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Livelihood resilience of informal settlements:
Impacts of COVID-19 pandemic on their local
economy.

A case study in Lima, Peru

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Summary

The Covid-19 pandemic has had serious repercussions in Latin America, from an economic upheaval and social disruption to more than a million deaths as of November 2021. This disruption has harmed the livelihood of households restricting their economic and social capital, and destabilizing strategies available. The capacity of livelihoods to respond to this crisis relies on the socio-economic resilience present; this is particularly true in informal settlements. It is uncertain whether a view of vulnerability or prosperity applies to these settlements during this crisis, especially in countries where they are highly proliferated in the urban fabric, such as Peru. The main objective of this paper is to focus on the livelihood of residents in the informal settlement of Las Delicias de Villa, in Lima, Peru, and its responsive capacity to the impacts of the COVID-19 pandemic on the local economy. An exploratory approach was adopted for this research with the use of a single case study, and the main data collection method applied is qualitative by in-depth semi-structured interviews of households. With the data collected an analysis is done for the main variables identified: economic activities, social capital, strategies, and the COVID-19 pandemic, looking at before pandemic perceptions and a year a half after.

The findings from the fieldwork highlight the importance of informal employment as it embodies available income-generating activities in a time where layoffs were common and unskilled labor force lacks opportunities. It also portrays the role of cooperation at informal and formal networks in the community as a provider of basic goods and services to residents in need. Lastly, the deployment of strategies during the year and a half of the pandemic illustrates the link between the economic panorama and the social setting of the informal settlement as residents would rely on one another for economic support, mainly via casual employment; the community support in new businesses created in the settlement by residents; and the information transfer of various opportunities such as cheap goods, work prospects, and social activities. In conclusion, the findings confirm the theories of urban resilience and livelihoods at informal settlements as facilitation of informal employment and social networks act as safety nets and as main sources for strategy implementation during the pandemic.

Keywords

Informal settlements, livelihood, socio-economic resilience, COVID-19 pandemic, global south

Table of Contents

Summary.....	2
Keywords	2
Acknowledgments	3
Abbreviations	3
Chapter 1: Introduction	6
1.1. Background	6
1.2. Problem Statement	7
1.3. Research Objectives	8
1.4. Research question and sub-questions	8
1.5. Relevance.....	9
Chapter 2: Theory Review	10
State of the Art of the Theories/Concepts of the Study	10
2.1. Resilience.....	10
2.1.1. Urban Resilience.....	10
2.1.2. Economic Resilience	11
2.1.3. Social Resilience.....	12
2.2. Informality: Informal settlements	13
2.2.1. Livelihood Framework and Strategies	14
2.2.2. Social Capital of Informal Settlements.....	16
2.2.3. Economy of Informal Settlements.....	17
2.3. Conceptual Framework	18
Chapter 3: Research Design and Methods	20
3.1. Research Strategy	20
3.2. Data Collection Methods.....	20
3.3. Operationalization	22
3.3.1. Economic activities	23
3.3.2. Social capital	23
3.3.3. Livelihood strategies	24
3.3.4. COVID-19 pandemic.....	25
3.4. Data Analysis Methods.....	25
3.5. Challenges and Limitations	26
Chapter 4: Research Findings	27
4.1. Data Description	27
4.2. Findings Report	28
4.2.1 COVID-19 pandemic.....	28
4.2.2 Economic activities	30
4.2.3 Social capital	33

4.2.4 Strategies	36
4.3. Key Discussion	41
Chapter 5: Conclusions and Recommendations	43
5.1. Conclusions.....	43
5.1.1. Socio-economic conditions and economic development.....	43
5.1.2. Livelihood strategies and resilience	44
5.1.3. COVID-19 pandemic and livelihood strategies resilience	44
5.1.4. Livelihood resilience and COVID-19 impacts	45
5.2. Recommendations.....	46
Bibliography	47
Annex 1	52
Annex 2: IHS copyright form	60

List of Figures

Figure 1: Conceptual framework	19
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List of Tables

Table 1: Indicators for economic activities.....	23
Table 2: Indicators for social capital.....	24
Table 3: Indicators for strategies	24
Table 4: Indicators for COVID-19 pandemic	25
Table 5: Quantitative and qualitative data collected.....	27
Table 6: COVID-19 deaths at national, city, and district level	28
Table 7: Peruvian legislature approved from March 2020 – July 2021	29
Table 8: Chorrillos population by age and education level.....	30
Table 9: Employment rate change in Peru 2020 vs 2019.....	32
Table 10: Public service coverage in Chorrillos.....	37
Table 11: CPI variation during the pandemic	38

Chapter 1: Introduction

1.1. Background

The global COVID-19 pandemic started in late 2019 with the first confirmed patient located in Wuhan, China, on November 17th, and since then almost every country in the world has had confirmed cases during the first year and a half of the crisis (CDC, 2021). This pandemic had an unparalleled impact as the cost of millions of lives, an economic crisis due to government policies responding to the pandemic, and diminished social relationships and interactions reconfigure almost every aspect of societies, particularly the livelihoods of inhabitants. Furthermore, the extent to which countries and cities were affected by the pandemic differed significantly because of built-in environment conditions and governmental approaches. For example, these impacts were exacerbated in low- and middle-income countries (LMIC) and Latin America (LA) due to the lack of governmental resources, high levels of informality, living conditions (Wilkinson, 2020), and high poverty levels, overcrowded households, food insecurity, and limited sanitation (Litewka and Heitman, 2020).

Informality in LA and LMIC is greatly represented by the presence of informal settlements which refer to an urban area where one or more of the following criteria are lacking: security of land tenure, access to water and sanitation, and compliance of building regulations as materials and space (Nolan, 2015). According to UN-Habitat (2020), approximately 1 billion people are living in informal settlements in the world with characteristics such as a “dense population with inadequate household water and sanitation, little or no waste management, overcrowded public transport, and limited access to formal health care facilities” (Wilkinson, 2020). Such characteristics augmented the probabilities of transmission of the virus due to the infeasibility of following most of the recommendations to keep safe such as handwashing with soap for 20 seconds, self-isolating in the case of sickness, work from home, and social distancing of 1.5 meters from others (Farha, 2020).

An aspect that is vulnerable to this crisis is the livelihood of residents of informal settlements. According to Chambers and Conway (1992, p. 6) “a livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living”. It is referred to as a holistic term that pertains to monetary and non-monetary aspects of societies and their lives. In periods of disruptive shocks such as the global COVID-19 pandemic, the livelihood of residents in informal settlements can be affected by limiting the resources available and restricting activities that allow developing strategies. These effects on the resources and activities are embodied as the impacts on the local economy; a representation of the capacity and resources present in the area by which the community standard of living can be preserved and increased based on principles of equity and sustainability (Leigh and Blakely, 2013). Such description depicts socio-economic components as economic activities, social capital, and the consequent strategies that influence the livelihood of inhabitants.

Economic activities in informal settlements are characterized by a mix between informal and formal economy, sustaining a ‘day to day’ scheme. In that dual economy, the informal

agglomeration has a stronger presence, where its main elements are described as being “done in a way that it evades taxes and social security contributions; is done without any presence of work regulation, in term of labor regulation, quality control or security precaution; and, most importantly, relies on the presence of social network/capital” (Tunas, 2008, p.28). According to Oviedo, Thomas & Karakurum-Özdemir (2009), the informal economy can be determined by two factors: either “stringent and costly regulations, and lack of opportunities... or due to mediocre benefits of being formally employed, preference for self-employment, and lack of trust in public institutions” (p. 1). In LA and LMIC there is a mix of factors to consider, being the lack of opportunities and costly procedures the forefront reasons for the persistence of an informal economy, and in this persistence, the effect of external shocks as the COVID-19 pandemic can be a deterrent for development.

Social capital, according to Hawking and Maurer (2010, p. 1778) is defined “as direct and indirect resources that are a by-product of social networks and social support systems amongst family, friends or community members”. Moreover, the social conditions in informal settlements are determined by several variables such as demography, social networks, community sense, safety and security, cooperation, and health (Wilkinson, 2020), which renders the capital of the area. These aspects influence how residents of the area can improve or deteriorate their livelihood, and its ability to be adaptive and resilient to the COVID-19 pandemic.

Lastly, between the economic activities and social capital of an area, there are different strategies available to the population to ensure a sustainable and resilient livelihood. Those strategies are represented by the decisions meant to promote economic development and overall well-being. In informal settlements, these have a heavy reliance on social relationships, networks, ties, and accessibility that in different combinations create opportunities for residents to develop. In periods of crisis, the strategies are designed to be able to cope with stress and shocks, improving the capacity of households to survive and thrive taking advantage of the current situation, and building upon the resources available.

1.2. Problem Statement

Given the dimensions of the local economy in informal settlements, strains from the COVID-19 pandemic on this type of urban space and its reaction are still uncertain. Government officials may characterize informal settlements as decadent spaces where intervention to transform them is deemed necessary to ‘save’ the residents. Traditionally, instability and vulnerability are common characterizations, nevertheless, authors like Turner (1976) and Frankenhoff (1967) portray a view of prosperity and betterment, especially for the urban poor who are unable to obtain housing in the private and public sector, that creates a dichotomy of hope and despair (John Turner, 1976 in Chambers, 2005). Furthermore, informal settlements conditions are described to be resilient to external shocks based on socio-economic indicators such as the type of employment and social networks that can provide a unique allocation of resources during stress periods.

Considering that LA and LMIC are particularly affected by the COVID-19 pandemic, this research will focus on informal settlements in Lima, Peru. The development of informal settlements in Lima started around 1940 with a wave of migrants from the rural areas looking for better opportunities in the centralized capital. A new influx of people settled in the periphery of the city due to the unavailability of affordable housing from the state and the private sector, with the goal of homeownership (Matos Mar, 1958). During the first year and a half of the pandemic, Peru was the most affected country in the world with more than 5,000 excess deaths per million, an increase of 123% to the historical average for the same period (Financial Times, 2021). At the same time, the approximate seventeen million labor force was reduced by more than 6 million people, affecting particularly unskilled labor force, women, youth population, migrants, and self-employed ones, which embody most of the labor force in informal scenarios; all while informality itself grew (ILO, 2020).

This paper focuses on the livelihood of residents in the informal settlement of Las Delicias de Villa, in the district of Chorrillos, in Lima, and its responsive capacity to the impacts of the COVID-19 on the local economy. Informal settlements in Lima differ from the rest of the urban space in several aspects such as spatial design, the economic and social settings of the area, and institutionalization. Inside that differentiation, there are two opposing perspectives where one considers the space as vulnerable and unable to cope with stresses, and the other concentrates on its ability to be adaptive and resilient which grants them an opportunity to face the pandemic in a better position than thought. These factors influence community livelihood and create a different set of conditions for settlers living in the area.

1.3. Research Objectives

The research main objective is to explore the resilience of livelihoods in the informal settlement of Las Delicias de Villa, in Lima-Peru, to impacts on the local economy in the first 1.5 years of the COVID-19 pandemic.

1.4. Research question and sub-questions

Main research question:

M.Q: How resilient are the livelihoods of an informal settlement, in Lima, to the impacts on the local economy in the first 1.5 years of the COVID-19 pandemic?

Sub-research questions:

S.Q.1: In Lima, what are the socio-economic conditions in an informal settlement that impact the economic development of the area?

S.Q.2: In Lima, what makes livelihood strategies in an informal settlement resilient?

S.Q.3: In Lima, how are livelihood strategies in an informal settlement impacted by the COVID-19 pandemic?

1.5. Relevance

The COVID-19 pandemic had a devastating effect around the world in its first year and a half, still causing struggles for many countries in 2021, and the near future. There is an increasing number of studies into this subject such as health effects, policy response, socio-economic consequences, and more, nevertheless, it mostly focuses on urban centers or cities as a single urban entity.

This study would develop the research field of COVID-19 in cities by looking particularly into informal settlements, especially in low- and middle-income countries where it is a common practice to find these urban spaces. The research provides knowledge on the socio-economic resilience of informal settlements and their coping capacity against crisis periods such as the COVID-19 pandemic. It focuses on understanding the conditions of the local economy of these areas and the dynamics between its main components of economic activities, social capital, and strategies, before the start of the pandemic and in the present, a year and a half later.

For urban policy and management, this research develops a comprehensive basis to assess the vulnerabilities of informal settlements regarding their local economic panorama. It provides further analysis on local socio-economic dynamics and its coping capacity to an external shock such as the COVID-19 pandemic. With this, public officials can identify the advantages and limitations that these urban areas uphold to external shocks and aim to strengthen certain conditions while improving weak elements.

Chapter 2: Theory Review

State of the Art of the Theories/Concepts of the Study

2.1. Resilience

The theory of resilience is first developed under ecological science, where Hollings (1973, p. 17) employs the term of resilience to “determine the persistence of relationships within a system and is a measure of the ability to absorb changes of state variables, driving variables, and parameters, and persist”. From that point forward, the concept of resilience has been applied to different practices such as psychology, social work, physics, engineering, urban studies, and more. The definition of resilience that is more relevant for this research is depicted by Bassett et al. (2012, p. 17) as “the ability of an entity - asset, organization, community, region - to anticipate, resist, absorb, respond to, and recover from a disturbance”.

