran cooperative legislation concluded that while there are no legal barriers to creating cooperatives, the required training process known as “*Seminario de Cooperativismo Básico*” Law is burdensome, making it difficult for cooperative in training to cover the costs. As a result, some organizations may prefer to establish themselves in other social sectors of the economy, where the requirements are not so extensive (Guzman, 2020).

To differentiate between the various classifications of interview participants, they are coded based on the type of organization they belong to. The coding scheme is outlined in Appendix 2.

4.2.2 SAMPLING AND SAMPLE SIZE

Purposeful sampling was the initial method used during the data collection process. Purposeful sampling was deemed suitable as its objective is to select information-rich cases that offer a thorough insight into the research questions in question (Emmel, 2014). Due to the travel restrictions in response to



COVID-19, it was not possible to travel to Honduras, where ideally, a researcher could observe cooperatives and their members and gain greater insight into their operations and communities. Therefore, it was decided in the early stages of the research process that cooperatives with active websites and social media accounts would be selected for the preliminary research. Once initial contact had been made with the cooperatives and key informants were identified and interviewed, snowballing sampling was used to collect different perspectives with other organizations and with the general membership community. Furthermore, snowball sampling is an optimal choice when examining a network of individuals, as in this case (Bryman, 2016).

The resulting sample size for the research was ten interviews. Considering the cooperatives and producer organizations in focus were restricted to those dedicated to coffee production in Honduras and additionally limited by remote study to those with a strong social media presence, there was a narrower scope for the research (Bryman, 2016). As the interviews were from a generally small number of governing members of each cooperative and many of the adaptations were further required by law, and as the research questions were focused and direct, a smaller sample was suitable to address both the theoretical and pragmatic scope of the questions (Ibid). The sample size was further bound by the inability to travel to Honduras, as well as the challenges of contacting organizations online without prior acquaintanceship.

4.2.3 USE OF A RESEARCH ASSISTANT

During the course of the research, it was decided to use a research assistant to aid in contacting possible interview participants and assist with translations, if necessary, during the interviews. Any impact of the assistant in terms of reliability is minimal as translations did not rely solely on the assistant. The employment of the research assistant was determined based on previous working experience with the assistant.

4.2.4 TEXTS AND DOCUMENTS

Due to the nature of the research topic, it was necessary to include relevant information from official government policies and documents, news articles, other organizational materials, and reports from national and international coffee associations. Official statistics concerning COVID-19 were also used. This was necessary for the triangulation needed to analyze cooperatives' operations and choices within specific timeframes of government regulations. It was also necessary for 'real-life' context, which is essential in the case-study design (Simons, 2012).



4.3 ETHICAL CONSIDERATIONS

Due to the primary use of interviews for this research, ethical rules and guidelines specified by the United Nations Educational, Scientific, and Cultural Organization's (UNESCO) Code of Conduct and Ethical Guidelines for Social Science were followed (de Guchteneire, n.d). All interviewees were informed of the nature of the project beforehand, and they gave verbal consent to be interviewed and recorded (Ibid). Although the interviewer did not intend to ask about sensitive personal data, as classified by Datainspektionen (2020), it was possible that answers may mention ethnic origin, political opinions, or health-related matters. Regardless of whether this type of information was revealed, all participants were also able to choose to remain anonymous if they wished and were able to change their decision to be anonymous any time before the publication of this paper. As some of the participants requested to stay anonymous, all interviews were listed as such.

4.4 LIMITATIONS AND DELIMITATIONS

A significant limitation to this study was the inability to travel to Honduras and visit the cooperatives in person, as it would have provided a more thorough picture of their current situation, their responses, and community perceptions of COVID-19 and the government's responses.

Another limitation was the difficulty in finding smaller organizations within the country, as the ten interviewed had a dominance in the online area. The cooperatives' responses and actions may have been influenced by their size and standing, whereas emerging cooperatives may have had different approaches and reasons for such reactions. Furthermore, during the time of the interviews, many organizations had restricted access to their office space due to lockdowns or extreme weather. During November 2020, two grave hurricanes battered the country within two weeks of each other, resulting in issues within the electrical and physical infrastructure, as well as a prioritization of the organizations to prepare and rebuild for the 20/21 harvest, which also began in November (Perez, 2020).

It would have also been beneficial to include more interviews from cooperative members, to provide a more well-rounded discussion of the cooperatives impact on their members during this time and have a triangulation of cooperative activities. Originally, it was considered to have more member interviews in the sample, however as interviewing began, it became evident this would not be probable. Many cooperatives stated that their members often



have limited wireless connectivity due to the rural infrastructure, removing the possibility of remote interviews. There were also time-sensitive priorities that the members would have had to reorganize to be interviewed. These difficulties were also mentioned by cooperative employees when asked about the potential of interviewing their members. The one-member interview in this sample arose from the cooperative employee offering to provide a member 's contact information to interview. Research targeting cooperative members' perceptions would be very interesting for future studies.

An additional limitation was the difficulty in finding complete policy announcements regarding stay-at-home orders. Although the government has a website dedicated solely to COVID-19 cases and related government announcements, it was found that there were gaps within the time frames and where new policy updates were not included on the website. Also, departments and municipalities released their own regulations, which at times were inconsistent with the national government's policies. Considering that the cooperative and producer organizations are located in various departments and municipalities within the country, it was not possible to analyze all of the related documents due to the sheer volume, and the time it would take to locate and organize them.

Therefore, this research delimits itself to discussing only the national policy announcements regarding COVID-19 as listed on the official Covid-19 website, covid19hondurs.org (Despacho de Comunicacions y Estrategia Presidencial, 2020) and further delimits itself to examining COVID-19 policies primarily related to stay-at-home orders and biosecurity regulations. It does not include fiscal or monetary policies enacted due to COVID-19 and only includes reference to those if the research participants cited them.

This research delimits itself to focusing on the cooperatives and producer organizations with the primary objectives of serving coffee-producing members. This does not necessarily indicate that coffee is the sole product of these organizations; however, it is the primary one. The decision to delimit the research to coffee cooperatives and producer organizations was based on the unique context in which they and their members operate within a global commodity chain, which influences their ability to operate as resilient organizations.



5. FINDINGS

The Vulnerability Context serves as a framework for the external environment and conditions in which cooperatives and producer organizations have been operating in. It is composed of trends, shocks, and stresses, and additionally, includes the various impacts of these changes to the cooperatives and producer organizations, as well as adaptations during this time period.

5.1 TRENDS

Before COVID-19 global coffee prices had already been volatile for a number of years (Hernandez et al., 2020). Coffee is traded on global markets as a commodity, where the price of Arabica coffee is referred to as the C price. On the International Exchange (ICE) all coffee is treated as one raw material, regardless of origin or quality (Boydell, 2018). The C Price is often determined outside of real market conditions, as speculated future contracts are often applied and are based on predicted prices of the delivery date. Therefore, the C price does not necessarily reflect the cost of production but still has a very real impact on coffee producers (Ibid). It still influences the price producers receive, and as coffee producers generally have very small profit margins, volatile C prices can easily render farmers at a loss (Smith and Loker, 2012). There is more security if a coffee producer is operating with a cooperative or with certifications such as Fair Trade, where there is price floor or trading their coffee with a fixed price (Ibid). However, cooperatives still face uncertainty in regard to coffee prices. One organization said *“The face (image) of the zone where we live in just coffee. We're all coffee, we're all coffee producers. If the future of coffee is low, the area will be even more affected. The producers are going to be more affected ... and we are asking God not to have many problems [with] to market the coffee, as [we] collect them, because as we tell him from now on ... we are going to have more ... problems”* (C-1). Multiple organizations discussed the trouble with low coffee prices and the hardship it had produced in recent years (C-1, C-2, C-3, C-5C-6, PO-1, M-1, SA-1).



Figure 3. Ten years of international coffee prices, price is USD per pound. Grey shading indicates recession. Source: <https://www.macrotrends.net/2535/coffee-prices-historical-chart-data> (Accessed on Oct. 25, 2020).

For the past ten years, there has been a downward trend in global coffee prices, as illustrated in Figure 3. Since 2016, it has declined 30% below the average of the last ten years (ICO, 2020). In recent year, C-3 emphasized on how their cooperative was promoting diversification because of this trend and price volatility. Diversification into honey and vegetable were common as they also had a more stable local market, whereas the local coffee market was not sufficient for the supply (C-2, C-3, C-4, PO-2). This sentiment was also shared by PO-2, C-4, C-5 and M-1. M-1 claimed that as coffee prices had been very low, they were not always able to cover their production costs. M-1 is a third-generation coffee producer, who had always been a member of a cooperative. In previous years, they could often compensate a bad year with the following season, however with the past three years of low prices, this was no longer the case (M-1).

The international response to COVID-19 was also affecting cooperatives through the demand side of the value chain. Out-of-home consumption has decreased significantly, especially in the spring when countries like Italy and France, which have a significant café culture went into strict lockdowns (ICO, 2020). PO-2 exported a significant volume to shops in Europe and the United



States, which focused on specialty coffee. As these shops were not able to open, there was less demand. C-5 was also worried that the regulations of importing countries would affect their ability to sell, but fortunately this had not been an issue for their buyers.

In regard to coffee demand, the International Coffee Organization (ICO) predicted that reduced household incomes may translate in lower demand in coffee volume and it is likely that price-sensitive consumers will substitute higher-value coffee to lower-value coffee blends. (ICO, 2020). PO-1 reported that some of their producers had sold their coffee at lower prices than they would have previously, due to decreased demand in specialty coffee, and no one was willing to pay the standard normal prices that specialty coffee would earn. The ICO also expected there would be a great effect through by the downturn in the global economy (ICO, 2020). Linear regression analysis conducted by the ICO on coffee consumption growth of the twenty most important coffee-consuming countries, representing 71% of the global demand, and GDP growth from an average sample for the years 1990 – 2018, found that a one percent decrease in GDP growth is correlated with 0.95% lower growth in coffee consumption (ICO, 2020). Based on the 2018 global demand for coffee, this correlates to a reduction of growth in global coffee demand by 1.6 million 60kg bags (Ibid). It is probable this effect will be more evident after the 20/21 harvest and also affect coffee prices as there could be significant surplus.

5.2 SHOCKS

The main shock which is analyzed is the disease coronavirus-19 and the NPI measures the Honduran government implemented to contain and control the disease. This includes the *toque de queda absoluto* which translates to curfew, and *bioseguridad*, which means biosecurity, and in this case refers to the biosecurity and NPI measures.

5.2.1 COVID-19

As of January 3rd, 2021, there have been 122, 974 confirmed COVID -19 cases and 3, 160 deaths (Despacho de Comunicaciones & Estrategia Presidencial, 2020). As the government primarily issued decrees based on the number of cases within departments, this is also how the information will be presented within the report. The spread of the disease has been most prominent in major cities. The department Francisco Morazán, where the capital Tegucigalpa is located, has recorded 23.6% of national cases and Cortes, which is home to



the country’s main port and a large portion of the industrial maquila operations, currently reports 29.5% of cases (Jansen et al, 2006: Despacho de Comunicaciones & Estrategia Presidencial, 2020).

The department Copan, where four of the organizations are located, reports having 2.6% of national cases or just over 3,100 confirmed cases, while Lempira, home to one of the organizations, has 1.1% or about 1,270 cases. Table 1 further quantifies the number of reported cases in the departments where the organizations are located in.

Interview codes	Department Located	Number of reported cases	Percentage of national cases
C-5	Choluteca	2,938	2.4%
C-3	Comayagua	3,692	3.0%
C-1, C-4, PO-2, SA - 1	Copan	3,136	2.6%
C-2	Lempira	1,412	1.1%
C-6	La Paz	2,964	2.4%
PO-1	Ocotepeque	1,382	1.1%

Table 1. Reported COVID cases as of Jan. 3, 2021. Information from <https://covid19honduras.org>

As the data displays, cases were not as prevalent in the rural areas within the country. However, many of the cooperatives still reported that either employees or members had become ill with COVID-19 (PO-1, PO-2, C-2, C-3, C-4, C-5). In C-3, the interviewee had themselves become sick, along with 17 other employees and 10 producers, one of which was fatal. They had taken serious measures to determine if an employee was able to return to the workplace, requiring them to quarantine for 14 days from developing symptoms, present a negative polymerase chain reaction (PCR) test and take a treatment locally known as MAIZ (COHORSIL, 2020). C-3 had been required to be quarantined for three weeks in total. C-4 also reported that 12 employees had been sick and required them to provide documents from the Ministry of Health, their doctors and a negative PCR test before they could return to work. C-1 and C-5 expressed significant concern over how the harvest season would impact the spread, both suspecting it would be worse, while PO-1 stated that they believed the ruralness of the area would help



prevent the spread. SA-1 also spoke about the issue of people not believing in COVID-19, which prevented them from practicing biosecurity measures, while C-4 explained that since the community was so rural, the local mentality was that “*the virus hadn’t yet arrived*”.

5.2.1.1 HEALTH CARE ENVIRONMENT

A significant trend among the interviewees was concern over the lack of health care facilities in their communities and how that could impact a potential outbreak (PO-2, C-3, C-4, M-1). Not only is the lack of facilities a problem, often the ones that are available do not have the necessary equipment, personal protective equipment (PPE), or staff needed (C-4, C-5). The Honduran healthcare system is a dual system with private and public options, but there are still significant gaps in terms of inclusion and access, and the systems require significant investments in regard to equipment and professional coverage (Carmenate-Milián et al., 2017). In 2017, it was reported that in the department of Lempira, there were only two doctors per 10,000 inhabitants. None of the departments in the country had the minimum requirement of 25 doctors per 10,000 residents as prescribed by the regional human resource target; and according to the World Bank, in 2014, there were only 0.7 hospital beds per 1,000 people and only 100 ventilators in the country before the pandemic (Carmenate-Milián et al., 2017; World Bank Group, 2020).