2.1.1. Urban Resilience

Urban resilience is an approach to the theory of resilience, focusing on urban spaces, especially cities, considering cities as complex network systems, or as according to Meerow, Newell & Stults (2016, p. 45), “complex, adaptive, emergent ecosystems composed of four subsystems - governance networks, networked material and energy flows, urban infrastructure and form, and socioeconomic dynamics”. This view of cities as different subsystems that are interconnected vertically and horizontally gives way to the notion of complexity and network systems that consider a variety of aspects for urban resilience.

Furthermore, this concept of urban resilience can be classified into various dimensions that reflect the complexities of urban areas. An accurate depiction of urban resilience is developed by Ostadtaghizadeh et al. (2015 in Gomes & Pena, 2019), where the main dimensions that model this concept are physical, natural, economic, institutional, and social, considering the urban systems of cities, and identifies the different paths of response to disturbances and impacts that could disrupt the equilibrium. The notion of equilibrium refers to the steady-state of cities, although it can be interpreted according to its systems with different levels of equilibrium or in a transformation process.

Depending on the type of disturbance being faced, the different types of urban systems can be undermined to various degrees. For example, the Ebola outbreak in Liberia led to the depletion of economic resources, limited access to social networks, and a disruption of government health services (Alonge et al. 2019); in the United States the economic crisis from the housing market in 2008 created a ripple effect to markets worldwide; the Hurricane Katrina disaster of 2005 in the USA and continuous natural disasters in certain areas of the Philippines destroyed houses, small and medium enterprises went bankrupt, and thousands of lives were lost (Hawkings & Maurer, 2010; Usamah et al. 2014). There is a prevalence of impact towards the economic and social system from crises which even at the local levels will display a different magnitude, depending on the resilience of the area.

In the case of the COVID-19 pandemic, there is abundant literature related to its impact mainly from a health perspective, but there is an increasing body of research towards this crisis and cities. At the social level system, the focus has been on social tensions, sense of community, structural inequalities, and more recently into social innovation and collaboration; meanwhile, at the economic level, the research has been around specific sector impacts, governmental deficit, and response, and built-in inequalities (Sharifi & Khavarian-Garmsir, 2020). The emphasis on inequalities in cities signs on the vulnerabilities that can provoke substantial changes due to the pandemic, particularly in spaces such as informal settlements where socio-economic conditions such as labor, social interactions, public services, and environment are factors that can be detrimental. As such, in both systems mentioned the resilience present is an element that directly influences the possible effects and long- or short-standing persistence of it.

2.1.2. Economic Resilience

According to Martin (2012, in Modica & Reggiani, 2014, p. 5), economic resilience is “the capacity of an economy to reconfigure, that can adapt, its structures (firms, industries, technologies, and institutions) to maintain an acceptable growth path in output, employment, and wealth over time”. The economic resilience of an urban area is determined then by the economic system in place, and whether it can modify its components such as industrial and business structure, financial and governance arrangements, and labor market conditions towards an adaptive environment able to change rapidly and successfully. Alongside this view of economic resilience, Borsekova et al (2018) identify a diversified industry, innovation forward, reliable infrastructure, and skilled and experienced labor force as key elements of economic resilience.

Furthermore, Martin and Sunley (2015) state economic resilience as a local economy's ability to withstand external shocks to its developmental growth path, by “adaptive changes to its economic structures and social and institutional arrangements, to maintain or restore its previous developmental path, or transition to a new sustainable path characterized by a fuller and more productive use of its resources” (p.13). With it, the local economy and the adaptive capacity to recompose its dimensions, aiming to persist, are seen as a key element of the economic resilience of an area.

Economic resilience and crises

According to Simmie and Martin (2010), the main indicators for analyzing the economic resilience are related to innovation as a key to generating local economic variety, diversity as a degree of local sectoral variety, the competence of firms, human capital, and infrastructure of the area. Factors that have a different ranging influence on economic development, depending on the area studied. Informal settlements' economic resilience particularly relies on business diversity, especially for independent workers, and human capital for its larger workforce available.

In Simmie and Martin study following the shock of changes in markets, technology, policy regime, and the economic recessions of 1980 and 1990 in England, they analyzed the post-

disaster process of two cities: Cambridge and Swansea. While Cambridge went through a reorganization of the local economy around a new high-tech development path through a phase of exploitation and growth to a phase of conservation, Swansea was dependent on the primary source market as mining and became strained by foreign direct investments. The authors explain how in Cambridge “the steady market-led innovation, high-tech SME, and early cluster development provide it with the resilience to weather the industrial downturn of the recession”; whereas in Swansea “the economy lost its main industry to international competition in the availability of raw materials and more efficient processes... was reliant on the external knowledge brought into the area by foreign-owned companies which increased rigidity in an industry-driven globally by rapid technological change, reducing its resilience” (pp.9-12). The innovation and diversity components were the key differences between the cities that permitted one to cope and thrive in the crisis period.

Although new research has been done on the economic effects of the COVID-19 pandemic, an economic resilience lens study is still limited. Nevertheless, some authors have presented early reports and context-specific investigations. Rahmadana and Sagala (2020) studied the economic resilience of households in Medan City, Indonesia to the continued application of physical distancing. According to the authors, 81% of participants and their families with daily income will be able to survive between 0 to 4 weeks if the measure continues, and about 70% of participants with income ranging between less than 100 and 200 Indonesian rupees monthly, will survive economically between 0 to 4 weeks as well.

2.1.3. Social Resilience

Social resilience is related to the social subsystem of urban resilience from Gomes & Pena (2019). In this regard, Adger (2000, in Sabatino, 2019, p. 360) defines social resilience as the “ability of a community to resist the same shock using the social system of relations between individuals, their individual response capacity, and the capacity of social organizations and the community to adopt, support, absorb, and cope with change and threats of various kinds”. The same author also states the relationship to economic dimensions, which clarifies the duality and complementary capacity of the concepts. Keck & Sakdapolrak (2013), describe a perspective of social resilience and its main components that relate to a people's approach as coping capacities to immediate adversities; adaptive capacities from past learning and future adaptation; and transformative capacities to change institutions in face of crises. From a local urban scale, being neighborhood or community, the presence of active residents' networks, inclusive participation of actors at decision-making processes, and equal access to public services are some of the main concerns to social resilience (Borsekova et al. 2018)

Social resilience and crises

Usamah et al (2014) study the vulnerability and resilience of informal settlements in the Philippines towards natural disasters in the area, highlighting the geographic, economic, housing, and tenure vulnerability as the main components sought out in these areas. According to the research, social resilience is portrayed through multiple elements such as trust, social cohesion and sense of community, community involvement, respect for culture and values, and

communication and information. Such elements help in reducing the vulnerability of communities. The social domains in areas that are particularly deemed vulnerable have a unique part in building a resilient environment against external shocks. These elements identified can generally be found in informal settlements as a driver for resilience and as the main form of social capital, nevertheless, it also embodies context-specific degrees which derive from the demographic composition of the settlement, such as national culture, gender, religion, among others.

The results from Usamah et al research are not an exception for understanding social resilience in light of crises. Alonge et al (2019) study on the role of community resilience in addressing the Ebola outbreak in Liberia has similar results without undermining the impacts of the crisis itself. The authors recognize the damage brought upon by distrust, fear, death, psychological trauma, and the importance of community cohesion where trust in leadership plays an essential role in building resilience. For example, “communities with strong leadership and social capital before the Ebola outbreak were able to recover more quickly, limit the spread of the disease, and minimize the consequences of the disease by initiating behavioral changes and making the most efficient use of limited resources available” (p. 9).

The COVID-19 pandemic impacted these elements of social resilience as the death of millions harmed social networks and the governmental approach to the crisis by enforcing lockdown measures and social distancing allowed for elements such as social relations, cultural activities, and a sense of identity to become vulnerable. Communities that are dependent on their social structure to persist and thrive, such as informal settlements, can suffer a social fracturing due to the pandemic and to what extent will be influenced by the resilience level and present social capital.

2.2. Informality: Informal settlements

In urban practice, informality is concerned with a spatial categorization where illegal and/or unplanned occupation of land for housing is done by settlers who, in most cases, were not able to obtain viable options in the private or public market and is characterized by a lack of urban infrastructure and/or basic public services (Calderon, 2005). John Turner (1976) highlights the role of informality as an entry point for migrants and a solution for the housing shortage, at least in a temporal frame, while embracing characteristics of optimism towards a better future and great social capital. The growth of informal settlements, particularly in developing countries, is steadily rising in the last decades due to a diverse range of factors, especially in search of better economic opportunities.

In Peru, an informal settlement is formed by a group of families that ‘invade’ a piece of vacant land with little to no value, normally around the periphery of the city. The process of the settlement on the land is the division of plots between the families and immediate edification of housing with any type of material available. Simultaneously, a settler association is founded as a representation that is in charge of the defense of the plots arranged, collective work, and allocation of public services. Families normally pay a monthly fee to this association to afford

their job but no rent for the land is paid although later when more lots are made available and public services provision is present, rent and sublet are common (Matos Mar 1958; Calderon 2019). It is worth noting that the process through which informal settlements are formed in Lima and other cities in Peru does not follow the same steps. According to Espinoza and Fort (2020), a significant number of informal settlements are initiated through a sales agreement but mimic the later process of obtaining infrastructure and services by the municipalities. With that organized process life in an informal settlement commences.

According to Calderon (2020) the population of settlers in these urban areas of Lima, Peru is approximately 4 million as of 2012, which represents a growth of 100% from 2002. Contrasting this number to the total population growth of inhabitants in informal settlements at the national level (0%), the difference portrays a migration phenomenon towards the capital, Lima. In a study by Espinoza and Fort (2020) the authors state that the cumulative urban expansion of Lima between 2000-2018 was almost 40% from which approximately half was illegal occupation and 40% was informal occupation. In the context of Peru, the difference between illegal and informal is that the illegal form does not account for any right of property over the land been occupied, while the informal has some type of imperfect property right, but both lack urban infrastructure and services.

2.2.1. Livelihood Framework and Strategies

According to Chambers and Conway (1992, p. 6)

“a livelihood comprises the capabilities, assets, and activities required for a means of living; a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long term”.

Despite embracing the capabilities, assets, and activities as the means to make a living, authors argue that these are not to be solely understood as such but to view them as a holistic notion. De Haan and Zommers (2005, p. 32) refer to livelihoods as not only “a matter of material well-being, but rather that also includes non-material aspects of well-being”. Components of livelihood have an important role in the creation of value and security, social dynamics, and reproduction.

Along with these elements of livelihoods, it is crucial to analyze the choices made by households, which represent an unfolding of strategies derived from the activities and assets of residents. The strategies employed have different purposes and aims and are heavily influenced by the environment. Rakodi (2002) states that those strategies can be performed to obtain income, fulfill kinship obligations and responsibilities, develop mutual support networks, and it is dependent on the assets available and accessible to the household. Hossain (2005) identifies livelihood strategies as principles for obtaining goods and tackling economic and social disturbances that affect the development of individuals, households, and communities.

The effects of crises on household livelihood strategies are relevant as it limits the resources of urban and rural areas. The limitation of assets and consequent activities delineate the development horizon of households although it is not an absolute restriction. Humphries (1982, in De Haan and Zoomers, 2005) identifies the limitation as structural constraints from which households still operate with relative autonomy through decision-making processes or strategies. Through a household strategies-based approach, the livelihood studies of inhabitants transformed its focus from income and consumption that required intervention to a people-center that highlighted objective needs and day-to-day life.

The tangible and intangible assets presented by Chambers and Conway are unfolded into five dimensions as human, natural, financial, social, and physical (Meikle, 2002). These assets vary depending on local context but in low-income urban spaces such as informal settlements, human capital provides the basis for livelihood strategies in the form of labor and social capital as households, networks, and community ties. In informal settlements, the human capital is characterized by the economic context such as labor and employment, the main sources of income for households. Both components are mainly represented by informal activities that are unstable and fragile. Lack of access to credit and financial institutions, lack of savings, and insecure employment compromise the development of human capital in these areas. Affected by external shocks, the impacts can be considerably higher depending on the context.

Mirzoev and Sedaghat (2020) in their study about the impact of COVID-19 on livelihoods and SMEs in Tajikistan show a decline in employment and income which mainly affected the capacity for acquiring basic food products, and make utilities, especially when prices rose due to the global-market decline. Similarly, results of affected livelihood are described by Joko, Amri, and Arditya (2020) where 34.5% of households in Indonesia responded to have available means for the next week and 32.8% responded to have no available means, and 50.6% describe as doubtful to be able to survive for the next two months due to the uncertainty of continued measures by the government which limits their livelihood. Equally, Rahmadana and Sagala (2020) found in their research in Indonesia that if the measure of physical distancing continues to be applied residents in the lower quintile income bracket will be able to survive approximately 1- 4 weeks.

Focusing on the social capital asset, it is identified as a valuable tool for communities to reach different goals. Relationships and networks can improve the quality of life through opportunities made available as strategies. Phillips (2002, p.134) highlights how inhabitants of low-income areas,

“In the absence of other assets, poor people rely on their relationships, associations, and networks to survive on a day-to-day basis – for example, sharing and reciprocating labor, cash, food, information, friendship, and moral support. In times of crisis, such as ill-health, death, land clearances or fire, social capital is one of the few resources upon which poor people can draw”.

Accentuated by times of crises as the COVID-19 pandemic, households in informal settlements build livelihood strategies upon their social capital, aiming to develop skills, organize the area,

and acquire knowledge to increase their access to resources, making it a critical asset that conserves and improves the well-being of the inhabitants. In a study performed by Dershem and Gzirishvili (1998) on informal social support networks and household vulnerability from Georgia after the collapse of the Soviet Union, the participants with a higher degree of participation in informal social networks considered their household less vulnerable towards food security, economic situation, and shelter condition.

These findings show the vulnerability towards exogenous shocks that settlements face, and to which their socio-economic resilience plays a fundamental role. As described in the previous sections, conditions in informal settlements describe a context of resilience given their social capital and economic activities that allow for flexibility and cohesion, illustrated also by Alfaro d'Alencon (2018) “the capacity of flexibility, adaptation, and resilience; in other words, as a chance to create adaptive environments, abandoning the idea that informality exists for purely survivalist purposes” (p. 7). The extent to which socio-economic resilience enables the livelihoods of inhabitants to endure, and probably thrive, from the pandemic impacts on the local economy is a question that guides the present research.

2.2.2. Social Capital of Informal Settlements

The main perspectives on social capital come from Bourdieu (1986) who focuses on resource gain from participating in a large network; then Coleman (1988) by highlighting the cooperation and relation between and among actors as families and communities; and lastly, Putnam (1993) argues that the emphasis is on interpersonal trust, civic engagement, and obligations and values. Those conceptualizations of social capital were further developed as bonding, bridging, and linking. Hawkins and Maurer (2010) mentioned that these refer to “relationships amongst members of a network who are similar in form; relationships amongst people who are dissimilar in a demonstrable fashion such as age, status, race, education; and the extent to which individuals build relationships with institutions who have relative power over them (p. 1779-1780), respectively.

These aspects are increasingly important for matters of understanding the urban dynamics and economic activities in informal settlements, as well as for policy practices of governments (Evans, M & Syrett, S 2007). The social capital performs as a vital element for the day-to-day development of residents, particularly for the economic development of the area. From a complementary economic perspective, Evans, M & Syrett, S (2007) characterize social capital means and ends as processes that “emphasize the importance of a range of socio-cultural factors within which economic activity is embedded and which provide the vital frameworks for economic action” (p.56).

Social capital performs a vital role in communities when facing internal and external disturbances. When challenged by crises, the relationship between inhabitants allows for a more resilient process against adversities and built-in vulnerabilities, taking the form of sources of information, technological knowledge, market access, and complementary resources (Torres, Marshall, Sydnor 2019). In a research of the relationship between social capital and Hurricane Katrina by Hawkins and Maurer (2010), this form of capital operated as an

exchange of resources and support via multiple networks, facilitating families to survive the storm. According to the authors, families were able to count on immediate household members and their connections to neighbors, describing the social capital of the area as a means for short- and long-term survival. A similar experience is described by Alonge, et al. (2019) when describing social networks and leadership as factors of the communities in Liberia that acted as enabling collective actions within communities, sustaining the livelihood of households during the Ebola outbreak.

The different forms of social capital that households in an area build upon, facilitate the process of problem-solving. According to Amis (2002, p. 104) “there are reciprocal exchanges that exist between individuals and households which allow local citizens to work together in identifying and acting on local problems or in taking local initiatives” as the global pandemic. At informal settlements, the social capital can then be interpreted in the forms of a network of support from friends, the community, or institutional organizations, participation in CBOs, access to loans, childcare, accommodation, labor opportunities, scarce goods and services, and information (Torres, Marshall, Sydnor 2019; Rutherford, Malcolm, Grierson 2002; Moser, 1998). Given this, said capital is readily present as the social resilience in these areas is described as high. In response to the COVID-19 pandemic, a similar process could have been proven useful to secure not only the social cohesion of the area but also go beyond and ensure a sustained livelihood for the inhabitants.

2.2.3. Economy of Informal Settlements

General factors that influence the local economy in informal settlements are based on their human capital, financial accessibility, technological resources, limited market, public services availability, government legalism, and location (Tunas, D 2008). Without regard to the conditions that influence the local economy, basic economic measures such as income and employment in informal settlements are overall similar at a global scale: low-income households and a majority informal employment. According to the National Institute of Statistics and Informatics of Peru, or NISI, (2020), the inhabitants in the periphery of Lima where informal settlements are mostly located, are in majority classified as medium-low and low strata. This translates into an average monthly income of 220-270 US dollars for medium-low, and 220 US dollars or less for low. Nevertheless, the informal economy is recognized as a source of livelihood and flexible safety-net for millions of inhabitants, low-skilled or not.

From the lenses of informality, economic activities can be approached as a result of globalization and targeted economic development and the role of large firms in search of reduced input costs and labor, or because of stringent and burdensome procedures and regulations of the state. Moreover, it is also conceptualized as an approach that people are the ones selecting the option of working in the informal economy, based on preferences and cost-benefit analysis (Portes, 1997; De Soto, 1989; Hirschman, 1970). Informal economy embodies the economic activities and employment without registration to the state, with a lack of social and legal protection, vulnerability, and flexibility. Following said characterization, ILO classifies 61% of the global workforce under informal employment (Webb, McQuaid, Rand, 2020). The informal employment varies from country-specific context depending on a

multiplex of factors, wherein Peru represents 66.4% of the economically active population at the national urban level, and specifically 58.7% in the city of Lima (NISI, 2020).

In periods of crises, the conditions of the informal economy, especially in informal settlements, provide an opposing view between a place of flexibility and an opportunity for searching income, as a safety net, or as a source of income uncertainty and absence of social security (Joko, Amri, Aditya 2020). During crisis periods a common occurrence is the downsizing of enterprises or complete shutdown where the most affected are workers being laid-off but later incorporated in the informal economy mainly because of lack of alternative formal jobs, lack of insurance and savings, or compensations. The informal economy works as a means for households to obtain income, at least in a temporal manner until the economic panorama starts to recuperate.

During the COVID-19 pandemic, given the lockdown measures, standstill of economic activities, social distancing, and many more governmental restrictions, the informal economy workers might be disproportionately affected, especially when receiving minimal government support. According to Rand (2020) the countries of Spain and Italy had different stakeholders advocating for support of workers in informal conditions to overcome the distress of the pandemic. However, it could, at the same time, function as an income source to the newly unemployed workforce, or also to self-employment and business venture.

Research performed by Joko, Amri, and Aditya (2020) about the impacts of the pandemic on informal workers in Indonesia found that 58.2% of workers experienced a decline in income, and 33.2% lost their income. Regarding their job stability, 37.7% mention to have lost their job, 32.8% continue the same type of work, and the rest switch jobs. The authors state that, despite some of the negative findings, “the sector most affected in general is the formal sector, which is characterized by a wave of massive layoffs and then also followed by a wave of job informalization” (p. 5), and that past crises experiences proved to make the informal economy relatively more resilient.

2.3. Conceptual Framework

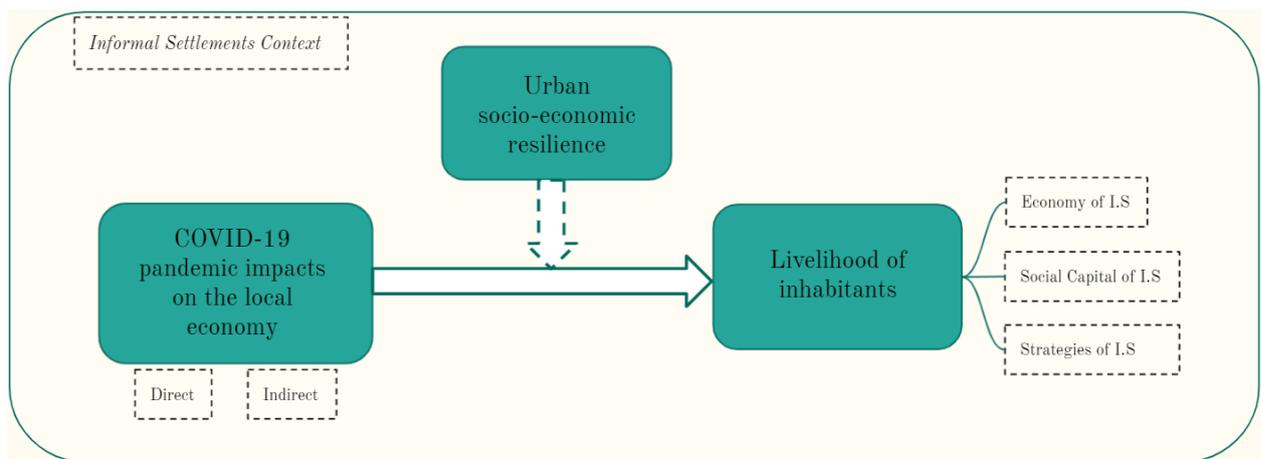
Based on the previous sections of this chapter, the following conceptual framework establishes the relationship between the variables discussed. The first component is related to the COVID-19 pandemic and the effects that it caused, accounting for its direct consequences such as deaths, and indirect ones such as the government measures and restrictions applied to safeguard citizens from the disease. This is the independent variable in the framework that has a direct relation to the dependent variable.

According to those effects of the pandemic, the impacts in the informal settlement are classified along with the local economy representation of economic activities, social capital, and strategies employed by its residents. These components make up the livelihood of inhabitants and are referred to as the dependent variable. The impacts would portray two points of reference

to analyze the components of livelihood as before and after the pandemic, considering that each element has been affected either directly or indirectly by the pandemic.

Lastly, there is a concept that is involved in this relationship that is the urban socio-economic resilience, especially in informal settlements. The characterization of informal settlements displays a particular resilience at the economic and social level that would display built-in assets and capacities for coping against external shocks such as the COVID-19 pandemic and inherently influences the degree and process of impact in the livelihood of the residents.

Figure 1: Conceptual framework



Chapter 3: Research Design and Methods

3.1. Research Strategy

This study takes an exploratory approach, looking at the resilience of livelihoods to the impacts on the local economy of informal settlements in the first 1.5 years of the COVID-19 pandemic. The thesis employs a case study strategy to achieve a thorough understanding of the phenomenon under investigation. This is an appropriate research approach when there are few units of analysis and a large number of variables, and the researcher needs to rely on extensive questioning into a unique and dynamic phenomenon within its bigger context.

The case study is the most appropriate choice for this research for multiple reasons such as the deep and detailed investigation required by the topic, there is no behavioral control needed, as well as the consideration of real-life setting and contemporary context (Yin, 2008). The main method approach for this study is qualitatively based on in-depth semi-structured interviews to capture the perception of residents around the variables investigated. This approach provided for new primary data and was complemented by quantitative secondary data collected, although limited. For purposes of this research, new primary data was required since there are no recent available studies for this matter. The secondary sources were used to gather quantitative data, focused on context information, particularly to portray district-level characteristics where the case study is located, and also at the city of Lima, which allowed for triangulation of data. The approach for secondary data and its quantitative dimension is explained in the following sections.

For this research, a single case was conducted in the geographical context of Lima, Peru. The case selected for this purpose is the informal settlement called Las Delicias de Villa, inside the district of Chorrillos, situated in the southwest of Lima. Key characteristics from this settlement are its foundation in 1947 by migrants, its extension of approximately 3,000km squared, and approximately 20,000 residents. The settlement has lacked basic public services provision such as water supply and waste management, and its location is next to a natural swamp reserve. The socio-economic strata of the population are between low and middle-low (or according to the NISI 'C' and 'D'). For a more detailed view of the socio-economic distribution of households in the district of Chorrillos and the settlement of Las Delicias de Villa, the Annex 1.2. illustrates the latest classification done by the NISI. Lastly, the unit of analysis for the case study is the household level as it is the singular unit representative of the settlement and the dimensions of a local economy, especially referring to its socio-economic component.

3.2. Data Collection Methods

The study primarily focuses on the use of primary data from the qualitative interviews done during the fieldwork and is complemented at a general level with quantitative secondary data. The quantitative section in this study is representative of the district and city where the informal settlement is located but not of the specific area since there was no information available. The

primary data collection was done via in-depth semi-structured interviews with households of the informal settlements while the secondary data collection relied on official report documents at the district, city, and national level about socio-economic indicators as consumer price variations, (un)employment figures, COVID-19 deaths, governmental decrees, demographics, serving as a triangulation tool.