With the emergence of the COVID-19 pandemic, the government implemented an emergency aid package of approximately \$454,000 to boost the health system and the country additionally received \$119 million in credit from the World Bank (Silva, 2020; The World Bank, 2020: Appendix 4). These funds were expected to purchase various types of PPE, masks, hand sanitizer, ventilation machines and mobile hospitals however, there have been a series of corruption scandals regarding the use of funds since the end of March (Silva, 2020; Garrison, 2020). The mobile hospitals have yet to arrive, and were purchased through a little know intermediary, without considering other contracts (Garrison, 2020). Additionally, some of the materials purchased from some suppliers were vastly overpriced, with records of the government organizations paying roughly \$0.50 per disposable mask, when the maximum price for these among pharmaceutical suppliers before the pandemic was \$0.10 per mask (Silva, 2020). It should also be remembered that a price freeze was placed on such items (Appendix 4). Many of the cooperatives voiced this as a source of discontentment within their members in regard to the social support they had received during this time (PO-2, C-3,



C-4, M-1, C-5), with one saying, “*the government had abandoned them (the people)*” (PO-2).

5.2.1.2 SUPPORT TO MEMBERS AND COMMUNITIES

To support their own members and communities, a number of the organizations had established their own medical care benefits prior to COVID-19 (C-2, C-4, C-5). They offer health insurance to their employees and members, which can cover eight to ten free consultations a year. In one cooperative’s community, the only hospital in the area is completely funded through donations, civil society and the cooperative’s contribution, which they covered through funds from Fairtrade (C-2).

During the pandemic, all the organizations were concerned with the health and safety of their members, as evident through their actions, and for many this was their biggest priority (PO-2, C-1, C-3, C-4). Almost all interviewees were providing biosecurity supplies to their members, which were given to producers in the form of supply bags, that included masks, hand sanitizer, basic medicine, disinfectant, as well as food staples such as rice and beans (C-1, C-2, C-3, C-4, C-5, C-6, PO-2, M-1). There are records of these being delivered since May and C-3, C-4, and C-5 said they would have additional supplies including extra hand gel, masks, and rapid tests to give to the members as the harvest began. In one cooperative, the creation of an economic fund primarily for medical assistance and medicine was the second action they took after learning about the seriousness of COVID, while the first was establishing their own protocols (C-3).

In addition to supporting their own members, many of the cooperatives created funds or made donations to support their local communities, contributing biosecurity supplies, rapid testing kits, and also provided fumigation equipment (C-3, C-4, C-5). These were given to the local authorities (C-3, C-4, C-5) and the police (C-4). The purchase of these materials was usually financed by the certification organizations, broader producer associations and development groups. Other cooperatives also aided their local health institutions by being part of sponsoring teams, which were responsible for hiring additional hospital doctors and staff (C-3, C-4, C-5). One cooperative gave more financial offers to their members, by allowing zero interest on fertilizer for two years and also another changed their fertilizer manufacturing to use leftover coffee bean husks produce cheaper fertilizers for their producers (M-1).



A vast majority of the cooperatives reported an increase in other coffee producers wanting to join the organizations after seeing the support they were providing to their members (C-1, C-2, C-3, C-4, C-6, PO-2). Only one cooperative said this was not the case, but then stated that 90-95% of the coffee producers in their region were already part of different cooperatives so there wasn't a significant pool of new applicant (C-5). One cooperative member was interviewed during the research and he expressed how supported he felt by being in a cooperative, especially during this time saying, *"I really like being a cooperative member, I feel satisfied and proud to belong to my cooperative... together we are a business, separately we can't [be as successful]"* (M-1). He further elaborated on how he valued being part of an organization that also mirrored his own values on the importance of community development, education, self-sufficiency and taking pride in the work you are doing. Cooperatives also reported that there had been an increase of member-member support, unprompted by the organizations themselves (C-1, M-1).

5.2.2 EL TOQUE DE QUEDA

The Honduran response to COVID-19 officially commenced on February 10, 2020, when the government declared a sanitary emergency in response to COVID-19 and dengue fever with the first confirmed infection on February 18th. An information campaign on NPIs started March 4th, followed by a travel ban for air travel from high-risk countries. On March 13th, schools were closed for 14 days, as well as gatherings of over 50 people prohibited and the travel ban was extended to include passengers traveling by sea. The government also began regulating the supply and prices of essential goods (Ham, 2020: Please See Appendix 4).

On March 15th, the government announced a suspension on all work in both the public and private sector. There were a number of exceptions related to this order, including public employees working in the fields of public health, security, emergency services and in ports and airports. Additionally, workers employed in hospitals, medical centers, pharmacies, and other essential sectors were excluded. The borders were also closed, public transportation services suspended, and all events and religious celebrations cancelled (See Appendix 4) The same day the government implemented a *toque de queda absoluto* for the Distrito Central, and the cities of La Ceiba and Choluteca, locations which all had confirmed COVID-19 cases. (Appendix 4). The *toque de queda absoluto* prohibits the free circulation of the civil population, and in this case establishes times in which people were allowed to leave their homes. On



March 26th, the *Sistema Nacional de Gestion de Riesgos* (SINAGER) introduced a policy for when people may leave their home, based off of the last digit of their identity card, passport or resident card. People were authorized to leave their homes for necessities from 9:00am to 3:00pm. People who are more vulnerable to COVID-19, including the elderly, and pregnant women are authorized to leave their homes from 7:00am – 9:00am on the days designated by their identity cards (See Appendix 4). On March 29th, this was extended to a national quarantine, enforced by the National Police and the Armed Forces, who were granted authorization to arrest those who did not comply with regulations stated (Ham, 2020; Appendix 4) Throughout the summer and autumn months, the stay-at-home orders were extended, depending on the number of cases within the municipalities. A more detailed timeline of the national policies, stay-at-home orders, and other important updates can be found in Appendix 4.

Considering that the coffee harvest occurs from November to April in Honduras, much of the harvest 2019/20 was already completed by the time the national government announced lockdown restrictions in mid-March (Gomez, 2020). Many of the interviewees mentioned this (C-1, C-2, C-3, C-4, SA-1) as did the cooperative member who was interviewed (M-1). While the first stay-at-home order in the country began March 15th, 2020, it was not until March 29th that SINGAR released a schedule for when people were authorized to leave their home and within the exceptions list of which businesses were allowed to still operate at this time, there is no mention of privately-owned farms (Appendix 4).

Industrial agricultural business, workers in agricultural harvesting and agro-chemical businesses were included in the exemption's category of the March 15th announcement and cooperative personnel were required to get authorization to travel to and from work (PO-2, C- 3, C-4: Appendix 4). However, C-4 reported that they were still required to close. M-1 also addressed the initial lockdown as a significant problem, due to the resulting inability for producers to work on their farms, pointing out that in "*the case of animals, of the plants, in reality they don't have holidays; they need to eat, they need assistance*". He was required to obtain a special sticker from the cooperative so he would have authorization to travel to his *finca* (farm) (M-1). Due to the standards of quality and requirements of different certification organizations and additionally that cooperatives require, it is necessary for producers to sustain a high level of upkeep within their coffee producing



sectors. This includes inputs such as organic fertilizer and ensuring that the coffee plants are healthy and disease-free which is necessary to sustain high quality coffee production (Hartwich et al., 2010). Without proper maintenance, the quality of the coffee is jeopardized, also lowering the prices that cooperatives may receive when selling their coffee, risking their certifications, and potential business (C-1). It was perceived as very important to get the travel and work authorization from the necessary local offices and SENASA completed quickly (PO-2) while C-4 said inconsistent regulations from the national and local governments, as well as different guidelines being recommended from various governmental organizations made following the policies very difficult. Not following the regulations could result in fines or jail, making it crucial for everyone within the organization to properly understand and follow the procedures (C-4). For other organizations, production had been halted completely but employers were still required to pay salaries, although they were required by law to be closed (IWCA, 2020).

One interviewee criticized “*decisions of fear*” which had an impactful role in some of the organizations and they believed fear to be a dominate factor in the decisions made by people and the authorities (C-3). One organization described an instance where, despite their legal standing to operate during this time, the local municipal was still very alarmed. The building is located very close to others, and people wanted them to close, so they put chains on the building preventing any employees from entering. After some discussions, both sides reached an agreement, and they were allowed to continue their work (PO-1). This was not an isolated event within the country, with the government having to issue announcements banning the barricades of authorized businesses (See Appendix 4). Another institution claimed the employees’ fear of leaving their homes resulted in them closing for one month, despite having the necessary permits to operate (C-6). This was an additional financial strain on the organization as they were still required to pay their employees during this time (C-6).

5.2.2.1 TRANSPORTATION

Transportation and mobilization were severely disrupted due to the stay-at-home orders, and according to almost all interviewees, had negative repercussions for their organizations (C-1, C-2, C-3, C-4, PO-1, PO-2, M-1). C-1 stated that they were unable to meet their schedules because restricted movement meant employees were arriving to work later and had to leave earlier because of the curfew. This resulted in the organization hiring an



additional employee so they could meet their deadlines. A report from the International Women's Coffee Association (IWCA), also corroborated this, and included that in some cases, reduced numbers of employees in the offices required others to work longer for less pay (2020). PO-2 indicated that transferring the coffee from the various farms to the necessary locations for processing and later exporting was one of the biggest impacts they had experienced thus far. There were police stops to check identification cards which slowed mobilization (PO-2) and drives were required to have prior authorization from the police (C-3: Appendix 4). C-1 also mentioned this, emphasizing that lack of timely transportation and therefore, processing of the coffee can damage its quality, once again affecting the price.

Another challenge SA-1 included, was concern for producers when they needed to be paid. They must travel to cities and subsequently, more crowded areas to receive their cash payment. For many producers this requires using public transportation, which had been restricted in number of possible people on board by the national regulations (See Appendix 4). Despite limiting the number of people allowed to on the buses and the times the services were available, the reverse effect happened making them quite crowded, which increases people's possibilities of being infected. The cooperative member interviewed also spoke about how the frequency of going to the banks had increased due to the regulations (M-1). Previously, they went to the bank every 15 days based on their payment schedule, but as they were only permitted to leave their homes on specific days, they had to go every eight days to ensure they were able to receive payment and also pay their own expenses, to reduce the risks of possible late fees or other complications (M-1). It is additionally not possible for producers to handle their finances through electronic systems as they don't have the sufficient infrastructure to do so (SA-1).

5.2.2.2 EXPORTING AND IMPORTING

While the government prioritized keeping ports and exporting offices open, several organizations reported encountering obstacles and delays concerning the export of their product (C-1, C-2, C-3, C-5, C-6, PO-1: Appendix 4). Shipping procedures were also delayed due to a decrease in workers and working hours in the offices, limited access to necessary governmental offices, and curfews (C-1, C-5: IWCA, 2020). For PO-1, this increased their cost to export and honor their contracts. C-4 was required to renegotiate some of their contracts because of delays but reported that the buyers were understanding of the situation. Shipping postponements likewise resulted in delayed payments



while salaries, bank payments and interest dues remained to be paid (IWCA, 2020). C-2 also included this as an issue, stating that their exports were delayed, resulting in delayed payments which further limited the cooperative's financial ability to support their producers. They also had to extend loan payments to the banks because of income delays (C-2). Other organizations reported that they did not have any significant problems regarding exporting their product (C-5, C-6), however one did mention there were some delays on the receiving side due to policies in the importing countries (C-5).

One cooperative indicated another concern receiving agricultural inputs from other countries, as they were not in sufficient quantity, nor received in a timely manner (C-2). It is common for cooperatives and producer organizations produce their own fertilizer, which they sell to their producers to ensure the quality of the coffee is maintained; and they may also buy large quantities for manufactures and serve as a distributor to their members, offering lower prices than if the producers were to purchase it themselves (C-1, C-3, C-5, M-1, SA-1). A number of the cooperatives offer this service; however, C-2 was required to lay off staff because they did not have the inputs and therefore there wasn't sufficient work for them to do.

5.2.2.3 MARKETING AND SALES

The suspension of travel also affected the ability of the coffee organizations to market their product. PO-2 reported that they had planned to go to Europe in June to attend various coffee fairs, but due to the restrictions, they were unable to attend. Many of the promotional fairs and tastings had been cancelled or moved to online platforms, and PO-2 lamented the loss of potential clients. C-4 stated they were taking part in virtual fairs and C-2 explained that online platforms were becoming very fashionable, where they create their own profile to describe their products and attract new customers. Others claimed it was more difficult now to sell their coffee (PO-1, C-2, C-3). C-3 also mentioned that some of their buyers usually visit their cooperative during the summer months, but these trips had also been cancelled. However, one cooperative had sold more coffee this year than previous years, in part to an increase in local demand (C-5). This particular cooperative also has their own café and roasting operation in their town and reported increased sales there and larger orders from the municipal government, which had distributed it locally (C-5).



5.2.2.4 FINANCIAL POLICIES

In response to the pandemic, the government offered tax breaks and the restructuring in fiscal payments to business to support the labor market (See Appendix 4). When asked about any financial support from the government to help cover these costs or additional support due to pandemic, there were mixed results. A majority of the organizations said they had not received any financial aid or support from the government (C-1, C-2, C-3, C-4, C-5, C-6, PO-2, SA-1), with only PO-1 stating they received some financial support from the national government. While the government did extend the period in which business had to pay their taxes, C-2 still was anxious about this, as the time extension was not significant enough to change their financial situation (See Appendix 4). Two organizations also explained that, although the government had provided loan support for small producers, the process of getting the necessary documents was so time-consuming and required going to many different offices with restricted hours, that the results would be not worth the effort. The producers could not sacrifice the time away from their corps and the money would not arrive in a timeframe where it would be most needed (C-2, SA-1).

5.2.3 BIOSEGURIDAD

On March 14th, the office of the Secretary of Work and Social Security released a report titled *Protocolo de Seguridad e Higiene para Centros de Trabajo a Nivel Nacional en Prevencion de COVID-19* (Security and Health Protocol for Work centers at the National Level for Prevention of COVID-19) (Please see Appendix 4). It outlined the origins and symptoms of COVID-19, general considerations, preventative measures, use of PPE, disinfecting and hygiene practices the business were required to follow. Biosecurity measures are clearly outlined, requiring businesses to provide employees with information about COVID-19 and prevention; supply prevention and hygiene supplies in the work place, such as hand gel, antiseptic liquid soap, gloves, PPE and masks when appropriate (later policies made masks mandatory when outside the home); establish monitoring, control and follow-up mechanisms for workers who present symptom or test positive to COVID-19; and take priorities to maintain two meter distance from each other. The Secretary of Work and Social Security also inspects businesses randomly to ensure they were following the biosecurity protocols as do officials from the Ministry of Health (C-4: See Appendix 4).