Primary data collection and sample size and selection

The use of in-depth semi-structured interviews was the method of collection for primary data sources. This method enables gathering opinions and perceptions of the units of analysis regarding the topic of investigation (Thiel, 2014). Furthermore, the interview helps corroborate, or disprove, hypotheses built around the investigation being done for which the researcher needs to exercise caution (Yin, 2008).

The interviews were developed based on the operationalization of the variables, which also defined the research's emphasis. An interview guide was prepared ahead of time to assist in the execution of the interview (see Annex 1) to ensure a clear division of sections that reflects the operationalization of the variables, as well as to provide a coherent framework that delivers the data needed for the research, and to prevent distractions during the discussion while preserving the flow of conversation.

For the application of the primary data collection, non-probabilistic purposive and snowball sampling was applied. A first respondent was found via online groups on social media to which it was later asked to provide contact information for new respondents in the settlement until the necessary interviews are performed. When issues encountering new respondents were faced, contact from previous researchers whose work was on the area was requested to enable further encounters.

As for this research, the interviews were done with households in Las Delicias de Villa which portrayed first-hand information of the resilience of livelihoods to the impacts of the local economy by the COVID-19 pandemic. A single interview per household was performed allowing the researcher to discuss the livelihood framework and socio-economic resilience theory at this level until data saturation was reached. It is important to note that the number of interviews performed was based on obtaining “a new and richly textured understanding of experience” (Sandelowski, 1995, p. 183) and the data saturation process.

The data saturation model “relates to the degree to which new data repeat what was expressed in previous data” (Saunders et al., 2018, p. 1897) but viewed this as an incremental process and not a unique point on research. The purpose of data saturation in this research focuses on gathering the perceptions of residents in Las Delicias de Villa around two points in time for three components of resilient livelihood: before pandemic and present time of economic activities, social capital, and strategies. Between interviews 8 and 10, the information provided by respondents was stagnating without new insights on the phenomenon investigated.

Also, it is worth noting that 100% of codes were found in the first 8 interviews and two more were added to validate the data saturation. The sample size of 10 interviews also provides

results reliability following the work of Guest, Bunce, and Johnson (2006) that around 92% of codes are usually identified between 7 to 12 interviews. This accounted for 2 interviews per sub-unit of the settlement. With the use of this method, the emphasis was put on the variables of economic activities, social capital, and strategies in a resilience lens.

Secondary data collection and sample size and selection

Secondary data allows one to delve further into the topic and gain a better understanding of the phenomenon since it is made up of previous research results that can be reused in a new study on the same or a similar topic (Thiel, 2014). It acts as a data triangulation tool and a comparative collection of findings to the information collected during the interviews. Moreover, the secondary data serves as a reference to the interview guide for the primary data collection.

The secondary data of the research is mainly quantitative and focuses on three main aspects: the measures implemented by the government regarding the control of the COVID-19 pandemic, demographic context data on the city of Lima and the district of Chorrillos where the informal settlement is located, and the first initial reports on the impacts of the pandemic in Lima and overall Peru. The use of quantitative secondary data helped in comparing and complementing insights gained during the interviews from the situation in Las Delicias de Villa but it refers only to the district, city, and country-level and not the informal settlement itself. The use of this approach was limited due to the lack of detailed information in the reports.

The main sources for these purposes are the National Census of 2017 by the NISI which provides demographic data of the district such as population, employment, education, housing, and public services; the Consumer Price Index reports from NISI for 2020-2021 that shows the price variation of the basic goods basket; the NISI informal production and employment 2020-2021 that portrays initial outcomes on employment, production, and capital during the pandemic; the 2020 Monetary Poverty report by NISI where updated figures on poverty numbers of Lima and its districts is shown; the OpenCovid database from the Health Ministry which details the number of deaths by the pandemic on Chorrillos; the judicial system of the government to review and synthesize the main regulations and measures implemented by the state, and other governmental reports.

3.3. Operationalization

From the literature review, the livelihood framework provides a lens of strategies that households apply based on their assets. These strategies vary according to context and are particularly important for coping with external shocks such as the COVID-19 pandemic. Representing this concept at the informal settlements resilience is a highlight at the economic and social components which link to assets of the livelihood approach. For which, how resilient are livelihoods to the impacts of the COVID-19 on the local economy guides the following section. The concept of livelihood is linked by its dimensions of economic activities, the social capital, and strategies of informal settlements, while the COVID-19 pandemic is characterized by direct and indirect effects, mainly health consequences for the former and measures from

the government to counteract the disease for the latter. In the following subsections, the variables and indicators derived from the literature are operationalized.

3.3.1. Economic activities

Economic activities portray a representation of the economy of informal settlements. According to theory, informal settlements have a distinct economy, mostly characterized by its informal aspect but not exclusively (Tunas, D 2008). Due to this factor, economic activities in this space can be in constant change, and easily affected by external impacts; however, these same characteristics are described to be resilient. Residents respond to a crisis such as the COVID-19 pandemic by increasing their labor pool, by carrying out more jobs, or including non-economic active household members into labor. One of the objectives of the research is to analyze to what extent the economic activities allowed for the resilience of the informal settlement during the first year of the pandemic based on employment opportunities and flexibility of work. Accordingly, the following set of indicators work through as a guide to measure the impacts and the ability to maintain the carrying out of employment.

Table 1: Indicators for economic activities

Concept	Variable	Indicator	Data type (quantitative/qualitative)	Data source (primary/secondary)
Livelihoods	Economic activities	Type of employment	Qualitative	Primary
		Form of employment	Qualitative/Quantitative	Primary/Secondary
		# of household members working	Qualitative	Primary
		Employment change	Qualitative/Quantitative	Primary/Secondary
		Easiness to carry out the job	Qualitative	Primary
		Facility to access to jobs	Qualitative	Primary
		Perception of measures against Covid and employment	Qualitative/Quantitative	Primary/Secondary

3.3.2. Social capital

Social capital is the second variable analyzed, especially given its significance in informal settlements. The social ties, socio-cultural factors, and overall community involvement provides a framework for social support, economic development and can provide competitive advantage (Evans, M & Syrett, S 2007; Phillips, 2002). At the informal settlements where the community relies on such components, these can translate into resilience to externalities such as the COVID-19 pandemic. The use of social networks for cooperation, support, and aid, between family members, friends, and the community are factors able to cope with changes from the pandemic, helping households going through issues, survive. The research then focuses on the indicators below to measure how social capital worked as a safety net against the impact of the COVID-19 pandemic and to what extents these were affected.

Table 2: Indicators for social capital

Concept	Variable	Indicator	Data type (quantitative/qualitative)	Data source (primary/secondary)
Livelihoods	Social capital	# of family members in the area	Qualitative	Primary
		# of friends in the area	Qualitative	Primary
		# of social networks involved	Qualitative	Primary
		Type of social activity in the community	Qualitative	Primary
		Social relationships in the community	Qualitative	Primary
		Perception of cooperation and support in the community	Qualitative	Primary
		Perception of social ties in the community	Qualitative	Primary
		Perception of measures against Covid and social networks	Qualitative	Primary

3.3.3. Livelihood strategies

The last dimension is described as livelihood strategies. According to Chambers and Conway (1992), it involves the activities, assets, and gains, and outputs that people deal with to make a living. Furthermore, the strategies that residents rely on have unique conditions which are influenced by their assets, especially social capital and economic environment, as it is represented in the case of informal settlements. The use of multiple strategies from households such as performing multiple jobs, facilitating new employment and work ventures, associating with neighbors for grocery shopping, sub-renting rooms, and reduction of expenditure are all common paths to take while in crisis periods. From the literature review, the indicators laid out are intended to identify said conditions in the informal settlement and the strategies, which relate to economic activities and social capital, that are present.

Table 3: Indicators for strategies

Concept	Variable	Indicator	Data type (quantitative/qualitative)	Data source (primary/secondary)
Livelihoods	Strategies	Presence of public services	Qualitative/Quantitative	Primary/Secondary
		Housing condition	Qualitative/Quantitative	Primary/Secondary
		Approx. daily income (\$)	Qualitative/Quantitative	Primary/Secondary
		Approx. daily expenditures (\$)	Qualitative/Quantitative	Primary/Secondary
		Savings (\$)	Qualitative/Quantitative	Primary/Secondary
		Capacity to 'survive' without employment	Qualitative	Primary
		Perception on job security	Qualitative	Primary

		Perception of measures against Covid and day-to-day life	Qualitative	Primary
		Perception on future livelihood	Qualitative	Primary

3.3.4. COVID-19 pandemic

The COVID-19 pandemic impacts on the local economy can be characterized by direct effects: death and sickness, as indirect ones: governmental measures. The latter are the ones that have a correlation with the impact on the economic systems of society, as well as the interactions that people had with one another. The following set of indicators are made to evaluate how the government of Peru responded to the crisis and study how these relate to certain changes on socio-economic conditions of informal settlements.

Table 4: Indicators for COVID-19 pandemic

Concept	Variable	Indicator	Data type (quantitative/qualitative)	Data source (primary/secondary)
COVID-19 pandemic	Health	Deaths	Quantitative	Secondary
	Government measures	Curfew	Qualitative	Secondary
		Lockdown	Qualitative	Secondary
		Economic restrictions	Qualitative	Secondary
		Social restrictions	Qualitative	Secondary
		Subsidies	Qualitative	Secondary

3.4. Data Analysis Methods

For the primary analysis of qualitative data collected, the process relies on the transcription of the recordings and the use of ATLAS.ti as the main software tool. This program allows the organization and process of the data with the use of coding to identify main topics and keywords utilized during the interviews. The structuring of data provides the researcher with the ability to assign labels to different units of information and compare them at a later stage (Thiel, 2014).

Through the use of the software, first, the code manager was used to see the indicators by themselves and observe the main perceptions from respondents regarding the two points of reference: before the pandemic and present time, a year and a half later. Later on, a co-occurrence table was employed to view the relationships between the indicators and the frequencies at which these happened. Finally, queries were employed for predominant indicators from the co-occurrence table to analyze in more depth the perceptions from the respondents. Moreover, a network was created to graphically represent the connections between variables and indicators, although the result did not permit clear identification of them (see Annex 1).

Quantitative data were analyzed by descriptive statistics to portray a general view of existing relations between the variables and worked as a triangulation tool with the analysis of the

interviews. The data is presented in values such as mean and percentages to present a more suitable contextualization of the results and demonstrate a comprehensible point of comparison to the qualitative data (Thiel, 2014). The analysis done in this section was purely focused on context information from the district, city, and national level from where a general comparison was done. For this analysis method, the main software used is Microsoft Excel.

3.5. Challenges and Limitations

The main challenges and limitations identified for the research design are language, ongoing COVID-19 pandemic, access to the internet, and available information. Firstly, there is a language barrier between the case study and the research: Spanish and English, respectively. This complicated the process of translation due to the slang used by respondents and the portrayal of actual perceptions.

Moreover, to perform the data collection method there were two major challenges: the ongoing pandemic and the lack of internet connectivity of the targeted population. The ongoing pandemic limits the methodology to online interviews for which, due to limited access to the internet of the population, made the recollection of data a long process. It is worth noting that the pandemic itself proved to be a sensitive issue for many of the respondents. There were cases of participants that have lost their jobs and also suffered the death of family members and friends for which made it hard to carry on with the interview normally.

Lastly, available information was limited in the primary and secondary data. The interviews done were able to provide valuable insights and information regarding the variables and indicators, nevertheless, it was difficult to provide exact numbers on certain aspects. Indicators such as income, expenses, and savings, although respondents could identify the difference between before pandemic and at the time of the interviews, the numbers could not be represented by figures. Regarding the secondary data, the numbers used in the research are not a direct representation of the informal settlement since it is part of the district, city, and national level, lowering their reliability.

To tackle these, the following was considered: initial interviews with the population that are known to the researcher to ensure the correct use of wording according to the interview guide, and notice trends of terminology not common for respondents. As the interviews were progressively done, the subject of the pandemic was better handled to ensure the comfortability of the respondents. Because of the online setting for the fieldwork, the use of a raffle to engage more respondents was applied and proved to be successful; also the use of social platforms such as WhatsApp was the main source for interviews, facilitating the respondents' participation.

Chapter 4: Research Findings

Chapter 4 focuses on the research findings collected through a series of in-depth semi-structured interviews from fieldwork in Las Delicias de Villa settlement in the district of Chorrillos, Lima, and secondary data. Section 4.1. describes the data collected and is then followed by section 4.2. where analysis derived from the data is structured accordingly to the operationalization tables in chapter 3. At the end of this section, a comprehensive analysis and discussion of the key relationships found between the variables are presented.