While it is now mandated to follow the biosecurity protocols, at the beginning of the pandemic some cooperatives had different approaches to the measures when they were announced. PO-1 stated that they were some internal disagreements about how to proceed, as the surrounding area had not seen any infections and it would be costly to implement all the necessary measures. The appropriate measures were taken after an incident where the local community blocked the entrance, as described earlier, however the interviewee still expressed regret over the biosecurity processes (PO-1). C-3 conveyed a very different approach taken by their organization, where they released their own biosecurity protocol on March 16th, shortly after the legal announcements. They immediately stopped all face-to-face meetings, events, trainings and assemblies, readapted customer service areas, marked off spaces for social distancing and made it mandatory to wear masks within the cooperative's workspace. Only specific people were allowed to handle money and they must wear gloves when doing so (C-3, C-5). In one shared office, large floor-to-floor Plexiglas dividers had been installed so employees did not always have to wear their masks (C-5), and other cooperatives mentioned the use of Plexiglass dividers between customer service and payment areas (C-2, C-3). They also purchased equipment for taking temperatures, and containers for disinfecting clothes and footwear (C-3, C-4). C-3 and C-4 stated that transport vehicles returning from the countryside also had to be disinfected. Sanitation booths had been taken from the cooperative and installed at the road leading into the town for public use (C-4).

C-4 also explained how they were implementing the protocols in regard to the mobilization of coffee to the cooperative grounds where it is processed. Typically, a truck with two people would move throughout the area collecting the harvested coffee cherries, or producers would deliver their own harvest to the cooperative, which is also a social occasion. However, this year only one person is conducting the pick-up process, and they have been instructed to only interact with one person when collecting the coffee. For producers who are delivering their own crop, there are designated waiting lines for the cars, and producers must remain in the vehicles while the coffee is collected and weighed. Modification had to be made to make the weighing station visible to the cars which was very important to the cooperative so they could remain transparent. Additionally, only one person is allowed on to the compound, and if other producers or family members were present, they must wait outside (C-4).



5.2.3.1 FINANCIAL IMPLICATIONS OF BIOSECURITY

The financial burden of establishing and maintaining the ordered biosecurity measure has been felt by all of the organizations (C-1, C-2, C-3, C-4, C-5, C-6, PO-1, PO-2, SA-1). The provisions of masks, hand gel, gloves all must be provided by the businesses, as specified in the national regulations (See Appendix 4). One organization claimed that a box of 50 disposable masks cost approximately \$10 and their organization would use about one box a day (SA-1). They also spoke about how other cooperatives in the area had begun to make and sell their own reusable masks or produce their own hand gel to reduce these expenses (SA-1). A report for IWCA also confirmed this, although none of the establishments interviewed for this research were using this method (IWCA, 2020). C-1 stated they had to hire an additional employee to take temperatures and ensure people were following the protocols during the harvest period, and C-2 also mentioned more personnel was needed to ensure all the protocols were followed correctly.

5.2.3.2 SUPPORT FROM OTHER ORGANIZATIONS

Many of the organizations received aid from different certification organizations, and broader producer associations and development groups to support biosecurity measures and their producers. Fair Trade, or *Commercio Justo*, had provided funds for C-2, C-4, and PO-2, and their regional co-body, the Latin American and Caribbean Network of Fair-Trade Small Producers and Workers (CLAC) had donated to C-1 and C-5. Proyecto ComRural had also collaborated with C-4 and SA-1 and an organization called Jumelage St. Felix has been working with C-5, donating supplies and the first oxygen tanks to the area. It should be noted that the following responses may not include all partnerships that the different enterprises receive, these are just the ones that were mentioned during the interviews.

There have been mixed results about communication and support from the *Instituto Hondureño del Cafe* (IHCAFE), which is the principal coffee institution in the country and executes the national coffee policy. IHCAFE collects information about coffee prices and quantities, is engaged in research on coffee management and genetic research and licenses coffee exporters, (Loker and Smith, 2012). C-5 is the only organization to have received financial support from them and C-2 and C-3 have also had a lot of contact with them, while PO-1, PO-2 and C-1 and C-6 have received little communication from them. One cooperative stated that “*we cannot expect*



others to solve our problems” when asked about receiving support from other organizations (C-6).

C-3, which is one of the oldest cooperatives to be interviewed also said they have been engaging with many other smaller cooperatives to assist them with administrative and technical capacity. SA-1 and C-4 also regularly work with each other and have supported each other during this time. M-1 also included that their cooperative was in partnership with a financial cooperative which had provided them with improved loans and credit during this time.

5.2.3.3 MEETINGS AND TRAININGS

A significant role within cooperative and producer organizations is the education of both members and the local community and all subjects interviewed declared this part of their normal operations had been severely affected (C-1, C-2, C-3, C-4, C-5, C-6, PO-1, PO-2, SA-1, M-1). Many cooperatives hold training sessions and have meetings with their producers to ensure that the upkeep of the *fincas* (farm) are in accordance with their standards or help with technical assistance. They may also include workshops on other topics such as health, gender awareness, the environment and climate change (PO-2). These happen throughout the year but with the presence of COVID-19, the format and regularity of these meetings and training sessions had to adapt.

A few organizations continued with some in-person meetings following the necessary protocols (PO-2, C-1, C-3, C-4), while others had switched to online sessions (C-2, C-3, C-4, C-6). Conducting all meetings and instructions online is not a feasible option for many, as many areas where producers live have poor connectivity infrastructure (C-5, C-6). Some had cancelled their regular training (C-5, C-6) and had severely limited their on-sites visits to *fincas* (PO-1). Other organizations had begun workshops about the virus and how to follow the appropriate measures to keep safe (PO-2, C-1, C-3, C-4, M-1). These included topics such as the symptoms, preventative measures, social distance and how to assess the potential network of a virus spread (C-3, M-1). One organization additionally did extra training for the collectors who gather coffee from different *fincas* (PO-2), and another reported that they had received training from organizations such as IHCAFE, and CLAC on how to follow the biosecurity protocols and teach them to their members (C-5).

Restrictions on gatherings, have also affected the organizations; three of the associations interviewed were scheduled to have their general assembly



meetings in December, where they vote on new projects, business plans, and discuss the plans for the harvest (C-4, C-5, C-6). All had postponed their meetings, with one saying many of the cooperative member still wanted to conduct the meetings as they have in the past and were objecting to the measures (C-5). Theirs had been reschedule for January, however, the interviewee was skeptical about having the assembly at the time, as they were assuming there would be an increase in cases due to the harvest increasing human interactions (C-5).

5.2.3.4 CULTURAL CHALLENGES

A couple of the participants expanded on cultural aspects which are conflicting with the social distancing aspect of the biosecurity measures (C-1, C-4, C-5, C-6, M-1). It is customary to hug and kiss on the cheek when greeting people, and it is also common for extended families to be involved in the coffee business (C-4). According to one cooperative, *“The people, here are very attached, [and] very affectionate, ... here you will find many people who are from the same family, are cousins, are uncles, are grandparents. So that task, that mindset we're ... changing, trying to make them understand that they [need to] keep their distance, it's not because they don't love their family, it's for health [and] it's about taking care of you[selves]”* (C-4). Other interviewees discussed the emotional and mental impact of not being able to have physical contact with others (C-1, M-1) and for one organization, the inability to socialize freely had been one of their largest problems (C-6). Some cooperatives had acknowledged this cultural characteristic when designing their biosecurity measures and were taking extra precaution to ensure social distancing was being maintained, by marking areas where people could wait (C-3, C-4) and hiring extra personnel for the harvest (C-1).

5.3 STRESSES

The most significant stressor for the organizations interviewed was the upcoming 2020/21 harvest and how they would be able to adapt to the biosecurity protocols and keep their members and workers from getting sick (PO-1, PO-2, C-1, C-2, C-3, C-4, C-5, M-1, SA-1). One of the concerns in this matter was being able to get the extra workers and cutters needed for the harvest (PO-1, PO-2). Some stressed to the producers to find local labor, worried about the risk of infection from other countries (C-4, C-6), and suggested that producers follow the strategies of Columbia and Brazil, which had completed a harvest with COVID restrictions during the 2019/20 yield (C-



4). Some organizations were able to get the necessary labor from the community or within their region (C-1, C-2, C-3, C-4, M-1, PO-2, SA-1), while other also employed cutters from neighboring Guatemala (C-4, C-6, PO-1, SA-1) El Salvador (C-6, PO-1, SA-1) or Nicaragua (C-5). PO-1 expressed concerns about if the borders were still closed or had limited entry, as well as the necessity of potential workers needing to have negative PCR tests to enter into Honduras. Land borders began reopening on October 19th, however not all board crossing were opened until the end of October (Dyde, 2020).

C-5, which is located in the south of Honduras, often relies of employing about 40% of their seasonal workers from Nicaragua and raised concerns about health and safety for everyone involved in the harvest. Nicaragua has had a very different approach to handling the virus; with the government taken an extremely dismissive approach to the pandemic with only 4,748 reported cases and very inconsistent reporting (Pearson et al, 2020: WHO, 2020). As there have been no regulations, and even the discouragement of following standard NPI measures within Nicaragua, it is understandable why C-5 is concerned. While they said they will try to raise more local cutters, they have also decided to try to keep the Honduran workers and Nicaraguan workers separate at all times, including working in different areas of the *fincas*, having separate lodgings and eating areas and when receiving payment. They also spoke about worries of mistrust between the groups, as Hondurans are very aware of the Nicaraguan response and the Nicaraguans may suspect that the cases are simply much worse in Honduras as there are higher reported cases. The cooperative also formed a biosecurity committee, with representatives from the coffee sector and national government to establish and reinforce the biosecurity criteria for the harvest cultivation, which everyone will still be required to follow (C-5).

To some cooperatives, getting producers to prioritize the safety of themselves and their workers was one of the most significant challenges brought on by COVID-19 (C-3, C-4). The additional expenses of implementing biosecurity measures with the influx of seasonal workers are a significant burden (SA-1, C-1, C-4, C-5). Producers have the responsibility of providing all the necessary biosecurity products, like masks and hand gel, which can be quite costly as masks must be replaced everyday (SA-1, C-5). Additionally, producers typically provide lodging space for the temporary workers, which will require them to reorganize and expand the living quarters to accommodate social distancing (SA-1, C-4). *Fincas* will also have to provide a quarantine space, in



case workers become ill (C-4). In some cases, workers travel with their families and will move through several different communities throughout the harvest season. This has the potential to increase the risk of virus spread, making it crucial that biosecurity measures are followed (Ibid). Many of the communities also lack sufficient healthcare infrastructure, meaning the potential outbreak during the harvest season could be determinantal for the community (PO-2).

Due to the occupancy limitations in vehicles, transporting the temporary workers to the *fincas* will also be a problem. One organization explained that while previously they could transport 20 people in a truck, but that is now reduced to 10 (C-1). This means that they will have to do twice as many trips, which take about 40 minutes each way, meaning they will also have to pay more for gas. As it will also take more time to transport everyone, less work in a day will ultimately be completed (C-1). The general assembly approved the purchase of new vehicles to tackle this upcoming problem (C-1).

Cooperatives and producer organizations have been greatly affected by the COVID-19 pandemic throughout 2020. Coffee prices have been in declining trend for the last ten years and it is possible the demand for specialty coffee will decrease as the pandemic and global economic downturn continues. Caution about the disease and the potential impact on community healthcare systems is a common pressure. The initial *toque de queda* posed a barrier for some organizations, and the biosecurity measures have required drastic changes to their organizational structures and are a new financial expense, which some organizations have been supported in by other associations. The 20/21 harvest presents the most significant stress for many of the organizations, as the compliance of biosecurity measures will be tested and there is the potential for outbreaks.



6. ANALYSIS AND DISCUSSION

This chapter evaluates the findings, beginning by analyzing the Vulnerability Context with elements to understand resilience and then assessing the relative modifications with the Asset Pentagon. The section concludes by discussing how these circumstances have affected cooperatives' potential resilience.

6.1 VARIABLES TO UNDERSTANDING RESILIENCE

According to Hutter's (2011) research note on organizing social resilience in the context of natural disasters, two variables that influence resilience are whether the threat is perceived and what type of change occurs in the organizational context. The threat, to be understood as an occurrence that has impending negative and harmful consequences, does not indicate that time pressure is high to react in real-time to potentially risky events (Straw et al., 1981). Adaptations to the organizational context may be categorized as incremental or radical and refer to either small, continuous changes or the knowledge or experience an organization considers when adapting to a threat (Hutter, 2011). The following subsections address Research Question 1: *How have perceived threats arising from shocks and trends influenced the organizations' responses and changes to their organizational context?*

6.1.1 THREATS PRESENTED BY TRENDS

As coffee prices have been declining for a significant part of a decade, the issues surrounding the falling price has been apparent to all coffee producers prior to the pandemic. All cooperatives have responded to this by offering specialized or certified coffees that earn higher prices. As some certifications dictate that producers must be in a cooperative to earn their certifications or other cooperatives primarily served as a function to enrich the value of the coffee, which was being produced, this also would have little effect on the organizational behavior.

The need for diversification is also a perceived consideration, with almost all of the organizations interviewed requiring or promoting diversification practices prior to the pandemic. For the sole cooperative that had not done this before, they were making plans to improve diversification after reflection on this issue; and for them, it would necessitate an adaptation to their organizational structure. This requires a more pervasive organizational change as they will need to expand their business plan and activities. As the organization was still in the pre-planning phase of this, more information about their strategy was not available.



6.1.2 THREAT PRESENTED BY SHOCKS

The danger of illness and the risk of spread throughout the community was identified early on as a major concern for all the organizations. The fact that this was a perceived threat allowed some of them to quickly update their internal protocols and start communicating with their members about preventative measures. Others were less swift in establishing these protocols; however, it is plausible this had less to do with the extent of the threat and more with their organizational capacities in deciphering contradictory governmental regulations. It should also be mentioned that there have been other epidemics in the county's recent history, such as the dengue epidemic in 2019 and 2015, and outbreaks of chikungunya in 2014 (PAHO, n.d: (Zambrano et al., 2019.)), though these are mosquito-borne diseases; and therefore, require very different strategies to curtail their spread.