4.1. Data Description

The qualitative approach in this case study consists of 10 interviews from different households in the settlement Las Delicias de Villa, representing the 5 zones of the area, and the revision of reports from national organizations referencing various aspects such as prices, (un)employment, poverty, demographics, and overall socio-economic indicators. The data collected provides an exhaustive knowledge of the variables investigated and ensures a representative sample. The following table describes the method, data, and sample size used in this research. The interviews are coded as D1 until D10 to comply with confidentiality guidelines and will be addressed as such in the findings and analysis section of this chapter.

Table 5: Quantitative and qualitative data collected

Data collection method	Data		Sample size
In-depth interviews with households	Primary	Qualitative	10
NISI Informal production and employment in Peru	Secondary	Quantitative	1
NISI Monetary poverty evolution 2009-2020 and district map	Secondary	Quantitative	2
NISI stratified zoning – Lima 2020	Secondary	Quantitative	1
NISI Consumer Price Index Variation	Secondary	Quantitative	6
MINSA OpenCovid – 2021	Secondary	Quantitative	1
National Census 2017	Secondary	Quantitative	1
Peruvian System of Juridic information	Secondary	Qualitative	-
SIGERSOL Waste Production and Collection	Secondary	Quantitative	1
Work Ministry National Survey Monthly Employment Variance	Secondary	Quantitative	2
World Bank Data – Peru	Secondary	Quantitative	1

4.2. Findings Report

The following section presents the findings from primary and secondary data collected regarding the variables and indicators from the operationalization tables. Frequency tables are used for the primary data collected via interviews representing the main findings regarding the indicators. Those results are later on supported by secondary data as a way of triangulating the information. Network and co-occurrence tables from ATLAS.ti are presented in Annex 1.

4.2.1 COVID-19 pandemic

The COVID-19 pandemic has strenuous effects worldwide as indicated in the problem statement. The main two categorizations for them are direct, as health impacts, and indirect, as governmental measures implemented.

Health

Key health impacts from the COVID-19 pandemic are expressed in the form of deaths that resulted from the disease. At the national level in Peru, the number of deaths as of July 31st, 2021, are 196,353 with an average of 6,039.69 deaths per million inhabitants. In Chorrillos district where the case study of Las Delicias de Villa is located, the number of deaths from the pandemic is at 2,351. The information is represented in the following table:

Table 6: COVID-19 deaths at national, city, and district level

Location	Deaths
Peru	196,353
Lima	80,454
Chorrillos	2,351

Source: Author based on the report from MINSA OpenCovid (2021)

According to the National Census (2017), the population of Chorrillos is set at 314,241 which means that almost 1% of the population has died of COVID-19 until July 31st. The percentage of deaths has deeper implications when considering age groups, e.g., the death percentage from COVID-19 in the population age 60 and over is 4.2% for Chorrillos district.

From the interviews performed, 10 out of 10 respondents mentioned knowing someone that had COVID-19, and 7 out of 10 knew someone who passed away from the disease. Respondent D6 explains that *“having had so many human losses definitely changed the dynamic and that comes from the virus itself... and no matter how many measures the government can put in place, right or wrong, that didn't prevent people from dying, right?”*.

The extent to which the pandemic affected households in Las Delicias de Villa carries deep health implications that had a ripple effect on social and economic aspects of families, especially to those that actually went through a family member's death or close relative. This feeling is described by respondent D1 as *“now look, we are in such a high wave, how many daily deaths and people who do not lose, do not feel, but people who do lose, feel, right?”* In an urban area where most residents have mourned the loss of a community member, either direct or extended family or a known friend, the impact exacerbated emotions and brought on several issues.

Measures implemented

The Peruvian government made a series of measures to combat the pandemic striving to protect the population. The first legislature¹ in place was on February 1st, 2020, from the Health Ministry, and acted as a technical document to prepare and respond to the risk of introduction of COVID-19 in the territory. At the time of its publication, the document established that the presence of the virus did not constitute a state of emergency for public health.

Following the WHO pandemic classification for the COVID-19 outbreak, on the eleventh of March 2020, the government passed an executive decree declaring a national ‘sanitary’ state of emergency which dictated prevention and control measures against the COVID-19 for the following 90 days. On the fifteenth of March, 2020, the first measure² that suspended the exercise of constitutional rights was implemented under the declaration of a state of emergency for the grave circumstances that affected the lives of Peruvians. With it, a lockdown, curfew, quarantine, and socio-economic restrictions were implemented. Both executive decrees have had modifications and were still in place at the time of writing this research, with the latest extension made until March 1st, 2022, for the sanitary emergency, and September 30th, 2021, for the state of emergency. The following table lists the frequencies of legal devices instated in the country against the COVID-19 pandemic from March 2020 to July 2021:

Table 7: Peruvian legislature approved from March 2020 – July 2021

Legislature	# of publications
Sanitary emergency	6
State of emergency	46
Other measures	3410
Total	3462

Source: Author based on Peruvian System of Juridic Information

Restrictions largely affected the population of the country resulting in socio-economic struggles. Out of the interview respondents, 10 out of 10 identified the lockdown as the main issue during the first year of the pandemic. Respondent D9 stated summarized that feeling as *“the quarantines young man. I can’t understand them but I’m not a specialist. They wouldn’t let us leave not even to the beach to breathe. It was terrible and I felt like... from the pandemic that is what really affected us, the total quarantine”*.

A series of measures were made effective to act as economic aid towards vulnerable groups that were affected by the restrictions and the economic crisis that resulted. Those measures were grouped to target different aspects such as vulnerable households, subsidies to unemployment, payment of public services, tax alleviation, pension and retirement fund liberation, subsidy for transport service continuity, and enterprises' economic support. The vulnerable household subsidies consisted of money transfers and deliveries although their success is discussed. Respondents mentioned several families of Las Delicias de Villa in need of economic aid were not targeted in the beneficiaries list as D1 states

¹ R.S N° 039-2020-MINSA

² D.S. N° 044-2020-PCM

“I think the government gave the subsidies but look, there are people that got nothing. Then why call it universal? The area is still labeled as poor, we were supposed to receive it then, no? It’s still extreme poverty even. My sons are registered but none of them receive any subsidy”.

4.2.2 Economic activities

As described by Tunas (2008) economic measures in informal settlements such as income and employment are fundamental to understanding the context for low-income households and a majority of informal employment that can suggest a paradoxical economic resilience. The case for Las Delicias de Villa before the pandemic also falls under said characterization as the reports and household interviews describe a similar scenario.

Employment

In Las Delicias de Villa the economic panorama before the pandemic is described by residents as a mixture of informal and formal activities with a low-income scheme. The working population, mostly, does not have superior education which affects working opportunities and accessibility to higher-income employment. According to the National Census (2017) the population of the district of Chorrillos, where Las Delicias de Villa is located, 80% is labelled as ‘working population’ including those 14 years of age and older. Out of this group, 11.3% only have primary education, and 43.9% have secondary education; the rest have a form of superior education. The following table shows a detailed account of the education level for different age groups in the district of Chorrillos.

Table 8: Chorrillos population by age and education level

	Education level reached (by age)								Total	
	3-4	5-9	10-14	15-19	20-29	30-39	40-64	65+	Population	Percentage
No level	3,298	908	77	69	158	185	793	1,928	7,416	2.50%
Initial	5,773	7,967	246	34	49	60	67		14,196	4.70%
Primary		14,044	12,904	842	1,458	2,128	9,335	9,799	50,510	16.70%
Secondary			9,982	18,452	21,612	20,684	37,092	8,595	116,417	38.50%
Special basic		29	45	158	403	285	174		1,094	0.40%
Sup. Non-uni incomplete				2,190	6,658	4,180	5,425	570	19,023	6.30%
Sup. Non-uni complete				170	7,131	7,998	13,098	1,883	30,280	10.00%
Su. Uni incomplete				3,376	10,681	3,714	5,028	791	23,590	7.80%
Su. Uni complete					7,485	9,754	14,191	3,046	34,476	11.40%
Master/PhD					271	1,337	3,200	411	5,219	1.70%
Total	9,071	22,948	23,254	25,291	55,906	50,325	88,403	27,023	302,221	
	3.00%	7.60%	7.70%	8.40%	18.50%	16.70%	29.30%	8.90%		

Source: Author based on National Census of Peru (2017)

Respondent D5 describes employment in Las Delicias de Villa as “*jobs are more of a casual type, at least in my block. Some people have an activity linked to a more permanent job, like teachers, but they can also be left unemployed, huh. More have been as micro-entrepreneurs, bricklayer jobs, or welders*”. This depiction of the type and form of employment is generalized

by 9 out of 10 respondents where the exception was an administrative employee who, contrary to the other respondents, did not see informal employment as prevalent in the area. One respondent, D9, offered a view of the economic situation of the area before the pandemic and what it meant for the residents by saying,

“Before the pandemic, I think that every family, every being, was dedicated to its plans, its projects, their jobs, or their studies. And well, if possible, to move on like everyone else but at that time there was full freedom, right? You had no impossibility of a ceiling, to expand, to advance”.

The situation describes opportunity and growth for every family. The chances appeared to be dependent on individual drive and capacity, such anyone could achieve their plans. At macro-scale numbers, the informality in Peru is divided by sector and employment. In 2019 (NISI) the informal sector where every employee is considered informal represents 52.7% of employment participation and informal employment outside the informal sector represents 16.1%, representing a total of 68.8% of informal employment at the national level. Even though this means 2 out of 3 people employed fall under informality, it is not an exclusiveness scenario. More data from the NISI (2019) states that 44.3% of households in Peru have formal and informal income; 40.9% have only informal income, and 14.8% have only formal income. This data is used to infer similar situations in Las Delicias de Villa where households tend to rely heavily on informal employment.

Accessibility and performance

With the informal activity being characteristic of the employment in Las Delicias de Villas residents usually have the chance of having different jobs available or to become part of the working population rather easily. This is linked to the conception of informal activities and the greater offer of employment to low-skilled individuals. From the interview respondents, 8 out of 10 mentioned that people did not have major issues finding a job. When asked about the employment situation before the pandemic, respondent D6 stated that *“before the pandemic, I see that, overall, it was very easy-going, even relaxed I would say”*. The scenario of high accessible employment in Las Delicias de Villa has a strong relation to the employment form and type described in the previous section. Respondent D9, complements the idea by saying that *“the fact that it is informal... is a good point because now there are no formal jobs, they are minimum, so it is a good thing that there are informal jobs”*.

Another two factors that played into the accessibility and performance described by residents of the area are personal drive and social relationships. People with a high inner motivation helped in promoting the search for employment whether as employees or as self-employed. Moreover, knowing more people or having strong social relations also improved the accessibility and performance of employment. Respondent D1 had an interesting remark:

“Look, for me, I would say it was easy. Any person could have a job, and if they had capital they would go into a business since there were a lot of opportunities. You had capital and set up a business and then you would make yourself an income, no? Me, for example, people always needed me to work in maintenance. People would always call me; I was finishing a job and I already got another one set up for later. Like that, work was never an issue, every year. I’ve worked as a carpenter for 35 years and I was never out of work”.

Lastly, accessibility is also influenced by external factors such as the economic growth of the area. At the national level, Peru has had a GDP growth between 2.3% and 3.9% yearly since

2014 and positive percentage growth since 1999 (World Bank, 2021). This has had an impact on several aspects of society including employment. According to the Work Ministry (2021), employment rates in the city of Lima had an average positive rate of 4.0% in 2019, mostly in the formal sector, while 2020 is the first year with negative results in GDP and employment. Both figures will be discussed in the last section of economic activities.

COVID-19 and economic activities

Since March 2020, the COVID-19 pandemic has impacted economic activities all over the world, and Las Delicias de Villa is no exception. Terms of employment, accessibility, and performance have seen their lowest numbers in the last 20 years. Key economic indicators for 2020 such as the GDP growth was -11.1% (World Bank, 2021) and the monthly variance of employment was set at -8.8% in Peru, and -12.1% in Lima (Work Ministry, 2021). Initial reports of employment rates for the first 3 trimesters of 2020 are represented in the following table:

Table 9: Employment rate change in Peru 2020 vs 2019

	Formal	Informal
I trimester 2020	-5.6	-0.7
II trimester 2020	-45.8	-36.9
III trimester 2020	-24.8	-13.9

Source: NISI Informal production and employment in Peru (2021)

Measures implemented by the government caused the employment rates to severely decrease and the same for production. The formal sector appeared to endure the biggest impact since large companies were forced to close and many employees were fired, as respondent D4 mentions *“right now, work is generally informal because the companies, the majority of them, have gone bankrupt, they have fired us and people now are looking mostly what it is entrepreneurship, no? Informal entrepreneurs”*.

In Las Delicias de Villa according to 10 out of 10 respondents not necessarily for the same reasons, the main concerns from the COVID-19 pandemic were related to their household members' employment status. Five respondents mentioned having to change jobs because of the closure of business, three of them mentioned switching jobs to pursue entrepreneurship, and two of them stated that household members who did not work before the pandemic had to take upon a job to help. According to respondents, this effect was more severely felt during mid-year 2020 when more governmental restrictions were put in place, which is also represented by the statistics of NISI and the Work Ministry.