They also never experienced implementing the types of biosecurity measures or the mass public health communication that had occurred at the state level before this time. Applying the biosecurity protocols required a radical change in the organizational context, as it was a new experience for them and required a complex change to the organizational structure. Some cooperatives completely changed the layout of their working environment and all changed the norms and procedures for interacting with members and clients. Those who quickly assumed the new changes demonstrated a "capability to restore efficacy," meaning that through developing and adapting to the new norms and structures, they are more quickly able to return to efficient states (Sutcliffe and Vogus, 2003: 16).

The cost of applying these new biosecurity measures also represents an unperceived threat, as the continuation of the policies has led them to be a continued expense. Resistance to implementing the measures at the start of the pandemic due to these expenses is an example of how conservation of resources impacted threat response (Hutter, 2011). Both the implementation and expense of the biosecurity measures represented a radical change for the organizations. Additionally, the biosecurity protocols would have presented an unconceived challenge of countering the cultural norms. This issue could be determined as a perceived threat as the interviewees included strict education regarding keeping distances, as well as a few providing definitions in the education about specific terms such as social distancing and members of household, which if not clarified, would have been confusing in the local context.



In regard to the new types of information and training sessions that focused on COVID-19, while the information would have been new for the organizations, the act of teaching and spreading that knowledge would not be considered a new role for the organizations. Since they have experience with the role of educator and mentor, this new duty would have been an incremental change to their normal structure. Similarly, the maintenance of feelings of well-being among members, especially during times of crisis, is something that the older, more established cooperatives would have had a great deal of experience with. One of the older organizations has been around for 40 years, meaning they experienced Hurricane Mitch in 1998-9, Coffee Price Crisis in 1999- 2002, as well as more recent coffee rust epidemics in 2012 – 2014 (Bunn et al, 2018: Tucker, 2013). Emotional attunement and therefore, experience with emotional attunement helps to mobilize appropriate action during deteriorating situations and contributes to resilient organizations (Sutcliffe and Vogus, 2007). Furthermore, a long-accepted theory concerning group behavior is that external threats increase group cohesiveness and when a group is successful, say by overcoming these previous challenges, the group may sustain a high degree of cohesiveness (Straw et al., 1981).

6.1.3 THREATS PRESENTED BY STRESSORS

The looming stress for the cooperatives and producer organizations is the upcoming 20/21 harvest season and the ability to collect their primary product. While all cooperatives stated concern over the process that they would have to establish for the harvest to be carried out safely, which qualifies it as a perceived threat, the timeline of the interviews affected the analysis regarding organizational change.

Two of the interviews took place in July 2020, while the remaining occurred in October and November 2020, approaching the harvest season. The two organizations which were interviewed earlier expressed optimism that the situation would have improved considerably by the time the harvest arose, so major adaptations would not have been needed. When asked if they had plans on adaption for the harvest if necessary, they both reported they did not and hoped the situation would be better. For them the issues around temporary workers and collection of the coffee was not an unperceived threat, but there was no change in their planned response. Hutter would classify this as a rigid response to radical change, which would indicate that the organizations expect to have positive outcomes for the future while continuing current patterns of action (2011). However, it has been theorized that when under threat,



“decisionmakers reduce the complexity and variety of the information they seek and use to make decisions, consequently narrowing the range of possible behavioral responses” (Sutcliffe and Vogus, 2003: 94). It is possible that the organizations decided to wait until there was more information about the protocols and measures, they were expected to take before initiating responses. This is consistent with research that shows that individuals narrow their perceptions of environmental conditions in a threat response due to increasing stress (Sutcliffe and Vogus, 2003). As no follow-up interviews were collected, it was not possible to see if their responses and perceptions of threats changed as the situation continued. It is not possible to assess if the other organization had perceived this potential problem due to the time period in which they were interviewed.

When asked about concerns with the next exporting period, many felt that as this was a situation they had already experienced, they did not believe it would be a problem. As they had already made organizational changes to adapt to this challenge, any other adjustments necessary would be easy to handle, as they would be incremental in nature.

6.2 THE ASSET PENTAGON

The Asset Pentagon evolved from Scoones’ (1998) capital base from which people or other units of organization use to form their livelihoods. In addition to the four original assets: human, social, natural, and economic, this analysis also considers physical capital, added by the DFID (1999). The subsequent subchapters answer Research Question 2: *How do cooperatives’ sustained livelihood capitals influence their responses?*

6.2.1 HUMAN CAPITAL

Human capital embodies the skills, knowledge, health, and education of the organizations and their members (DFID, 1999). During this time period, all of them expressed concern of keeping their employees the members, and their communities healthy. However, there has been illness in at least four of the cooperatives’ member base and in one case, among the employees as well. A few organizations also reported producer deaths due to COVID-19. In this regard, illness or the threat of illness would decrease their human capital. However, the cooperatives also worked to improve the health care infrastructure in their communities, which served to increase human capital by providing financial support and equipment to keep their members safe.



As many of the normal training and education programs, the cooperatives supply and organize have been canceled, this would also decrease in human capital. Furthermore, the delay of some of the general assembly meetings, which dictate the governing members and future business plans of the cooperatives, would also be a deficiency of human capital, as the organizations do not have the ability to draw on member's knowledge and vice versa. While these limitations speak to the capabilities and quality of life of the cooperatives and their members, it is also an aspect that is out of their control, as there could be a variety of consequences for ignoring the governmental policies (Conway and Chambers, 1992). However, there has been a sustainable increase in education providing specifically by the cooperatives regarding disease and health, which should be considered as a positive supplement.

Additionally, the one cooperative member interviewed commented on the feelings of support and good-will felt by being in a cooperative during this time. While there has been a significant amount of stress felt by cooperatives and their producers, especially at the beginning of the pandemic, the feelings of security and confidence among members would also positively influence human capital, as they have drawn on intrinsic elements of 'well-being' (Scoones, 1998). Relationships of trust, reciprocity, and exchanges can reduce transaction costs and increase informal safety nets (UNDP, 2017). This was evident in the increase of member-member collaboration.

The above implications are modes in which the cooperatives' human capital has been directly impacted, but there are also broader modifications which have indirectly affected their human capital (UNDP, 2017). Indirect influences have also come from the government's efforts to educate the entire population about COVID-19. Additionally, some of the participants said that what they have learned from the experience concerning health and safety precautions will be something they will continue to practice after the shock of this pandemic. This increases their human capital as they are more aware of disease spread and preventative measures, demonstrating the ability to learn and implement new knowledge (UNDP, 2017).

At their core, cooperatives are member-centered enterprises, which is recognized through the number of ways the cooperatives and producer organizations prioritized their members' assets at the sake of the organizations' capitals. The distribution of supplies to their members, donation of equipment to their communities, and prior investments to their local health



care systems demonstrate the trade-offs cooperatives were willing to make in order to preserve the capitals of their members.

By engaging in these instances of skillful trade-offs, cooperatives are enabling themselves to become resilient organizations. By investing in their members, cooperatives are increasing the chance of membership loyalty and commitment, which prior research has demonstrated enhances their resilience (Münker, 2012). Likewise, there are visible benefits to their membership even during an extensive crisis, which adds to their commitment to their organizations.

6.2.2 NATURAL CAPITAL

For one cooperative, a negative change to their provisions of natural capital occurred due to difficulties with importing agricultural inputs. However, while generally there were few changes to the stocks of natural capital due to COVID-19 and the Honduran policies, access to their capital represented a more considerable barrier. A handful of cooperatives were required to close their offices at the initial start of the pandemic and some reported difficulties in the certification process which lessened the value of their natural capital.

Transportation of the coffee and the challenges presented with that is another area where the value could be affected. With the upcoming harvest and concerns around the health of the temporary workers and producers, other transportation concerns are a significant threat to their natural capital. It is vital to ensure the wellbeing of the workers so producers and cooperatives can retrieve their capital in a timely manner. Many participants also explained that it was a priority to get the coffee through the first stage of processing as quickly as possible after it was picked, which is where delays with transportation or illness could pose a threat.

While many organizations stressed the importance of a timely harvest, the same emphasis was also present when discussing how important it was to maintain the NPI measures during the collection time. The value of the organizations' natural capital is dependent on the maintenance of their human capital, i.e., the health of their members and workers.

One cooperative mentioned the recycling of discarded coffee husks as a way to lessen costs for their producers, showing resource versatility. Many other organizations also spoke about supporting their producers with increasing their diversifying products, such as expanding their beekeeping for more honey or



planting more citrus among their coffee plants. This is another way in which they worked to enhance their natural capital through diversification on their existing land. While some of these diversification projects had been started prior to the COVID-19 pandemic, many said they had promoted their expansions during this time, recognizing the importance of also having a local market for products. Honey is a common product for coffee farmers to produce, and one cooperative commented on how recently the local demand for honey had greatly increased due to its natural health benefits. Diversification into other crops and products is important for coping with temporary hardships and also for adapting livelihood activities if a more sustained stress or trend occurs. Introducing additional hives widens producers' portfolios to become more resilient to shocks and stresses which also includes diversification with the objective of reaching more local markets. (Scoones, 1998). Though this was a common thread between many of the cooperatives, it was also mentioned that reaping benefits from such diversification strategies also requires significant time. Considering this, it is still a sensible decision to diversify so that a mix of activities will reduce the impact of different stresses or shocks, generating a more resilient system (Scoones, 1998).

6.2.3 SOCIAL CAPITAL

For the cooperatives and producer organizations in Honduras, social capital has been an extremely valuable resource, which many have drawn on to further support their members during the pandemic. Networks have a significant role in cooperative resilience, producing tangible and intangible results (Johnson et al., 2016).

As previously mentioned, the feeling of solidarity was reported by the member interviewed and it could be assumed that the supplies bags which cooperatives gave to their producers also contributed to this feeling as would the funding of medical care and medicine. Other financial backing through zero-interest-rate offers, and medical funds, would also contribute to this, and these horizontal relationships would have been strengthened (DFID, 1999). There is also the reported rise of membership inquests during this time, which is a clear example of the positive impact the cooperatives have had in their communities. As social capital includes increases in trust and confidence, it appears that cooperatives interviewed have demonstrated strength in this matter (UNDP, 2017). The growth of social capital between the members and their respective producer organizations has influenced them primarily regarding access, by



increasing their access to biosecurity goods and health and financial services during this health crisis (Ibid).

Vertical networks also increased in social capital, through contributions to the communities and from other organizations and businesses (DFID, 1999). Many of the cooperatives also provided support to other organizations and institutions within their community, providing medical supplies, fumigation chambers, and in one case, oxygen tanks to their towns and local hospitals. Some had also financially contributed to programs which resulted in the hiring of hospital staff. These decisions would ultimately improve the communities' human capital as health care access is improved and demonstrate how networks achieved tangible benefits.

Furthermore, donations to communities increase social capital through informal safety nets (UNDP, 2017). This occurred within C-5, which had helped the community and local government significantly through donations of medical supplies. The government also promoted the cooperative's coffee and bought it to distribute among the town. This demonstration of increased social capital also positively affected the cooperatives' financial capital.

Communication with organizations within the country varied between cooperatives, with some reporting a lot of contact with IHCAFE, while others had received very little. It appears that older cooperatives were more successful in utilizing that connection. Exchanges between cooperatives were also noted; again, often occurred between well-established associations, with one claiming that they had helped other with administrative capacity and the negotiating of the procedures that had to follow. As social capital often involves participation in formal institutions, it is logical that the organizations with more history working in such institutions would feel more capable of navigating with them (UNDP, 2017). Pre-existing relationships between members of different formal groups could further affect the availability and willingness of communication (DFID, 1999). This can also lower transaction costs for the cooperatives who were quickly able to manage the necessary protocols to get the authorization they needed to travel during the lockdowns.

Most cooperatives used funding from external organizations to finance their producer support since the pandemic began. Fairtrade was often mentioned as a financier, as was CLAC. Without having strong connections to these organizations, it is questionable if they would have been able to afford to provide the support they were able to. Often, the cooperatives that had strong



connections to these external groups were the more established of the ones interviewed. The ability for cooperatives to collaborate among each other and with other organizations increases their capability and adaptability to shocks and stress (Conway and Chambers, 1992).

6.2.4 FINANCIAL CAPITAL

The economic capital of the cooperatives and organizations had particular inflows and outflows throughout the pandemic. The fulfillment of biosecurity protocols was a significant burden for many of the cooperatives, and although many received financial support from external organizations to help cover these expenses, it is unlikely that these donations would contribute to their regular inflows of money. In order for inflows such as these to be considered a positive influence on financial capital, they must be reliable, which could not be determined during the interviews (UNDP, 2017).

Some cooperatives reported the cancellation of some of their contracts, which would have negatively affected their income flow, while only one claimed to have sold more coffee this year than previous years due to the support of local government initiatives. The most significant potential impact for the future of the cooperatives' regular inflows of money will occur throughout the 2020/21 coffee harvest, where it will be vital to collect, transport, and process the coffee in a timely manner. A failure to do so will affect the quality of the coffee and therefore, the price. Also, the international coffee price has been declining for the past decade, which has affected their financial capital over time.

To adapt to this trend, cooperatives grow specialized coffee, which has a higher price and also supports having good relationships with their buyers. Maintaining the growth and production high quality, specialized coffee requires a number of financial inputs on behalf of the cooperatives and their members. The tradeoff of the expenses, however, increases the value of their natural capital and helps them build social capital through stronger relationships with their members and their buyers.

Only one cooperative mentioned how they were using their institutional services to aid producers' financial situation by providing interest-free loans and opting for cheaper fertilizer for them to buy. Another mentioned how their previous investments would not realize any type of financial gain this year due to the pandemic, meaning another loss in financial capital. Cooperatives were attempting to diversify their producers' crops increasing their inflows, but as mentioned earlier, there were mixed reports on the success. Access to their



capital in financial entities also represented a problem for some producers due to lockdown restrictions.

A central role financial capital had in the pandemic context was decisions to forgo financial capital to increase other assets, particularly human and social capital. The adaptation of biosecurity measures is costly to maintain, but all cooperatives were willing to do so to help protect their staff and members.

6.2.5 PHYSICAL CAPITAL

The most dramatic changes to physical capital occurred through lockdown periods, which restricted or made it more challenging to access roads and secure timely transportation, as well as restrictions that affected the ability to export. The increased cost of transportation means that cooperatives operated at a competitive disadvantage to other actors in the market, as it limits their productive capacity (UNDP, 2017). Considering the different responses in regard to the process for transport authorization, this had a significant impact on the cooperatives that were not able to complete the process as quickly. This is evident in both delays within exporting their goods and receiving inputs from foreign countries. Lack of physical capital also can affect the capabilities and accessibility of other capitals: for one cooperative, delays in exporting required them to delay payments to the bank, and also affected their human capital in terms of the initial support they could provide their members (Ibid).

Existing physical capital barriers include poor quality of roads and limitations in infrastructure affecting affordable and accessible internet access. Issues with rising costs of electricity and internet and insufficient infrastructure to support wireless communications have prevented cooperatives from being able to do remote meetings and consultation with their members. This further affects the human capital for both groups as the infrastructure cannot support the services the cooperatives supply (UNDP, 2017). Another major limitation to physical capital is the inadequate health care system, which is apparent in many of the communities where the cooperative work. Without established health care systems, human capital is also negatively affected as is the cooperative financial capital, as they had to draw on their own resources to supplement the poor system.

6.3 DISCUSSION

While considered in the preceding sections, the subsequent discussion more concretely answers Research Question 3: *How is cooperative resilience*



shaped by the organization's sustainable livelihoods capitals during a major public health crisis?

Though it is not possible to measure resilience as a single component or within a single time frame, it is possible to explore how cooperatives invest in their resilience capabilities and what barriers exist to enhancing said capabilities. The COVID-19 pandemic has had a drastic impact on Honduras' coffee cooperatives and producer organizations in regard to the daily operations and has forced them to restructure their organizational structures to still benefit and serve their members. As many of these adaptations were required by law, it is understandable that many of the organizations reported similar impacts and followed similar methods of implementing these changes.

However, the ability to adapt to these regulations in time-efficient manners and continue to support their members was dependent of the organizations' assets and changes to those assets through the pandemic. Social and financial assets greatly influenced their operations, and a significant impact on the organizations' assets was collaboration and communication with other institutions and external organizations. It is theorized that more established cooperatives and organizations have a better understanding of institutions that they must operate in, making it easier for them to navigate a complex system to determine their actions in regard in COVID-19 and the government policies. They would also have more connections to external organizations which would contribute to more support.

When examining relationships with internal institutions, such as local authorities and administrative offices, it appears that the longer-established organizations had more success in navigating the procedures necessary to retain permission to be open during the initial lockdown. C-3, C-5, and PO-2 all claimed they were able to complete the process quickly, while C-1 said they had difficulties in completing the process. C-5 was also able to partner with their local government to purchase coffee from them and distribute it to the community to help counter the financial threat of the pandemic.

In regard to communication with IHCAFE, the cooperatives which had the most contact with them (C-2, C-3, and C-5) were also the more mature organizations, while the younger ones (C-1, PO-1, PO-2) had not received the same level of interaction. Additionally, financial support and product donations from international associations affected the ability of organizations to provide supplies to their members. Based on the responses of the interviews,



it appears that the longer-established cooperatives have more networks with such organizations, allowing them to receive more support.

Furthermore, the older organizations would have had more experience responding to crises than the younger ones. There have been a significant number of natural disasters and shocks related to coffee price and production, including: Hurricane Mitch in 1998 and the Coffee Price Crisis in 1999, and Coffee Leaf Rust Epidemic in 2012 – 2013, which the more mature organizations would have weathered as an association (Bunn et al., 2018). One cooperative formed due to the Coffee Price Crisis after seeing how other cooperatives had managed the challenges (C-6). For some organizations, this experience would have presented itself in different ways: by understanding the institutional processes to receive help from the government or other organizations, to how to communicate and assure their members about the current situation and instill comfort. These experiences would have added to their growth and competence, and additionally, the current members of the governing bodies of the organizations would have observed how previous leaders acted during times of crisis (Sutcliffe and Vogus, 2003). Accumulated knowledge, whether through experience itself or by observing others, would result in expanding the group's collective knowledge base where the diversity of the members can "kindle resilience by influencing a group's ability to sense, register and regulate complexity" (Sutcliffe and Vogus, 2003:12). This is not to say that the younger organizations do not possess the capability to draw on the group's collective knowledge, only to highlight how a larger pool of experience working within a group structure would heighten this knowledge and enhance collective capabilities.

Nonetheless, the importance of investing in their members and, therefore, their human capital was shared among all organizations. Social capital is also a valuable tool that many cooperatives utilized to strengthen their potential resilience. Furthermore, the networks they drew upon in the current pandemic, which many were based on previous relationships, will likely be important in the future. Financial resources also played a role in the allocation of support to members, with many organizations willing to trade off financial capital for the preservation of their human capital. This was also affected by the social capital, as supporting networks contributed to the financial aid in a variety of ways. Access to natural capital was a barrier, but by utilizing social networks, some organizations had an easier process in recovering from the challenge.



7. CONCLUSION AND RECOMMENDATIONS

7.1 CONCLUSION

The COVID-19 pandemic is an unprecedented event on a global scale, with the effects impacting numerous aspects of daily life. The study intended to explore cooperative resilience under COVID-19 by analyzing how coffee cooperatives in Honduras have been operating in response to the COVID-19 pandemic and the government's policy interventions. The aim was to evaluate the potential of their resilience by understanding the manners in which they have overcome these challenges.

This research used the lens of organizational resilience in partnership with the Sustainable Rural Livelihoods framework to identify the *Vulnerability Context* and the changes to their *Asset Pentagon*, to examine how their operations, and therefore resilience capacity, were impacted by the COVID-19 pandemic (DFID, 1999). Data from interviews with cooperatives, producer organizations, other actors in the Honduran coffee value chain, and secondary literature were additionally evaluated using two of Hutter's (2011) variables to understand social resilience in natural disasters. The application of *the Asset Pentagon* allowed for an in-depth analysis of the various ways the organizations were affected, in addition to the many sources they drew upon to determine their operational responses. Furthermore, by delving into the different perceptions of the various threats to organizations and categorizations of the changes to their organizational context, their responses, and the motives for their responses becomes clearer.

For coffee cooperatives and producer organizations in Honduras, they faced numerous challenges and adjustments to the organizations in order to comply with the government's policies and restrictions, as evident in Chapter 5. While the research questions were answered throughout Chapter 6, they are also revisited below.

How have perceived threats arising from shocks and trends influenced the organizations' responses and changes to their organizational context?

The different perceptions of potential threats also affected the cooperatives' responses to the COVID-19 pandemic. None of the organizations had any experience in this type of crisis, and although some had faced previous challenges as organizations, they did not recognize how prior trials may have produced similar knowledge needed to persevere in the current pandemic. All



were concerned about their local health care systems' capacity, which resulted in them acting to pacify this problem, and some of them had been working on this community development for a number of years. While the harvest always represents a seasonal stressor, the 20/21 harvest was of great concern, and all organizations were planning for it with the preservations of the health of their members and harvest workers at the forefront of their decisions.

How do cooperatives' sustained livelihood capitals influence their responses?

The capacity of their responses was influenced by their capital gains and losses, as demonstrated in Chapters 5 and 6. The costs of their responses were a significant burden, but the protection of member and community health was valued over the financial expenses. More established organizations had more robust social networks to draw resources from, which allowed them to have more comprehensive adaptations. The ability to draw from their natural capital was also a considerable concern, as the ability to access their products was affected by government regulations and institutional complexities. Physical capital in regard to infrastructure and health care systems represented another limitation the organizations recognized early in the pandemic and were attempting to improve. Although costly to develop, the need for local health care was something many of the cooperatives were proud to contribute towards.

How is cooperative resilience shaped by the organization's sustainable livelihoods capitals during a major public health crisis?

Their capability to be resilient organizations in this context was influenced by their assets, most notably by their human and social capital. Cooperatives that invest in their members and member well-being are thought to be considered more resilient (Johnson et al., 2016). This notion is evident in the cooperatives' decision to enhance their human capital at the expense of their financial assets and prioritize this above other organizational obligations. There was also significant trust within the older organizations, which had experienced other hardships as an organization. This would have increased the commitment and loyalty of the groups and towards the governing body, which again increases their human capital. The strength of some organizations' social capital also contributed to their ability to provide benefits to their members and receive and give other types of support. The older ones appeared to have more connections with important institutions and with their local government, allowing them to support each other and received important information in a



timely manner. In regard to relationships with local actors, this also helped them form stronger informal safety nets within the communities.

By examining the challenges to resilience among coffee cooperatives and producer organizations during this time, the research has contributed to the literature on the effects of COVID-19 on cooperative resilience, by analyzing their capitals. While this data is delimited to Honduran coffee cooperatives, it allows for some level of generalization in regard to how cooperatives can build their resilience capacity during this time. Understanding the trade-offs and decisions cooperatives make during crisis periods is useful to identify how organizations can be aided during other emergencies and how their resilience can be enhanced despite operating in challenging times. This study also contributes to identifying way in which cooperatives around the world can be useful towards addressing member and community needs during the pandemic.

7.2 RECOMMENDATIONS

To fully assess the impact of COVID-19 on coffee cooperatives additional analysis will need to be conducted after the harvest period and into the next exporting time, which may present a new set of challenges that the cooperatives have not yet faced. This will provide a broader picture of the impact of COVID-19 and the policies, in addition to how the global environment will have affected them. Another area of study would be to examine the younger cooperatives that were interviewed for this research in the next couple of years to see the outcomes of the pandemic and examine their how their resilient capacity was challenged in comparison to the more established organizations.



8. REFERENCE LIST

Álvarez, M. Á. (2018) *Analisis de la Cadena de Valor del Café en Honduras*. Tegucigalpa, Honduras: Heifer Internacional. Available at: <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwif4LbL2YzuAhW6kcMKHR9VD9EQFjADegQIBRAC&url=https%3A%2F%2Fwww.undp.org%2Fcontent%2Fdam%2Fhonduras%2Fdocs%2Fpublicaciones%2Fcadena%2520valor%2520cafe%25202018%2520HEIFER%2520IHCAFE%2520PNUD.pdf&usg=AOvVaw2V VvKBd6QwmhJcNnNXfj5K>.

Aragón Amonarriz, C., Iturrioz Landart, C. and Narvaiza Cantin, L. (2017) ‘Cooperatives’ proactive social responsibility in crisis time: How to behave?’, *REVESCO. Revista de Estudios Cooperativos*, 123, pp. 7–36. doi: <https://doi.org/10.5209/REVE.53252>.

Bacon, C. (2010) ‘A Spot of Coffee in Crisis: Nicaraguan Smallholder Cooperatives, Fair Trade Networks, and Gendered Empowerment’, *Latin American Perspectives*, 37(171), pp. 50–71. doi: [10.1177/0094582X09356958](https://doi.org/10.1177/0094582X09356958).

Balgah, R. (2019) ‘Factors Influencing Coffee Farmers’ Decisions to Join Cooperatives’, *Sustainable Agricultural Research*, 8(1). doi: [10.5539/sar.v8n1p42](https://doi.org/10.5539/sar.v8n1p42).

Béné, C. (2020) ‘Resilience of local food systems and links to food security - A review of some important concepts on the context of COVID-19 and other shocks’, *Food Security*, 12, pp. 805–822. doi: <https://doi.org/10.1007/s12571-020-01076-1>.

Beuchelt, T. and Zeller, M. (2012) ‘The role of cooperative business models for the success of smallholder coffee certification in Nicaragua: A comparison of conventional, organic, and Organic-Fairtrade certified cooperatives’, *Renewable Agriculture and Food Systems*, 28(3), pp. 195–211. doi: [10.1017/S1742170512000087](https://doi.org/10.1017/S1742170512000087).

Bhamra, R., Dani, S. and Burnard, K. (2011) ‘Resilience: the concept, a literature review and future directions’, *International Journal of Production Research*, 49(18). doi: [10.1080/00207543.2011.563826](https://doi.org/10.1080/00207543.2011.563826).

Birchall, J. and Ketilson, L. (2009) *Resilience of the Cooperative Business Model in Times of Crisis*. Geneva: International Labour Organization.



Boydell, H. (2018) *Rethinking the C Price: Should We Change How We Price Coffee?*, *Perfect Daily Grind*. Available at:

<https://perfectdailygrind.com/2018/10/rethinking-the-c-price-should-we-change-how-we-price-coffee/> (Accessed: 25 May 2020).

Bryman, A. (2016) *Social Research Methods*. 5th edn. New York: Oxford University Press.

Bunn, C., Lundy, M., Laderach, P., Girvetz, E., Castro, F. (2018) *Climate-smart coffee in Honduras*. California: International Center for Tropical Agriculture (CIAT), United States Agency for International Development (USAID). Available at:

https://cgispace.cgiar.org/bitstream/handle/10568/97530/Climate_Smart_Coffee_brief_Honduras.pdf?sequence=3&isAllowed=y (Accessed: 6 June 2020).

Carmenate-Milián, L. Herrera-Ramos, A., Ramos – Cáceres, C., Lagos-Ordoñez, K, Lagos-Ordoñez, T., and Somoza-Valladares, C.. (2017) ‘Situation of the Health System in Honduras and the New Proposed Health Model’, *Archives of Medicine*, 9(4). doi: [10.21767/1989-5216.1000222](https://doi.org/10.21767/1989-5216.1000222).

COHORSIL (2020) *Protocolos Interno de Bioseguridad de COHORSIL*. Comayagua, Honduras: COHORSIL.

Consejo Nacional Supervisor de Cooperativas (CONSUCOOP) (2019) ‘Detalle de Cooperativas Inscritas en el Registro Nacional de Cooperativas’. Consejo Nacional Supervisor de Cooperativas (NSUCOOP). Available at: <https://consucoop.hn/mapa/>.