The impact was felt harshly by residents in the area as respondent D8 commented

“Well, the impact came really strong, no? From one moment to other businesses were shut down, their stores, their minimarkets... even mechanic shops had to close abruptly and for people who were dependent on that income it was like a slam on the face ‘you have to stay home because you can die’, no?”

Another respondent, D9, stated, *“now with the pandemic is different... everything has changed, no? You can’t work as you used to, as my case that I can’t visit my patients at home because of restrictions and their age”*. The feeling described represents many scenarios around Peru and many other countries.

Nevertheless, in Las Delicias de Villa some opportunities arose from the predominantly informal employment. People were able to access other low-skilled jobs to sustain themselves; young household members entered the workforce in the area, residents started building different types of businesses that became a necessity such as house markets, selling sanitizing products, and safeguarding vehicles (Respondent D2, D6, D9, D10). The built-in environment helped many households find alternatives to unemployment and zero income.

Finally, interview respondents acknowledged another important element between the COVID-19 pandemic and its effect on the economic activities: information; 9 out of 10 respondents mentioned using media outlets to provide and search for employment. Sites such as Facebook and WhatsApp became a tool not only for social communication but for opportunities. Respondent D7 mentioned that groups were formed on Facebook, specifically for Las Delicias de Villa residents, where people posted wanted ads such as selling reps and business venture propositions for people to join.

4.2.3 Social capital

The elements of bonding, bridging, and linking social capital from Hawkins and Maurer (2010) are found in informal settlements to different degrees. Residents of these areas have a unique view which typically signals a high social capital and social resilience. The following sections describe those in Las Delicias de Villa before the pandemic and its effect for the last year and a half.

Social networks

Membership of social networks in an area promotes social capital and secures sustainable livelihood through the collectivism of people (Alonge et al., 2019). The duality between formal and informal social networks is the main focus for this indicator. Formal social networks are organizations in the area with different objectives and missions were the most commonly found in Las Delicias de Villa as CBOs such as popular diners, mothers clubs, and ‘Vaso de Leche’³ committee, religious organizations, and neighborhood committees for safety, housing, and sports. 9 out of 10 interview respondents mentioned being part of a formal social organization. Nevertheless, it was typically commented that membership of this type of social network did not equate to a perception of trust, relationships, or values that improve social capital.

Conversely, informal social networks appeared to foster said elements that promote social capital. These networks are formed by friends and family that identified themselves as part of a group without having a formal declaration of such. From the research performed, Las Delicias de Villa is a ground base for informal social networks given the spatial layout and history of the settlement. Plots in the area are of 1,000m² where multiple households are built for different families, although there are cases of single households in the same plots. From the interview respondents, only 1 said that his household was the only one in the plot; all other respondents mentioned living with multiple households where 6 claimed them to be direct and extended family members and 3 claimed to live in the plot with non-family members households as neighbors.

Such social networks identified by respondents played different roles in their life, primarily feelings of belonging, union, and support. Respondent D4 acknowledges those feelings as “*with the neighbors, I get along well being that they are like my family, I’ve grown up with my*

³ ‘Vaso de Leche’ is a social program created by the government to improve food security of vulnerable households in different settlements and is managed by residents of the area. It translates to Glass of Milk

neighbors in front; I have my uncles on the plot next side, and pretty much all people get along easily thanks to these networks”.

Social relationships and activities

Along with the formal and informal networks built in Las Delicias de Villa, the social relationships and activities done in the area were seen as pillars of their day-to-day. Social relationships help build on trust and the activities in the settlement incentivize cooperation and belonging (Torres, Marshall, Sydnor 2019; Rutherford, Malcolm, Grierson 2002; Moser, 1998).

Before the pandemic social relationships and activities sustained a primary role: develop a sense of community with strong bonds between residents. Respondent D10 mentioned, *“gatherings between neighbors were very frequent and people came up with any motive to hang out together; for example, birthdays, the birthday of anyone in the settlement and everyone will go, and we’ll have a chance to see our friends”*. Residents of Las Delicias de Villa had strong social relationships and felt that it was a foundation for their social activities, which in turn made them a close community.

According to all respondents, residents were used to getting together in person whether to celebrate moments, play sports, have food and drinks, and talk about their days. It was considered a fundamental part of their daily routine because not only did it promote a bond between one another but also presented an opportunity to share vital information. Thanks to the social relationships and activities, 9 out of 10 respondents mentioned being able to know about job opportunities, low prices in certain markets, where the crime occurred more often, and who in the settlement was having a hard time. All of that information provided aid in ensuring their livelihood.

Perception of cooperation and support

Networks, relationships, and activities were considered not only as exclusive social elements but also economically and livelihood related. Through organized activities residents were commonly helping households in need; 10 out of 10 respondents mentioned being involved in some sort of food drive, money collection, and/or other types of aid for vulnerable residents.

Acts of cooperation and support before the pandemic are shown by respondent D9 as

“Everything we manage to get is because of neighbors... sometimes someone was working on their house and needed a construction worker, needed a carpenter and they asked if I knew someone, and I will tell them, yeah that person lives in that zone, and I will give them their number and that’s how we help each other. Plumbing, painting, and anything we need we get it from our settlement. And with that, we try to support us between residents”.

Residents rely on each other not only for companionship and friendship but also to obtain goods and services, especially when their condition is not optimal. The cooperation and support portray a high level of resilience as *“people would even give economic support when they have a chance to help people that are struggling with basic needs, some disease, or an accident”*, says respondent D1. That sensation is not limited to residents that know each other but rather a generalized one in Las Delicias de Villa as respondent D7 acknowledges that *“even if I don’t talk to my neighbors or there isn’t a link established, I think that in some way they could do something, no? to take care of others. There is a feeling of caring”*.

The overall perception of cooperation and support represents a community whose residents are willing to help their neighbors and that are grateful when that help comes to them. Involvement between households goes beyond knowing each other and taking part in collective activities to assistance that is valuable for daily routines, development, and improvement.

Perception of social ties

Built upon the components described above, the respondents described a community with strong social ties before the pandemic. This component transcends the physical space of plots into the settlement area. All respondents mentioned the importance of the feeling of belonging. Respondent D8 attributes this to the history of the settlement and the families

“Because, well, they have time living here already, no? People already know each other, they know who they are, how they are, who is family, who is not, who is a stranger. I feel the ties are there because the majority has family living there for more than 20 years”.

Nevertheless, this could indicate that there is an exclusion of newcomers or outsiders into the community. Four of the respondents identified that feeling for two groups: the young generation, detached from the struggles of building the settlement of Las Delicias de Villa, and foreign people that settled in the area illegally. The perception of social ties can be disincentivized if those who have not been living there for longer periods disrupt the status quo.

It is then established that social ties are a time-forming process between the residents of the area. Spending many years living in an area and reliant on the connection that people create with one another, one tends to feel identified with their area. As respondent D2 mentions *“of course, since I live here, I think it is only logical for one to feel identified with the settlement where one lives, no?”*. Also, social ties can be intensified if residents continue to participate actively in the community, either through social activities or by the opportunities offered. For example, having spaces, public or private, such as parks, restaurants, cafes, or football fields, can create a sense of pride and belonging. Respondent D6 illustrates this when compares Las Delicias de Villa with other areas of Lima: *“from what I can see, it is no longer necessary for you to go to Miraflores to drink or eat something and now people gather here. Here in Las Delicias, they can do it”*.

COVID-19 and social capital

Although the pandemic has greatly affected the social capital of Las Delicias de Villa, the impact is perceived positively, as well as negatively, according to the interviewees. More than a year into this crisis has changed how people behave and interact, mainly because of two factors: fear of contracting the virus and measurements implemented by the government. But overall, all respondents acknowledge the influence that social capital has performed on surviving this period.

The main finding regarding the impact of the pandemic on social capital is how this influenced positively the livelihood of many residents. According to all 10 respondents, the perception was that people were able to draw upon their connections and community identity to sustain their day-to-day lives. The support was perceived in many ways such as neighbors creating information channels on media platforms to stay connected, especially during strict lockdown (D4); offering job opportunities to residents (D2); keeping up with housing worries (D3); and concern for each other, as respondent D1 states *“I think the pandemic improved our*

relationships to a certain degree because we were more united". Overall, it is perceived that the feeling of unity improved, and the support that residents provided to one another increased.

Also, social capital had great significance particularly for tackling economic issues. The pandemic made social networks, activities, ties, and cooperation the main component for residents to maintain their income. Respondent D6 mentions

"I think that the initiative of support in Las Delicias, in general, has always been there. If someone puts their little stand, someone goes and collaborates, they buy from them because they know what necessity is. This definitely helped during this time".

It is due to the social capital of Las Delicias de Villa that households were resilient to the pandemic but unfortunately, there were aspects harmed by it. Death, shame, and mental health of residents are detrimental elements that came from the COVID-19 crisis. Respondent D7 mentions *"it felt a lot of worries, a lot of burdens, a lot of stress... one goes out and it seemed like we are all somehow going through the same thing"*; respondent D6 and D1 lamented the death of many neighbors, family, and friends, *"having so many human losses definitely changed us, and that comes out from the virus itself. No matter how many measures the government can put in place, right or wrong, that didn't prevent people from dying, no?"*; finally respondent D3 explained his own experience having COVID-19 *"there is a shameful feeling that people know you have COVID-19. Everyone distanced themselves, avoided the house, and told other people to not go through the area"*. Nevertheless, despite those feelings and acknowledging how much damage the pandemic has caused in Las Delicias de Villa, residents still manage to organize themselves, help each other, and build upon their strength as a community.

4.2.4 Strategies

To maintain a sustainable livelihood, people apply different strategies that correspond to their resources and capabilities, or assets and activities as described by Rakodi (2002). When threatened by external factors such as the COVID-19 pandemic, inhabitants respond to it by pulling from those factors, and here, socio-economic resilience has a vital role in enabling residents of an area to survive and thrive.

Public services and housing

Drawing from the resources or assets, public services and housing were the initial indicators measured. For residents, these are fundamental in an area given that these cover a large and diverse group of basic necessities. Only half of the respondents, 5 out of 10, revealed that public services before the pandemic were being executed normally and they felt that it was not an issue. The rest of the respondents felt strongly disappointed by the public services of the municipality mentioning that *"the garbage is collected one time yes, then no, you never know... the health post has a terrible service; the parks are abandoned, and the roads take forever to be built"* (D4). When asked to the participants about the most worrisome issue in Las Delicias de Villa, 10 out of 10 recognized safety as number one. This tracks with studies done by the organization Lima Como Vamos for 2018 and 2019 where 90.5% of citizens indicated that they could be victims of a crime in the next twelve months and 87.8% perceived safety as the major problem that affects the quality of life in Lima, respectively.

According to the National Census (2017), water and electricity coverage in the district of Chorrillos has been improving for the last two decades, having 94.1% of households with public water systems available, either inside or outside the edification; and 99.6% of

households with public electricity. Coverage of other public services in Chorrillos such as waste management, health insurance, education provision, and formal housing are as follow:

Table 10: Public service coverage in Chorrillos

	Waste collection	Population insured	Education availability	Formal households
District coverage by public services	99.64%	74.6%	97.5%	41.2%

Source: Author based on National Census (2017) and SIGERSOL (2020)

These services were affected by the COVID-19 mainly because the municipality had different priorities and a lack of resources and management capabilities. Services were neglected during the first year and a half of the pandemic creating concerns primarily in three forms in Las Delicias de Villa: health, security, and formalization. Respondent D2 recollects how local health facilities did not attend any other complication that is not Covid related, sending people back home, and also how this happened too at the police precinct. Also, people that were doing formalization processes for their house had to stop completely because “*public records closed its doors and then started gradually opening again. The online process was incredibly slow to function*” (D2). There was a feeling of abandon which created friction and mistrust that in the end reflected on disobedience to the new Covid rules being implemented.

Income, expenses, and savings

On average, residents of Las Delicias de Villa have a medium-low income according to the NISI (2020) which amounts to a range between 208-260 U.S. dollars monthly. In Peru, the minimum working salary is 930 Peruvian soles or around 225 U.S. dollars; unfortunately, that amount is not always paid to workers, especially if their employment is under informal conditions. All respondents agreed that, in general, residents were able to survive with their income, but it was perceived as very limited; if a major expense happened people would have hardships and savings was not a practice. Respondent D4 mentions that “*in my block people don’t usually work in companies but in ‘cachuelos’⁴ but the income is minimum*”. Along with this perception, respondents D8 and D10 clarify what minimum income refers to: “*work to have your daily sustenance... most people get their daily and now they have for breakfast, lunch, and dinner*”; and “*people only had for their day that represents breakfast, lunch, and dinner but besides that there was none. Maybe they could get some more if they found another fast job but very little*”, respectively.