Conway, G. and Chambers, R. (1992) *Sustainable Rural Livelihoods: Practical concepts for 21st century*. IDS Discussion Paper 296. Institute of Development Studies. Available at: <https://www.ids.ac.uk/download.php?file=files/Dp296.pdf>.

Datainspektionen (2020) *Sensitive Personal Data, Datainspektionen*. Available at: <https://www.datainspektionen.se/other-lang/in-english/the-general-data-protection-regulation-gdpr/sensitive-personal-data/>.

Department for International Development (1999) ‘Sustainable Livelihoods Guidance Sheets Section 2’. Department for International Development. Available at: <https://www.enonline.net/attachments/872/section2.pdf> (Accessed: 20 October 2020).



Despacho de Comunicaciones & Estrategia Presidencial (2020) *Coronavirus COVID-19 En Honduras, Covid19 Honduras*. Available at: <https://covid19honduras.org>.

Dongre, Y. and Paranjothi, T. (2020) 'Asia Pacific Cooperatives Responding to Covid-19 Crisis', in *Cooperatives and Social Innovation: Experiences from the Asia Pacific Region*. Singapore: Springer Nature, pp. 271–284.

Dyde, J. (2020) *Honduras Reopens Land Borders and Extends Airport Opening Hours*, *CentralAmerica.com*. Available at: <https://www.centralamerica.com/experiencing/travel/honduras-land-borders-reopen/> (Accessed: 4 January 2021).

Emmel, N. (2014) 'Purposeful Sampling', in *Sampling and Choosing Cases in Qualitative Research: A Realist Approach*. London: SAGE Publications, Ltd, pp. 33–44. Available at: <https://dx.doi.org/10.4135/9781473913882>.

Food and Agricultural Organization (FAO) (2020a) *COVID-19 and the risk to food supply chains: How to respond?* Rome: Food and Agriculture Organization of the United Nations. Available at: <https://doi.org/10.4060/ca8388en>.

Food and Agricultural Organization (FAO) (2020b) 'Impact of COVID-19 on informal workers'. Food and Agriculture Organization of the United Nations. Available at: <https://doi.org/10.4060/ca8560en>.

Garrison, K. (2020) *Lack of Planning in Honduras COVID-19 Purchase Risks Millions in Public Funds*, *Transparency International*. Available at: <https://www.transparency.org/en/blog/lack-of-planning-in-honduras-covid-19-purchases-risks-millions-in-public-funds#> (Accessed: 11 December 2020).

Ghosh, P. and Venkatachalapathy, N. (2014) 'Processing and Drying of Coffee - A Review', *International Journal of Engineering Research & Technology*, 3(12).

Gomez, A. (2020) *Honduras Coffee Annual 2020*. Coffee Annual HO2020-0001. Tegucigalpa: Foreign Agriculture Service, United States Department of Agriculture. Available at: [https://apps.fas.usda.gov/newgainapi/api/Report/DownloadReportByFileName?fileName=Coffee%20Annual Tegucigalpa Honduras 05-15-2020](https://apps.fas.usda.gov/newgainapi/api/Report/DownloadReportByFileName?fileName=Coffee%20Annual%20Tegucigalpa%20Honduras%2005-15-2020).



de Guchteneire, P. (no date) 'Code of conduct social science research UNESCO'. UNESCO. Available at: http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/SHS/pdf/Soc_Sci_Code.pdf (Accessed: 29 June 2020).

Guzman, F. (2020) *National Report of Honduras*. Tegucigalpa: Cooperativas de las Americas. Available at: <https://coops4dev.coop/sites/default/files/2020-09/Legal%20Framework%20Analysis%20-%20Honduras.pdf> (Accessed: 8 December 2020).

Ham, A. (2020) *Social and Economic Impact of the COVID-19 and Policy Options in Honduras*. UNDP Latin America and the Caribbean.

Hartwich, F., Fromm, I. and Romero, G. (2010) 'Innovation Trajectories in Honduras' Coffee Value Chain: Public and Private Influence on the Use of New Knowledge and Technology among Coffee Growers', *International Journal on Food System Dynamics*, pp. 237–251. doi: <https://doi.org/10.18461/ijfsd.v1i3.137>.

Hernandez, M., Pandolph, R., Sanger, C., and Vos, R. (2020) *Volatile Coffee Prices: COVID-19 and Market Fundamentals*. International Coffee Organization, International Food Policy Research Institute. Available at: <http://www.ico.org/news/coffee-break-series-2e.pdf>.

Hinshelwood, E. (2003) 'Making friends with the sustainable livelihoods framework', *Community Development Journal*, 38(4), pp. 243–254.

Hutter, G. (2011) 'Organizing social resilience in the context of natural hazards: a research note', *Natural Hazards*, 67, pp. 47–60. doi: [10.1007/s11069-010-9705-4](https://doi.org/10.1007/s11069-010-9705-4).

International Coffee Organization (ICO) (2020) *Impact of COVID-19 on the Global Coffee sector: The Demand Side*. No.1. International Coffee Organization (ICO). Available at: <https://www.ncausa.org/Portals/56/PDFs/coffee-break-series-1e.pdf?ver=2020-04-09-214324-750>.

International Co-operative Alliance (2018) *Cooperative identity, values and principles*, International Co-operative Alliance. Available at: <https://www.ica.coop/en/cooperatives/cooperative-identity?ga=2.159694845.1172240110.1592213250-1010715933.1591952518#cooperative-values> (Accessed: 15 June 2020).



International Labour Organization (ILO) (2020a) *Cooperatives and wider SSE enterprises respond to COVID-19 disruptions, and government measures are being put in place*, International Labour Organization.

Available at:

https://www.ilo.org/global/topics/cooperatives/news/WCMS_740254/lang--en/index.htm (Accessed: 25 June 2020).

International Labour Organization (ILO) (2020b) *Jobs for Peace and Resilience: a response to COVID-19 in fragile contexts - Key recommendations from the JPR Task Team*. Geneva: International Labour Organization.

International Monetary Fund (IMF) (2020) *Policy Responses to COVID-19*, International Monetary Fund. Available at:

<https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19#H> (Accessed: 26 June 2020).

International Women's Coffee Alliance (IWCA) (2020) *IWCA Insights: COVID-19 Impacts on Coffee Communities*. International Women's Coffee Alliance (IWCA). Available at:

<https://www.womenincoffee.org/blog/2020/4/28/iwca-insights-report-covid-19-and-coffee-communities> (Accessed: 5 June 2020).

Instituto Honduran del Café (IHCAFE) (2020) *Memoria Corporativa IHCAFE Cosecha 2018-2019*. IHCAFE. Available at:

https://issuu.com/cesarmaradiaga2/docs/memoria_ihcafe_2019 (Accessed: 5 June 2020).

Jansen, H. *et al.* (2006) 'Policies for sustainable development in the hillside areas of Honduras: a quantitative livelihoods approach', *Agricultural Economics*, 34, pp. 141–153.

Loker, W. and Smith, E. (2012) "'We Know Our Worth': Lessons from a Fair-Trade Coffee Cooperative in Honduras", *Human Organization*, 71(1), pp. 87–98.

Macrotrends (2020) *Coffee Prices - 45 Year Historical Chart*, Macrotrends.

Available at: <https://www.macrotrends.net/2535/coffee-prices-historical-chart-data> (Accessed: 25 October 2020).



Majee, W. and Hoyt, A. (2010) 'Are worker-owned cooperatives the brewing pots for social capital?', *Community Development*, 41(4), pp. 417–430. doi: [10.1080/15575330.2010.488741](https://doi.org/10.1080/15575330.2010.488741).

McLean, J. E. (2015) 'Beyond the pentagon prison of sustainable livelihood approaches and towards livelihood trajectories approaches', *Asia Pacific Viewpoint*, 56(3). doi: <https://doi.org/10.1111/apv.12097>.

Mills, A., Durepos, G. and Wiebe, E. (eds) (2012) 'Qualitative Analysis in Case Study', in *Encyclopedia of Case Study Research*. Thousand Oaks: SAGE Publications, Ltd, pp. 749–757. Available at: <https://dx.doi.org/10.4135/9781412957397>.

Mortiram, S. and Vakulabharanam, V. (2007) 'Corporate and Cooperative Solutions for the Agrarian Crisis in Developing Countries', *Review of Radical Political Economics*, 39(3), pp. 360–367. doi: [10.1177/0486613407305284](https://doi.org/10.1177/0486613407305284).

Münkner, H.-H. (2012) *Co-operation as a Remedy in Times of Crisis. Agricultural Co-operatives in the World. Their Roles for Rural Development and Poverty Reduction*. Working Paper 58. European Research Institute on Cooperative and Social Enterprises.

NSUCOOP (2019) *Detalle de Cooperativa Inscritas en el Registro Nacional de Cooperativas*, Consejo Nacional Supervisor de Cooperativas. Available at: <https://conucoop.hn/mapa/> (Accessed: 16 November 2020).

Ortmann, G. and King, R. (2007) 'Agricultural Cooperatives 1: History, Theory and Problems', *Agrekon*, 46(1), pp. 18–46. doi: [10.1080/03031853.2007.9523760](https://doi.org/10.1080/03031853.2007.9523760).

Palma, O., Diaz-Puente, J. and Yagüe, J. (2020) 'The Role of Coffee Organizations as Agents of Rural Governance: Evidence from Western Honduras', *Land*, 9(11). doi: <https://doi.org/10.3390/land9110431>.

Pan American Health Organization (PAHO) (2020) *Situación de COVID-19 en Honduras*, COVID-19 Information System for the Region of the Americas. Available at: <https://paho-covid19-response-who.hub.arcgis.com/pages/paho-honduras-covid-19-response> (Accessed: 26 June 2020).

Pan American Health Organization (PAHO) (no date) *Honduras Health Situation and trends*, Pan American Health Organization. Available at:



<https://www.paho.org/salud-en-las-americas-2017/?p=4280> (Accessed: 29 November 2020).

Parnell, E. (2001) *The Role of Cooperatives and Other Self-Help Organizations in Crisis and Socio-Economic Recovery*. Geneva: International Labour Organization.

Pearson, A., Prado, A. and Colburn, F. (2020) 'Nicaragua's Surprising Response to COVID-19', *Journal of Global Health*, 10(1). doi: [10.7189/jogh.10.010371](https://doi.org/10.7189/jogh.10.010371).

Perez, M. (2020) *Honduras Coffee Growers Face Escalating Woes After Hurricanes*, *Bloomberg*. Available at: <https://www.bloomberg.com/news/articles/2020-12-01/honduras-coffee-growers-face-escalating-woes-after-hurricanes> (Accessed: 23 December 2020).

Poole, N. and Donovan, J. (2014) 'Building cooperative capacity: the specialty coffee sector in Nicaragua', *Journal of Agribusiness on Developing and Emerging Economies*, 4(2), pp. 133–156. doi: [10.1108/JADEE-01-2013-0002](https://doi.org/10.1108/JADEE-01-2013-0002).

Sarkis, J. (2020) 'Supply chain sustainability: learning from the COVID-19 pandemic', *International Journal of Operations and Productions*, 41(1), pp. 63–73. doi: <https://doi.org/10.1108/IJOPM-08-2020-0568>.

Scoones, I. (1998) *Sustainable Rural Livelihoods: A Framework for Analysis*. Working Paper. Institution of Development Studies.

Shumeta, Z. and D'Haese, M. (2016) 'Do coffee cooperatives benefit farmers? An exploration of heterogeneous impact of coffee cooperative membership in Southwest Ethiopia', *International Food and Agribusiness Management Review*, 19(4).

Silva, F. (2020) *In Honduras, Corruption on Top of the Pandemic, Contra Corriente*. Available at: <https://contracorriente.red/2020/03/20/a-la-pandemia-se-suma-la-corrupcion-en-honduras/> (Accessed: 11 December 2020).

Simons, H. (2012) 'Evolution and Concept of Case Study Research', in *Case Study Research in Practice*. London: SAGE publications, Ltd.



Snider, A., Gutierrez, I., Sibelet, N., Faure, G. (2017) 'Small farmer cooperatives and voluntary coffee certifications: Rewarding progressive farmers of engendering widespread change in Costa Rica?', *Food Policy*, 69, pp. 231–242.

Straw, B., Sandelands, L. and Dutton, J. (1981) 'Threat Rigidity Effects in Organizational Behavior: A Multilevel Analysis', *Administrative Science Quarterly*, 26(4), pp. 501–524.

Sutcliffe, K. and Vogus, T. (2003) 'Organizing for Resilience', in *Positive Organizational Scholarship*. San Francisco: Berrett-Koehler, pp. 94–110. Available at: <http://cpor.org/ro/sutcliffe-vogus%282003%29.pdf>.

Sutcliffe, K. and Vogus, T. (2007) 'Organizational Resilience: Towards a Theory and Research Agenda', in *Proceedings of the IEEE International Conference on Systems, Man, and Cybernetics*, Montréal, Canada. doi: [10.1109/ICSMC.2007.4414160](https://doi.org/10.1109/ICSMC.2007.4414160).

The World Bank (2020) *Honduras to receive US\$119 million in support to respond to COVID-19 (coronavirus) and other emergencies*, *The World Bank*. Available at: <https://www.worldbank.org/en/news/press-release/2020/04/09/honduras-recibira-apoyo-por-us119-millones-del-banco-mundial-para-hacer-frente-a-la-covid-19-coronavirus-y-otras-emergencias> (Accessed: 11 December 2020).

Torgerson, R., Reynolds, B. and Gray, T. (1998) 'Evolution of Cooperative Thought, Theory, and Purpose', *Journal of Cooperatives*, 13(1).

Tucker, C. (2013) 'Honduras's Smallholder Coffee Farmers, the Coffee Crisis, and Neoliberal Policy', in *Central America in the New Millennium: Living Transition and Reimagining Democracy*. New York: Berghahn Books. Available at: https://www.academia.edu/3901883/Honduras_s_Smallholder_Coffee_Farmers_the_Coffee_Crisis_and_Neoliberal_Policy.

United Nations Development Programme (UNDP) (2017) *Application of the Sustainable Livelihoods Framework in Development Projects*. Guidance Note. Panama City: Regional Centre for Latin American and the Caribbean, Available at: <https://www.latinamerica.undp.org/content/rblac/en/home/library/poverty/guidance-note--application-of-the-sustainable-livelihoods-framework.html>.



Verhofstadt, E. and Maertens, M. (2014) 'Can Agricultural Cooperatives Reduce Poverty? Heterogeneous Impact on Cooperative Membership on Farmer's Welfare in Rwanda', *Applied Economic Perspectives and Policy*, 37(1), pp. 86–106.

Wang, L. *et al.* (2020) 'Review of the 2019 novel coronavirus (SARS-CoV-2) based on current evidence', *International Journal of Antimicrobial Agents*, 55 (6). Doi: <https://doi.org/10.1016/j.ijantimicag.2020.105948>

Weick, K. and Quinn, R. (1999) Organizational Change and Development. *Annual Review of Psychology* 50, 361–386.
<https://doi.org/10.1146/annurev.psych.50.1.361>

World Bank Group (2020) *Hospital bed (per 1,000) – Honduras*. World Bank Group. Available at: <https://data.worldbank.org/indicator/SH.MED.BEDS.ZS?locations=HN&view=chart> (Accessed 11 December 2020).

World Health Organization (WHO) (2020) *Nicaragua: WHO Coronavirus Disease (COVID-19) Dashboard*, World Health Organization. Available at: <https://covid19.who.int/region/amro/country/ni> (Accessed: 19 December 2020).

Zambrano, L. *et al.* (2019) 'Spatial distribution of dengue in Honduras during 2016 - 2019 using a geographic information system (GIS) - Dengue epidemic implications for public health and travel medicine', *Travel Medicine and Infectious Disease*, 32.
<https://doi.org/10.1016/j.tmaid.2019.101517>.



Appendix 1. Interview Guide

Background information:

1. What is the primary purpose/ objective for the cooperative?
2. How many members are part of the cooperative?
3. How much coffee is produced with the coop?
4. How is the coop organized/ governed? Do cooperative member have the ability to update the operating structure?
5. What services does this coop provide?
6. What do you think are the main benefits of the being a member in the coop?
7. What are some difficulties the co-op has faced in recent years?

COVID-19:

1. How has COVID-19 impacted the operations of the cooperative?
2. How have your normal activities been affected or changed due to COVID – 19 to fit the government’s policies?
3. Have any members gotten sick?
4. What ways has the cooperative supported their members during this time? Have any members wanted to leave the coop or join?
5. Have members been able to still use the services you provide?
6. Have members still been able to take care of the coffee plants before the harvest?
7. Have members still been able to take care of the coffee plants before the harvest?
8. During other epidemics, dengue, in the country, did you ever face similar challenges to know to protect yourselves?
9. Have you had any support or communication from IHCAFE or other organizations? The government?
10. How has this period changed the financial state of the cooperative?
11. Were you able to take out loans from the government?
12. Have you looked into other ways to make money?
13. Has exporting been affected? How has that impacted the coop?
14. Has there been other times when it’s been very difficult for exportation or transporting or the cooperative was unable to get materials it needed?

Future Developments:

1. How will COVID-19 impact the harvest?



2. What do you see as the biggest challenges your members must overcome with COVID-19?
3. How do you think COVID-19 has changed the cooperative? Do you think it will affect how you operate in the future?
4. What communication has the co-op had with its buyers/ suppliers concerning next year's harvest?



Appendix 2. Interview Coding Sheet

Cooperatives and Producer Organizations

No.	Interview Code	Name of Organization	Location: Department	Year Founded
1	C – 1	Asociación de Productores de Cafés Especiales (APROCAFESCA)	Copan	2018
2	C – 2	Cooperativa de Servicios Agropecuarios Gualcinse Limitada (COSAGUAL)	Lempira	1994
3	C – 3	Cooperativa Cafetalera Siguatepeque Limita (COHORSIL)	Comayagua	1980
4	C – 4	Cooperativa Cafetalera Capucas Limitada (COCAFAL)	Copan	1999
5	C – 5	Cooperativa Cafetalera Sanmarquena Limitada. (COCASAM)	Choluteca	1988
6	C – 6	Café Orgánico Marcala (COMSA)	La Paz	2000
7	PO – 1	Beneficio San Marcos	Ocotepeque	2014
8	PO – 2	Cafés Especiales Corquin S.A. (CAFESCOR)	Copan	2012

Privately Owned Businesses

No.	Interview Code	Name of Organization	Location	Year Founded
9	SA – 1	Honduran Quality Coffee (HQC)	Copan	2007

Cooperative Members

No.	Interview Code	Name of Organization Membership	Location
10	M – 1	Cooperativa Cafetalera Siguatepeque Limita (COHORSIL)	Comayagua



Appendix 3: Timeline of Honduran Policies and Communications

The following timeline is comprised of summaries of regulations imposed by the Honduran national government in response to COVID-19. All of the following information was retrieved from the official COVID-19 Honduras website, covid19honduras.org, by Despacho de Comunicaciones & Estrategia Presidencial (2020).

Date Posted:	Summary of regulation:	Name of Communication:
Feb. 26, 2020	The Honduran Government declares an emergency for COVID-19 and dengue fever on February 10 th , 2020. 110 million lempiras is approved for budgetary support. Dr. Roxana Araujo, an epidemiology, is authorized as the official spokesperson. https://covid19honduras.org/?q=node/10 Accessed: 07/07/2020	Declaratoria de emergencia por Dengue y Coronavirus
March 4, 2020	The Ministry of Health informs the public and media of the preparations to address COVID-19. A commission of experts is being formed, as well as steps taken to procure necessary supplies. Plans for a mobile hospital in Roatán and mobile clinics are to be arranged, in addition to isolation rooms in hospitals. The government recommends washing hands correctly, using an alcohol-based gel sanitizer, using your forearm to cover your mouth when you sneeze or cough and avoiding close contact with people with respiratory problems. https://covid19honduras.org/?q=node/23 Accessed: 07/07/2020	Se ha conformado una comisión de expertos integrada por exministros de salud, infectólogos, neumólogos e internistas
March 11, 2020	The first two confirmed cases in Honduras are reported. Both patients recently returned from recent travels in Spain and Switzerland. The announcement includes the further recommendation of wearing a mask only if you have respiratory symptoms, have been in contact with someone with those symptoms, if you work in health and have contact with those patients, or if you work in an airport or bus terminal. https://covid19honduras.org/?q=primeros-casos-confirmados Accessed: 07/07/2020	Salud confirma los dos primeros casos de COVID-19 en el territorio hondureño
March 11, 2020	The government recommends that everyone abstains from unnecessary travel. All people who have passed through the following countries within the last 30 days must provide precise information about where they have been and must follow all orders for testing, restrictions and quarantine for 14 days: the countries are China, Iran, Spain, France, Germany, Japan, South Korea, and other countries with high incidents of COVID-19. https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/Comunicado_COVID-19%252010.pdf Accessed: 07/07/2020	Absténgase de realizar viajes innecesarios a países que reportan incidencia de COVID-19
March 11, 2020	The telecommunications company Claro, will grant free access to information on COVID-19 to the government site www.covid19honduras.com https://covid19honduras.org/?q=claro Accessed: 07/07/2020	Claro Honduras pone a disposición sus plataformas de comunicación para información a los usuarios sobre el COVID-19



<p>March 12, 2020</p>	<p>On March 13th, all government and non-government education centers for the pre-basic, basic, and intermediate level are suspended for 14 days. All events and public gathering are cancelled for 14 days except for church and it is expected they take all preventive measures as announced by the Ministry of Health and World Health Organization. All people from Europe, China, Iran and South Korea are barred from entry unless they are Honduran nationals, or temporary or permanent residents and can self-isolate in their homes.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/MEDIDAS%2520GOBIERNO%2520COVID19_0.pdf Accessed: 07/07/2020</p>	<p>Medias para prevenir el contagio de COVID-19 en el país</p>
<p>March 14, 2020</p>	<p>Events with more than 50 people are prohibited, including restaurants and bars. In work areas, no more than 50 people are allowed. Commercial businesses have to ensure there are no conglomerations of more than 50 people. Churches will have to resort to using modern technology for ways of worship to ensure there are no more than 50 people. All recreation parks are closed. All people above 60 are encouraged to stay indoors. Visitors are suspended to all hospitals, elderly homes, and infant care centers. All public transportation should be fumigated and cannot transport more than 50 people at a times. Anyone who has had contact with someone who has tested positive for COVID-19 needs to immediate report to the nearest health center. At the time of announcement, these regulations were scheduled to last until March 28, 2020.</p> <p>A report titled Protocolo de Seguridad e Higiene para Centros de Trabajo a Nivel Nacional en Prevencion de COVID-19 (Security and Health Protocol for Work centers at the National Level for Prevention of COVID-19) is published. It outlines the origins, symptoms, general considerations, preventative measures, use of PPE, disinfecting and hygiene.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/MEDIDAS%2520DE%2520ALERTA%2520COVID19%2520HONDURAS.pdf Accessed: 07/07/2020</p>	<p>SINAGER toma las siguientes medidas efectivas a partir del 14 de marzo 10:00am hasta el 28 de marzo 2020</p>
<p>March 14, 2020</p>	<p>Public transport services must continue operating and it is prohibited to transport more than 50 people in the vehicles. In order to prevent the spread of COVID, in no case should people be moving around the bus and they must stay in their respective seats. Masks are mandatory for drivers and other personnel. Windows must be open to minimize risk of infection spread.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/Comunicado%2520IHTT%2520%25281%2529.pdf Accessed: 07/07/2020</p>	<p>El Instituto Hondureno del Transporte Terrestre (IHTT), ratifica que el transporte publico de personas en todas sus modalidad debe seguir operando</p>
<p>March 15, 2020</p>	<p>Emergencia Nacional Combate al COVID-19 Comunicado No. 2: It was authorized that all people over the age of 60, working in judicial services, work from home.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/COMUNICADO%25202%2520POD</p>	<p>El Poder Judicial de Honduras autoriza para que todo Servido mayor a 60 anos de edad, permanezca en su casa</p>



	ER%2520JUDICIAL%252015%2520marzo%2520de%25202019%2520Medidas%2520ante%2520coronavirus.pdf.pdf 0.pdf Accessed: 07/07/2020	
March 15, 2020	<p>Prohibitions: All public and private business is suspended. All type of events, sports, cultural activities are cancelled regardless of number of people. Public transportation service is suspended. All religious celebrations are cancelled. All boarders included land, air, and through sea are closed.</p> <p>Exceptions: All permanent and temporary resident, and citizens may return with a mandatory quarantine immediately upon return. Also excluded are hospitals, medical centers, pharmacies, businesses related to the production and distribution of disinfectant and hygiene, gas stations, markets, supermarkets, restaurants with auto service and that can deliver to homes, hotels, banks, telecommunications and industrial agriculture, agricultural harvesting, and agro-chemical businesses.</p> <p>These are in place for 7 days, ending March 22 at 23:59.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/ESPECIFICACIONES%2520MEDIDAS%2520COVID19%2520HONDURAS.pdf 0.pdf Accessed: 07/07/2020</p>	En el marco de la emergencia nacional ante la amenaza de propagación de COVID-19 Se suspenden labores en el sector Publico y Privado con excepciones
March 16, 2020	<p>There is a stay-at-home order throughout the country, and an absolute lockdown order in Choluteca, La Ceiba, and Distrito Central, where it is prohibition to enter or leave the cities. National police and the Armed Forces shall carry out operations to verify the reasons people have to justify their leaving home. They are authorized to arrest those who do not comply. Authorized places are allowed to remain open during the day. This is for a seven-day period.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/TOQUE%2520DE%2520QUEDA%2520HONDURAS.pdf Accessed: 07/07/2020</p>	Se declara TOQUE DE QUEDA a nivel nacional y absoluto para el Distrito Central
March 17, 2020	<p>The International Airports, Aeropuerto Internacional de Toncontin (MHTG), Aeropuerto Internacional de Goloson MHLC) and Aeropuerto Internacional Juan Manuel. Galvez (MHRO) are closed for operations for 7 days. Aeropuerto Internacional Ramon Villeda Morales (MHLM) has restricted hours for the use of cargo planes and preauthorized flights.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/Comunicado%2520Aeropuertos%2520de%2520Honduras.pdf Accessed: 07/07/2020</p>	Comunicado aeropuertos de Honduras
March 17, 2020	<p>All custom ports within the country are to function as normal. All works have been instructed to follow the hygiene and security protocols.</p>	Todos los diferentes puntos aduaneros aéreos, marítimos, internos, terrestres o de



	<p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/COMUNICADO%2520SUSPENSION%2520GARANTIAS%2520CONSTITUCIONALES.pdf Accessed: 07/07/2020</p>	frontera están operando de manera normal
March 17, 2020	<p>A message from President Juan Orlando Hernandez about the four first economic measures introduced to face the crisis. BANHPROVI will freeze financing fees for three months without it affecting credit scores. BANHPROVI will increase funds to a total of 1.4 million to reactive the construction industry. 2.5 million lempiras is opened for agrocredit and 51 million lempiras is to be allocated from the Credito Solidario y el Servicio de Emprendimiento (SENPRENDE) to support 5,00 entrepreneurs.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/MEDIDAS%2520ECONOMICAS%2520COVID19%2520HONDURAS.pdf Accessed: 07/07/2020</p>	Medidas económicas para enfrentar la crisis por propagación de COVID-19
March 18, 2020	<p>A price freeze was placed on basic necessities, hygiene supplies and medicine. It is also included that there in an absolut lockdown in the cities of Tegucigalpa, San Pedro Sula, La Cieba, and Choluteca.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/CONGELAMIENTO%2520PRECIO%2520S.pdf Accessed: 07/07/2020</p>	Congelamiento de precios absoluto
March 19, 2020	<p>The absolute stay-at-home order was extended to the cities of Puerto Cortes, Santa Cruz de Yojoa, and El Triunfo.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/COMUNICADO%2520DE%2520PRENSA%2520Medidas%2520viernes.pdf Accessed: 07/07/2020</p>	Toque de queda absoluto se extiende a otras ciudades del país
March 20, 2020	<p>The absolute stay-at-home order is extended to the entire country until March 29th, 2020.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/COMUNICADO%2520TOQUE%2520ABSOLUTO.pdf Accessed: 07/07/2020</p>	Toque de queda absoluto para todo el territorio nacional
March 20, 2020	<p>The government will provide food for 30 days to 800,000 vulnerable families. 200 million lempiras will be offered as technical assistance to producers in the Corredor Seco. A Solidarity Production bonus will be offered to 190,000 small producers to support food production. Agricultural, agro-industrial, agro-exports and food distributors are authorized to operate normally without restrictions as long as they are following the safety measures for the employees. Supply markets are authorized to supply pulperias (small corner stores), small markets, and provide home deliveries. Fees for SMEs, trade, agriculture sector, tourism businesses will be frozen for three months without impacting credit score.</p>	Segundo paquete de medias económicas para garantizar comida en la mesa de cada hondureño, abastecimiento de alimentos y apoyo a productores