According to the NISI (2021), at the city level, there was a significant variation in income and expenditure compared to 2019. Average per capita income went down from 1,349 Peruvian soles to 998; while expenses went from 982 to 787. Analyzing those figures' deciles composition, Las Delicias de Villa classification ranges between decile 4 to 6 where average income decreases between 29.8% and 36.1%. Based on respondents' information of lack of savings and spending habits of their income, expenses of households in the area fall into decile 6 with a reduction of -20.3%.

The COVID-19 pandemic shrinks families' income sources which in turn impacts their spending capacity creating a ripple effect on other household income and their expenses as

⁴ Cachuelos is a term used in Peru for casual jobs that are done usually in a single day or a few days (e.g., painting of a living room, driving deliveries, carrying construction materials).

well. Respondent D1 illustrates that effect “*what I produced I could not sell anymore and that bankrupted me, and that happens to a lot of people not only me... a lot of people lost because people weren't buying as before. Markets close and in the open ones people did not go much*”.

Furthermore, between March 2020 and February 2021, the Consumer Price Index (CPI), which measures the variation in the price level of the goods and services that make up the basic consumption basket of households, was set at 2.40%. This meant an increase for families to afford their basic necessities, especially two components: rent, fuel, and electricity; and health care and conservation. The following table shows the variation between March 2020 – February 2021, and February 2021 – August 2021:

Table 11: CPI variation during the pandemic

CPI components	Mar20 – Feb21	Mar21 – Aug21	Total
Food and beverage	2.71%	4.75%	7.46%
Cloth and footwear	-0.01%	0.1%	0.09%
Rent, fuel, electricity	5.56%	6.1%	11.66%
Furniture and fixtures	0.60%	0.83%	1.43%
Health care and conservation	4.05%	1.21%	5.26%
Transport and communication	2.07%	3.79%	5.86%
Leisure, cultural and educational services	1.54%	2.12%	3.66%
Other goods and services	1.07%	0.64%	1.71%

Source: Author based on NISI (2021)

Analyzing the components of the CPI, the highlighted variations indicate key goods and services that households need for survival, especially during a health epidemic. Price augmentation of those combined with a low income can result in a catastrophe for families such as malnutrition, homelessness, sickness, and lost opportunities. According to respondent D7 this brought on a feeling of uncertainty and fear for the days to come “*money is always a stressor... it shows how there is a latent concern in people. We are talking about the fact that there are basic needs to be covered*”.

The numbers presented in this section are based on quantitative reports from governmental institutions which may not represent the actual scenario of Las Delicias de Villa. Nevertheless, some trends in the context of income, expenses, and savings seem to support the main idea from respondents that residents have suffered a decrease in available income and savings if they had. And although expenses may have decreased on average, participants did not perceive it as such.

Day-to-day life

Families' everyday practices include social interactions, commuting to their work and studies, cultural activities, and many others that usually entailed being outside people's households and in groups. The COVID-19 pandemic made a drastic change in this ‘normality’ restricting the amount of time people could spend outside, having to be careful to avoid catching the virus and hindering their capital. Residents of Las Delicias de Villa felt this issue, even more, when governmental measures were stricter, such as the hard lockdowns.

Moreover, based on the financial variations mentioned above, life for residents of Las Delicias de Villa, and most of the country Peru, suffered an impact on its routine and plans. The impact was exacerbated because of the pandemic there were new factors to consider such as protocols and health services. Of the 10 respondents, 10 of them incurred non-planned expenses that hindered their capital. Respondent D2 explains how people are now in debt because they had to take loans from banks; respondent D3 accounts a personal experience of spending most of the household income and savings in procuring medical attention to a family member; respondents D4 and D8 talked about the protocols and how they entailed new goods to be bought such as masks, alcohol, and shields, and also common goods that had to be bought in bulk because people were not allowed to go out often and these run out easily.

Because of the expenses increment and income reduction explained, households resorted to other means to cope in their day-to-day life. Of the 10 respondents, 4 identified self-drive as a key mean to diversify income sources and 6 affirmed social capital as the main coping mean; although when asked more about their perception, it became clear that all respondents considered a mix of those factors for improving livelihood conditions.

Respondent D6, D7, D8 capture that inner motivation as *“it depends on their drive, the need each person has, and there will always be a way to find a solution”*; *“I wouldn’t risk saying that people stayed with their arms crossed, but I feel that they reinvented themselves”*; *“they had to start from scratch, reinvest in their businesses, all to find on their own way to have an extra income”*, respectively. Regarding the social component the main views centered around cooperation. Respondent D5 talks about neighbors getting together to aid each other financially *“each week you would give 20 soles and numbers were raffle... every cycle you would get 200 soles”*; also, respondent D8 mentions activities at the community level such were *“we formed Facebook groups to make collections and support people who needed the most, right?”*.

Self-drive and collective activities played a role in coping with the day-to-day life affected by the pandemic. Residents had to rely on different means to manage and although the impact was felt harshly by households, the socio-economic resilience of the area appeared to influence their capacities positively. Also, Las Delicias de Villa was a ground-work scenario for engaging in different strategies that will be explained at the end of this section.

Future

Families consider the future an important aspect of livelihood. How people see themselves and their community developing plays a part in their vision, and this is affected by many internal and external factors. Before the pandemic, no respondent thought that something as a health epidemic could cause such damage to their everyday life. When asked about how they compare their perception of the future a year and a half into the pandemic, the answers differ significantly.

Initially, families thought that the COVID-19 was not going to be a serious issue in the next few weeks, so they still view the future as promising with better income, a more developed neighborhood, and a strong community. With the passing of months and a deteriorating panorama because of the virus, their perception shifted. 9 out of 10 respondents focused on three main aspects for the future: growing opportunities, better public services, and increased unity and solidarity between the residents of Las Delicias de Villa.

Respondent D10 mentions that in the settlement *“we have to learn what solidarity is”* to which other respondents agreed, seeing solidarity as a way for residents to be able to move forward stronger; respondent D5 complements this feeling with *“it is no longer thinking about if one*

wants a five-story house but instead realizing our we have common issues that need attention, no?”. On the other hand, respondent D6 envisions a different Las Delicias de Villa “*better urbanized with more interesting places and businesses, and good public services*”, hoping for a more stable settlement that allows the community to grow. With a future in such a state, residents could be more well-prepared to face another crisis in the future without the need to resort to desperate means, as respondent D7 wishes: “*for people to have more opportunities so they don’t kill themselves to be able to sustain their household*”.

Ultimately, households recognize the urgency of the pandemic, and their perception was that the COVID-19 is something that will not go away and will affect their lives for years to come. Despite this impression, respondents were still hopeful about the social capital of Las Delicias de Villa and the economic resilience of employment in the area as means to help them secure a sustainable livelihood. It is worth noting that the fieldwork was done when the vaccination program was still at early stages and there was widespread misinformation about their efficacy. Also, corruption news surrounding the application of vaccine doses had broken out a few weeks before this point. All of these incidents could affect residents and their perception of the future.

COVID-19 and strategies

Previous sections explained how the pandemic affects day-to-day life, economic and social components of the neighborhood but families employed different strategies to this scenario in search of managing and creating better opportunities as they envision their future in Las Delicias de Villa. As people suffered the consequences of the pandemic, households started re-inventing their ways to obtain income sources, rely more on family and friends, and use new information outlets to secure their livelihood.

Respondents identified new opportunities that arose from the pandemic for creating new jobs, particularly selling fruits, vegetables, and meat, health products to protect against the virus, and everyday products for households. According to respondent D5 “*in my block, we are approximately 12 families from which 6 have opened new businesses*” and that case seemed to have replicated all around the settlement. Respondent D2 started a vehicle storing business in the back of the plot and explained how people in the area started selling sanitizing gel, alcohol, and masks in the streets; respondent D6 opened a new cafeteria and saw how in the surroundings new places started to appear “*in the back came a pizzeria, and then another, and a candy shop, and so on several more places*”; respondent D7 mentions how households put on kiosks or little grocery shops in their plot. Households started to re-invent themselves, looking after entrepreneurship activities to support themselves and their families, even if they did not have the know-how. Respondent D4 narrates how people began selling prepped meals without knowing before how to cook. When asked about how these new businesses influenced their capacity to cope with the pandemic, all respondents revealed that it gave families a new income source that was more stable.

The stability for these new jobs and ventures came primarily from the cooperation and solidarity between neighbors. Residents of Las Delicias de Villa felt pride and gratitude towards the families that opened new places because these provided easier access to buy the products they needed and because they knew the hardship that many people were going through. Respondent D5 explains that feeling as “*these people have contributed a lot in the sense of the products they sold. It was at market price, maybe 50 cents more, but at that time, it was them who were the brave ones to go out and acquire these things to sell*”. And that feeling of rewarding those efforts was not the only sign of solidarity in the settlement. People

also supported each other financially by making raffles, collections, and ‘juntas’⁵ which is a money lending system based on trust.

Lastly, an important strategy that was used as a coping mechanism to the pandemic was information. Households in the community provided each other health tips against the virus, low-price alerts in specific places, and working opportunities which according to respondent D5 “*having that information at that moment was extremely important*”. The creation of groups in social media where people offered their services and posted job opportunities allowed many households to continue working in a time of crisis. Information also acted as a channel for social vigilance to keep tabs on people in need. Since the pandemic did not permit people to see each other or limited immensely, when someone needed help the information channels online such as WhatsApp were a useful tool. Group chats in blocks and zones were created to keep neighbors informed about the situation in the area, and when someone needed help it was asked through this platform. Respondent D3 relates her experience when infected with the COVID-19 and how thanks to the information channel neighbors were able to provide help such as grocery shopping, local remedy deliveries, and, importantly, encouraging words.

4.3. Key Discussion

After more than 1.5 years from the start of the pandemic, households have started to feel a clear improvement in their livelihood, compared to a few months ago when the pandemic was at its peak. Families feel more secure and stable, and at the same time, some old habits have started to return to their daily routines as the restrictions are lifted. Still, this does not neglect the hardship that households are still struggling with and what people had to endure for the past 18 months.

The COVID-19 pandemic undeniably harmed the community of Las Delicias de Villa. It brought unemployment, loss of income, deaths, disrupted social conventions and provoked a shock-like never seen before. Nevertheless, it appears that residents were able to survive this period of crisis thanks to connections, support, and available work, even though it was minimal. Still, some people confirm to not have seen families worse than what they were already before the pandemic, and that even now families are better off.

From the economic activities analysis, the main views from residents were focused on employment opportunities under two aspects: informality and social connections. Respondents agreed that the availability of casual jobs and, with it, job diversification allowed households to have different options in a time where companies were shutting down and employees have been fired because of the pandemic. It is worth stating that it is not a comparison between informal and formal economy, but a recognition that the former provided more possibilities, especially for low-skilled workers that are a majority in the settlement. The social connections and employment opportunities had a strong correlation based on the respondents' input. Community ties and social networks supplied a base for cooperation and support that extended into income sources, mainly via casual jobs. Residents considered one another to carry out these types of jobs not because they thought the other to be the right person but out of a solidarity spirit.

⁵ ‘Juntas’ is a term used in Peru that refers to a money lending system. A group of people will give an amount of money every week, or month, and get the total collected once during a cycle that ends when everyone gets a turn.

Besides having the chance to access employment opportunities through social interactions, the social capital that existed in Las Delicias de Villa also helped households to face the pandemic. Particularly, the cooperation and support between residents brought on a feeling of belonging in the community and assistance to those in need. Respondents perceived the community with a high social capital especially since households were able to rely on family members, friends, and neighbors in general, for essential needs. According to respondents, common signs were contributing to new businesses made in their blocks, providing attention to members of the community that suffered COVID-19, and sharing information about activities being done, low prices of goods and services, and other information that alleviated the burden of the pandemic.

With the economic activities and social capital scenario present in Las Delicias de Villa, different strategies were considered by residents to face the pandemic. The strategies employed by households in the area allowed them to cope with the main impacts such as unemployment, social disruption, and non-communication. Respondents mainly identified three types of strategies that can be classified for each type of impact. Regarding unemployment, re-invention through entrepreneurship ventures was a key strategy deployed. This permitted diversification of income sources, taking advantage of opportunities that the pandemic created. For social disruption, community associations increased the perception of cooperation and support while strengthening ties in the settlement. Lastly, information strategies focused on helping residents keep in touch and made available crucial knowledge needed at the time.

Chapter 5: Conclusions and Recommendations

As explained in the above sections of the findings report and key discussion, this study investigated the impacts of the COVID-19 pandemic on the local economy of the settlement known as Las Delicias de Villa and how resilient were the livelihoods of residents to these. The examination was done concerning the economic activities, social capital, and strategies of the inhabitants before and after the pandemic, exploring the changes and key differences that occurred in the first year and a half. Furthermore, an analysis of the extent to which socio-economic resilience conditions contributed to sustaining the livelihoods of the household was included. This chapter aims to answer the sub-research questions (sections 5.1.1, 5.1.2, 5.1.3) leading to the resolution of the main research question (section 5.1.4). Lastly, section 5.2. addresses recommendations for future research.