	<p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/2%20PAQUETE%20MEDIDAS%20ECONOMICAS%20MICAS%20COVID19.pdf Accessed: 07/07/2020</p>	
March 21, 2020	<p>Aeropuerto Internacional de Toncotin, Aeropuerto Internacional de Golosón, and Aeropuerto Internacional Juan Manuel Galvéz are closed until March 29th. Aeropuerto Internacional Ramón Villeda Morales is allowed to continue air traffic from the hours of 7:00am to 7:00 pm.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/COMUNICADO%2003%20-%2021%20marzo%202019.pdf Accessed: 07/07/2020</p>	CIERRE DE OPERACIONES de los Aeropuertos Internacionales hasta el domingo 29 de Marzo
March 21, 2020	<p>The Supreme Court recognized the authorization of the stay-at-home order until March 29th, 2020.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/Auerdo%20Presidencia%20CSJ%20Ampliacio%20de%20la%20Suspensio%20de%20Labores%20en%20el%20PJ%20por%20Coronavirus%2021%2003%202020.pdf.pdf Accessed: 07/07/2020</p>	Ampliación de la suspensión de labores en el poder judicial por pandemia
March 26, 2020	<p>The first death due to COVID-19 in Honduras is reported.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/COMUNICADO%202316%20COVID19%20CORRECCIO%20N%20.pdf Accessed: 07/07/2020</p>	Confirmamos el primer fallecimiento de un paciente por Coronavirus COVID-19 en Honduras
March 29, 2020	<p>SINGAR release a schedule for when people may leave their home, based off of the last digit of their identity card, passport or resident card. People may leave their homes for necessities from 9:00am to 3:00pm. People who are more vulnerable to COVID-19, including the elderly, and pregnant women are authorized to leave their homes form 7:00am – 9:00am on the days designated by their identity cards. All stores will be closed on Tuesdays, Thursdays, Saturdays and Sundays. Only two people are authorized to be in a vehicle at one time. It is required that the authorized business which are open require facemasks for employees, taking of temperature, using hand sanitizer and keeping distance of 2 meters between people. This policy is in place until Sunday April 12, 2020.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/TOQUE%20DE%20QUEDA%2012%20ABRIL_0.pdf Accessed: 07/07/2020</p>	Circulación segmentada de la población
March 30, 2020	<p>The government announces support to micro, small and medium sized businesses. Payments of income tax, Social security contributions, rents, and obligations of payment (without fines or interest) are postponed until June 30th, 2020. Businesses which do pay and declare as of April, 30th, 2020 will receive a 8.5% discount</p>	Medias para salvar el empleo de los hondureños ante la emergencia del COVID-19



	<p>of the tax to be paid. Large businesses are still required to pay by April 30th. Businesses which retain employees and respect payment of wages for the rest of the year, will have a 10% expense deductible for the 2020 fiscal year; this will be forfeited if they fire or suspend employment.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/MEDIDAS%2520PARA%2520SALVAR%2520EMPLEOS_0.pdf Accessed: 07/07/2020</p>	
April 4, 2020	<p>Anyone who uses heavy machinery or other objects to hinder access to communities will be forcefully removed and equipment confiscated. Those who work in transport must wear masks, use hand gel and follow biosecurity protocols.</p> <p>https://covid19honduras.org/?q=comunicado-gobiernos-locales Accessed: 07/08/2020</p>	Comunicado de la Secretaría de Seguridad
April 6, 2020	<p>The stay-at-home order extends to cities in the department Cortes and to the city El Progreso, Yoro until April 12, 2020.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/COMUNICADO%2520PCM%2520Valle%2520de%2520Sula.pdf Accessed: 07/08/2020</p>	Se aplica restricción de garantías de Toque de Queda Absoluto para Cortés y El Progreso
April 8, 2020	<p>Authorized businesses are now able to be open on Tuesdays and Thursdays. Hours of operations are now 9:00 – 5:00 and people must wear facemasks, have access to alcohol gel and can socially distance by 2 meters.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/COMUNICADO%2520circulaci%2520C3%25B3n%2520toda%2520semana.pdf Accessed: 07/08/2020</p>	Se determino ampliar el toque de queda absoluto hasta el día domingo 19 de abril
April 19, 2020	<p>The stay-at-home order is extended to the 26th of April. It is obligatory to wear masks outside your homes.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/COMUNICADO%2520extensi%2520C3%25B3n%2520medidas%252019%2520abril.pdf Accessed: 07/08/2020</p>	Se determino ampliar el toque de queda absoluto vigente, desde el domingo 19 hasta el día domingo 26 de abril
April 26, 2020	<p>The stay-at-home order is extended to the 3rd of May.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/COMUNICADO%2520extensi%2520C3%25B3n%252003%2520de%2520mayo.pdf Accessed: 07/08/2020</p>	Se determino ampliar el toque de queda absoluto vigente, desde el domingo 26 de abril al domingo 3 de mayo
May 3, 2020	<p>The stay-at-home order is extended to May 17, 2020. The system which dictates who may leave their homes on what day has been revised so now only one digit is allowed out per day and the calendar lasts for two weeks with closures on Saturday and Sunday. All establishments are required to have masks, gel, sufficient space for social distancing of 2 meters and take temperatures. This not valid for the department of Cortes, the city</p>	Se extiende toque de queda absoluto hasta el 17 de mayo y se restringe circulación a un dígito por día



	<p>El Progreso, Yoro, and Las Vegas, Santa Barbara who will receive new recommendation on May 6th. https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/COMUNICADO%2520Mayo%2520al%252017.pdf Accessed: 07/08/2020</p>	
May 6, 2020	<p>The department of Cortes, the city El Progreso, Yoro, and Las Vegas, Santa have an absolute stay-at-home order until May 10, 2020. This excluded those working within the import and export sectors, transportation of fish or agricultural products and health sectors. Pulperias are authorized to be open, pharmacies and supermarkets may only offer delivery service. https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/COMUNICADO%2520NADIE%2520OCIRCULA%2520zona%2520norte.pdf Accessed: 07/08/2020</p>	TOQUE DE QUEDA ABSOLUTO para El Progreso, Yoro y Las Vegas, Santa Barbara
May 17, 2020	<p>The absolute stay-at-home order for the entire country is extended to May 24, 2020. https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/COMUNICADO%2520Mayo%2520al%252024.pdf Accessed: 07/08/2020</p>	Se extiende el toque de queda absoluto EN TODO EL PAIS
May 24, 2020	<p>The stay-at-home order for the entire country is extended to May 31, 2020 https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/COMUNICADO%2520Mayo%2520al%252031%2520digitos.pdf Accessed: 07/08/2020</p>	Toque de queda hasta el 31 de mayo
May 24, 2020	<p>The SALVCONDUCTOS, issued by the National Police are still in force, and people must remember to carry them and report to authorities and justify their mobilization is strictly work-related. https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/AVISO%2520SALVOCONDUCTOS%2520mayo.pdf Accessed: 07/08/2020</p>	Emision de Salvoconductos
June 4, 2020	<p>In order to allow businesses to begin to reopen, the country is divided into three regions and each region may allow a percentage of the workforce to return to work. In Region 1, 60% is allowed, Region2, 40% and in Region 3, 20%. All municipalities where the interview participants are located are designated in Region 2. https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/COMUNICADO%2520DE%2520PRENSA%2520REAPERTURA%2520JUNIO%252008_0.pdf Accessed: 07/08/2020</p>	Apertura inteligente de negocios
June 7, 2020	<p>The first phase of reopening is announced. A number of government offices and intuitions are allowed to reopen, with 20% of employees. https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/COMUNICADO%2520APERTURA%2520FASE%2520I.pdf Accessed: 07/08/2020</p>	Comunicado de apertura Fase I



June 8, 2020	<p>The stay-at-home order for the entire country is extended to June 14, 2020. It is mandatory to wear a facemask when outside the home.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/COMUNICADO%2520Junio%2520a1%252014%2520digitos.pdf Accessed: 07/08/2020</p>	Toque de queda valido hasta el 14 de junio de 2020
June 14, 2020	<p>The stay-at-home order for the entire country is extended to June 28, 2020.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/COMUNICADO%2520Junio%2520a1%252028%2520digitos.pdf Accessed: 07/08/2020</p>	Extensión del toque de queda hasta el 28 de Junio de 2020
June 23, 2020	<p>It is released that since June 16th, 2020 President Hernandez has been hospitalized with COVID-19. The First Lady also tested positive.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/ESTADO%2520DE%2520SALUD%2520PRESIDENTE.pdf Accessed: 07/08/2020</p>	Por Covid-19: Estado de salud del presidente Hernández
July 12, 2020	<p>Phase one will continue for all districts until July 19, except for the departments of Distrito Central, San Pedro Sula, Olancho Choluteca, Atlántida, Comayagua, Santa Barbara, Lempira, and Colón, who are still in Phase 0.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/Comunicado%2520cierre%2520JULIO 0.pdf Accessed: 07/30/2020</p>	Comunicado Secretaria de Seguridad, departamentos en fase cero y fase uno
July 26, 2020	<p>The absolute lockdown order is extended to August 2, 2020. Regions except Distrito Central, San Pedro Sula, Olancho Choluteca, Atlántida, Comayagua, Santa Bárbara, Lempira y Colón will continue in Stage 1, while those listed above are still in Phase 0.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/Comunicado%2520cierre%252026%2520JULIO 0.pdf Accessed: 07/30/2020</p>	Medidas aplicables hasta el 2 de agosto
August 10, 2020	<p>The Stay-at-Home order extends from August 9th to August 23rd. Movement outside the home depends on the phase of the municipality and the last number of the identification card. Those working in the supermarkets, pharmacies, banks, cooperatives, hardware stores, financial systems institutions, restaurants, authorized markets and the maquiladora sector are to only attend customer as long as the last digit of their identification cards follows the National Circulation Calendar and are still allowed to operate in Phase 0 regions.</p>	Calendario de circulación nacional hasta el 23 de agosto de 2020



	https://docs.google.com/viewerng/viewer?url=https://covid19hon.duras.org/sites/default/files/Comunicado%2520cierre%252009%2520agosto_0.pdf Accessed: 08/30/2020	
August 16, 2020	The international airports open on August 17th, 2020. https://docs.google.com/viewerng/viewer?url=https://covid19hon.duras.org/sites/default/files/COMUNICADO%2520AEROPUER TOS%2520SINAGER%25202.docx-5.pdf Accessed: 01/04/2021	Activación del transporte aéreo internacional
August 20, 2020	The stay-at-home order extends to September 6 th . https://docs.google.com/viewerng/viewer?url=https://covid19hon.duras.org/sites/default/files/com-20-ago.pdf Accessed: 08/30/2020	Ampliación de circulación los fines de semana
September 6, 2020	The stay-at-home order extends to September 13 th . The municipalities of Tela, Atlantida, Omoa, and Cortes are now in Phase 1 of the Gradual and Responsible Opening Process. https://docs.google.com/viewerng/viewer?url=https://covid19hon.duras.org/sites/default/files/Comunicado%2520cierre%252006%2520septiembre.pdf Accessed: 09/28/2020	Nuevo calendario de circulación a nivel nacional
September 13, 2020	The stay-at-home order extends to September 20 th for municipalities still in Phase 0. https://docs.google.com/viewerng/viewer?url=https://covid19hon.duras.org/sites/default/files/Comunicado%2520cierre%252013%2520septiembre_0.pdf Accessed: 09/28/2020	Calendario de circulación hasta el 20 de septiembre
October 4, 2020	The stay-at-home order extends to October 11 th . Municipalities that were in Phase 0 are now in Phase 1, and those that were in Phase 1 are now in Phase 2. https://docs.google.com/viewerng/viewer?url=https://covid19hon.duras.org/sites/default/files/Comunicado%2520cierre%252004%2520octubre%2520DOS%2520SEMANAS.pdf Accessed: 10/29/2020	Calendario de circulación hasta el 11 de Octubre
October 11, 2020	The stay-at-home order extends to October 18 th . https://docs.google.com/viewerng/viewer?url=https://covid19hon.duras.org/sites/default/files/Comunicado%2520cierre%252011%2520octubre_0.pdf Accessed: 10/29/2020	Calendario de circulación hasta el 18 de Octubre
November 4, 2020	There is a national red alert due to Hurricane Eta. http://www.copeco.gob.hn/?q=alerta-roja-a-nivel-nacional-04-11-2020 Accessed: 11/24/2020	Alerta Roja a nivel nacional
November 16, 2020	There is a red alert for the country due to Hurricane Iota. An evacuation order was issued for the following departments: Gracias a Dios, Atlántida, Cortés, Colón, Yoro, Francisco	Asueto por huracán Iota



	<p>Morazán, Olancho, El Paraíso, Choluteca, Valle, and all areas previously impacted by Hurricane Eta.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/Asueto-por-IOTA.pdf Accessed: 11/24/2020</p>	
November 22, 2020	<p>The government releases data on the cases of COVID-19 in 100,000 people along with other data. The average number of cases per 100,000 per department is 1,121.3.</p> <p>https://docs.google.com/viewerng/viewer?url=https://covid19honduras.org/sites/default/files/22112020.pdf Accessed: 11/24/2020</p>	Situación Nacional del COVID-19 al 22 de Noviembre