5.1. Conclusions

5.1.1. Socio-economic conditions and economic development

S.Q.1: In Lima, what are the socio-economic conditions in an informal settlement that impact the economic development of the area?

According to the interview findings and discussion, socio-economic conditions that influence the economic development of Las Delicias de Villa are predominantly classified in three: employment, neighborhood solidarity, and entrepreneurship capacities. Firstly, employment is the main source of income that sustains livelihoods in the area, without regard to form (informal or formal) or type (manufacture, retail, etc.). Households have access to casual jobs that allow for low-skilled individuals to enter the workforce and generate multiple incomes, the majority of which fall under the informal economy. Tunas (2008) and Joko, Amri, and Aditya (2020) support the concept under which the availability of jobs in the informal scenario promotes development for residents through income. The multiple employment opportunities allow for a continuity of income-generating activities that increase households' purchasing power and capital. This enhances the income flux cycle of the community promoting economic development.

Secondly, neighborhood solidarity displays a foundation in Las Delicias de Villa to promote economic development. As explored in Chapter 4, cooperation and networks did not only help residents in an exclusive social aspect, but it also facilitated households in procuring basic goods and services. Community members provided each other with contributions and allocated opportunities to exploit. Phillips (2002), Dershem and Gzirishvili (1998), and Torres, Marshall, and Sydnor (2019), provided notions of development in an area by the way households interact with each other. The social capital in a settlement facilitates opportunities, support, and fulfillment of needs, mainly with the work of networks (informal and formal) cooperating.

Lastly, self-drive was identified by interviewees to be a crucial factor for development, linking the notions of entrepreneurship capacities as the result of that inner motivation. Considering that the informal economy is predominant in the area, residents of Las Delicias de Villa have been prone to be independent workers by creating their own non-registered businesses. The ease of this promoted economic development as shown by interviewees who see households more secure, with more income, and a more vibrant and diverse community with opportunities

that are also generated by the same businesses. De Soto (1989) advocated for informal economic agents to be permitted and incentivized to build their own businesses as they knew what is better for them and it provides a self-sufficient source of livelihood, although some aspects were overlooked by the author. Simmie and Martin (2010) conceptualization is more appropriate to this case as economic diversity, capabilities, and labor across self-built businesses promote stable development in the settlement.

5.1.2. Livelihood strategies and resilience

S.Q.2: In Lima, what makes livelihood strategies in an informal settlement resilient?

The livelihood strategies adopted by residents in an informal settlement are certainly constricted by the limited resources available and heavily dependent on individual and collective capacities. According to Turner (1976) and D'Alencon (2018), scenarios where conditions make livelihood vulnerable to external shocks, residents undergo adversities to survive but it also highlights that in urban areas such as informal settlements the situation may vary. The built-in socio-economic aspects of informal settlements influence the resilience level of the area making it adaptive to shocks and crises as the COVID-19 pandemic.

In the informal settlement Las Delicias de Villa, livelihood strategies have two major components that create resilience: informality and support inside the community. Factors such as job accessibility, easiness to create new businesses, and presence of opportunities facilitate residents with a variety of income sources and availability of employment even during emergency periods. Families employ different strategies based on these factors to cope with distress, increase income and their overall capital, as stated by Rakodi (2002). Therefore, households use these factors to their advantage to promote their socio-economic stability and showcase high resilience levels, particularly given the exchangeable strategies that residents can utilize.

Furthermore, community support is a key element that complements the economic factors of resilient livelihood strategies. Residents commonly cooperate between households in the settlement either via emotional and/or material support. Interviewees highlighted how inside the settlement people would look out for each other because there is an identity sentiment. This can be understood as community members seeing each other as an extension of themselves and the progress of one household as the progress of the community in general. Based on such perception, families make decisions to ensure each other livelihoods, especially supporting in socio-economic aspects such as providing casual employment, spending on local businesses, and creating social networks. The role of community involvement in resilience is portrayed also by Amis (2002) in the form of reciprocal exchanges for problem-solving actions, and also by Hawkings and Maurer (2010) in their study of communities affected by Hurricane Katrina and the vital role of exchange of resources and support for survival.

5.1.3. COVID-19 pandemic and livelihood strategies resilience

S.Q.3: In Lima, how are livelihood strategies in an informal settlement impacted by the COVID-19 pandemic?

Given that livelihood strategies are strongly dependent on social connections and access to employment and ease of business venture, the pandemic crisis affected these conditions by two main factors: limiting social interaction and creating an economic crisis. The limitation of social interaction was due to governmental restrictions, fear and shame of the COVID-19 virus, and deaths. The combination of these created a scenario where residents were not communicating as they used to and were not able to carry on their daily activities, disrupting

‘normality’. Overall, since households were in such a position, the dependability between residents decreased, and in the cases where family and friends death occurred, the impact was felt even deeper. Alonge et al (2019) study on the Ebola outbreak in Liberia explains a similar situation, recognizing signs of distrust, fear, and psychological trauma in communities affected by the disease. The lockdown, curfew, and other government decrees helped slow the transmission of the virus and avoid even higher death numbers but also created isolation, the break-up of social ties, and lack of cooperation. The situation tested the resilience level of informal settlements that rely on communication and support, and deeply impacted organizations, businesses, and households that counted on community interactions and mutual aid for their development.

Furthermore, the economic crisis that the COVID-19 pandemic brought along generated low revenues, especially for micro and small enterprises, businesses closure, unemployment, and scarcity of resources. These components endanger livelihood strategies of residents, especially in informal settlements such as Las Delicias de Villa, where employment is typically informal and by such does not have high stability and security. It is particularly important since the economic crisis was prolonged by government regulations that did not consider how small businesses and independent workers would cope. Mirzoev and Sedaghat (2020) found that the COVID-19 pandemic caused a decline in employment and income that turn into difficulties to cover basic needs in households, and Rahmdana and Sagala (2020) on their study showed the vulnerability of economic survival due to governmental measures in Indonesia.

The situation was explained by respondents as to how many members of the community lost their jobs because the companies where they worked shut down and in the case of the self-employed ones there were obstacles to carrying out their activities, an effect multiplied by the social aspect being severely neglected (e.g., families that invest in creating new businesses on the community were highly limited by the lack of people on the streets and the reduction on the income flux cycle).

5.1.4. Livelihood resilience and COVID-19 impacts

M.Q: How resilient are the livelihoods of an informal settlement, in Lima, to the impacts on the local economy in the first 1.5 years of the COVID-19 pandemic?

Even though the pandemic greatly affected the economic development of the area and severely limited social interaction by indirect and direct effects, residents in Las Delicias de Villa manage to deal with the adversity through various factors and ensure their livelihoods. Factors that influence households to cope include the different strategies, economic activities, and social capital readily available, showing that despite the notion of informal settlements as highly vulnerable places, the pandemic fared. This supports the notion of John Turner (1976) and Alfaro d’Alencon (2018) of informal settlements as urban places with potential and unique capabilities for development.

Residents took advantage of new opportunities that arose from the pandemic; they were able to find ways to keep social networks and interactions, even in light of restrictions and fear, helping each other in different ways, especially economically; cooperation and support became even more important, as solidarity and union, to face the pandemic via critical information and contributions; and people were able to generate a more diverse income source that creates economic stability in uncertainty. These individual and collective actions inside the community are particularly portrayed by Chambers and Conway (1992) and Rakodi (2002), who stated that the resources, even though limited, and capacities could create paths for coping in crisis and ensure livelihoods.

The resilience in the settlement allowed households to survive and thrive against the negative impacts of the pandemic on the local economy, creating a new scenario. An important aspect that resilient livelihoods also consider is how the future is looked upon by households. The analysis from respondents' input confirmed that their perception assures a sustainable livelihood in the next few months to come and highlights their gratitude to the conditions in Las Delicias de Villa that helped them be optimistic.

5.2. Recommendations

The COVID-19 pandemic has become a turning point for academics, public officials, and people as to how societies should work. It demonstrated systemic weaknesses in place but also shed light on strengths that communities have. Based on this investigation, further academic research should focus on two main aspects: grassroots community initiatives that were created in informal settlements to face the pandemic and the social effect of the role of the government on disadvantaged groups of informal settlements.

Firstly, bottom-up measures have shown to be as efficient and effective, or more, than bottom-down procedures, and it was shown during the pandemic how community initiatives provide essential support that governments could not attend to. Some of the measures implemented at informal settlements would provide additional understanding of urban dynamics at these spaces and share valuable insights for future development. Secondly, the measures implemented by the government, although focused on safeguarding their citizens, had unforeseen secondary effects. Unaccounted impacts are particularly crucial for vulnerable groups because of the magnitude to which are felt.

Furthermore, another interesting step that should be taken in future research is an investigation within different multiple case studies. Informal settlements have distinct characteristics around the world, even inside the same country or city; an analysis that looks into the variables investigated in this research at different places would provide a more comprehensive conception of resilient livelihoods. For practical matters this would help public officials, especially, to develop local strengths of informal settlements and manage key points that are more vulnerable to crises.

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Annex 1

1. Interview guide (in Spanish/English):

Buenos días/tardes/noche, mi nombre es Diego Carracedo y soy un estudiante de maestría en la ciudad de Rotterdam, Holanda. Actualmente me encuentro realizando una investigación de tesis y me gustaría pedirle su tiempo para conducir una entrevista que tomaría aproximadamente 40 minutos. El propósito de ello es investigar el impacto que ha tenido la pandemia COVID-19 en la economía local de su área.

Para ello, me gustaría también pedirle su consentimiento para grabar la entrevista y poder transcribirla. Le aseguro que toda la información y detalles personales serán tratados confidencialmente y serán de uso exclusivo para el desarrollo de esta investigación. Asimismo, de desearlo, una copia del informe escrito será enviado a su contacto.

De antemano, le agradezco por su tiempo y colaboración.

La entrevista consiste en 4 secciones donde la primera parte será detalles personales como su nombre, edad, y más; la segunda donde hablaremos sobre el aspecto social del vecindario; en la tercera discutiremos sobre actividades económicas de la zona y de usted; y la cuarta sección hablará sobre el sustento económico.

Sección 1:

Ahora le preguntaré sus detalles personales:

1. Por favor, dígame su nombre completo, edad, sexo y nacionalidad.
2. ¿Dónde vive y cuánto tiempo lleva viviendo allí? (distrito y vecindario)
3. Si no ha vivido toda su vida allí, ¿de dónde viene?
4. ¿Qué tipo de hogar vive usted? (casa, departamento, quinta, improvisado // alquilado o comprado)
5. ¿Tiene título de propiedad del hogar donde vive?
6. ¿Cuál es su nivel de estudios?
7. De tener un título universitario o técnico, ¿practica la profesión que estudió?

Sección 2:

Ahora pasaremos a hablar sobre el aspecto social del vecindario:

1. Primero, ¿con cuántas personas vive usted en su hogar? Y, ¿cuál es su relación con las personas en su hogar? (familia, amigos, conocidos, extraños).
2. ¿Tiene familiares en la zona donde vive? De ser así, ¿es este un factor que lo llevo a vivir en este lugar?
3. ¿Tiene amigos y/o conocidos en la zona donde vive? De ser así, ¿es este un factor que lo llevo a vivir en este lugar?
4. ¿Se siente cercano (identificado) a la zona donde vive? ¿Podría contarme un poco sobre el tipo de actividades que realiza en su vecindario?

5. ¿Cómo describiría su relación con los vecinos de la zona? ¿Cree que es igual para la mayoría de las personas del área? Por favor, explíqueme.
6. ¿Qué tan cercanas son las personas de su zona? ¿Diría que hay cooperación y apoyo entre los residentes? ¿Por qué?
7. ¿Cómo describiría el impacto de la pandemia en el aspecto social de la zona? ¿Qué hay de las medidas mismas tomadas por el gobierno? ¿Cree que las personas en la zona sienten lo mismo? ¿Por qué?
8. ¿Cuál de las medidas realizadas contra la pandemia ha afectado de mayor forma las relaciones sociales del área? ¿Por qué?

Hemos terminado esta sección de la entrevista. Ahora seguiremos con la parte de las actividades económicas.

Sección 3:

1. ¿Cuál es su tipo de empleo? (sector del empleo, qué es lo que hace) ¿Diría que su tipo de empleo es el más común en su zona? Explique, por favor.
2. ¿Tiene más de un trabajo? ¿Por qué? ¿Es común que las personas en el vecindario tengan más de un trabajo o solo uno?
3. El trabajo que usted tiene, ¿es independiente, es asalariado (obrero y empleado), trabajador del hogar, trabajador del hogar no remunerado, o es empleador? Su trabajo, ¿es formal o informal? ¿Hay alguna razón específica para ello? Explique, por favor.
4. ¿Hace cuánto tiempo lleva haciendo el mismo trabajo? ¿Suele cambiar seguido? ¿Por qué sí o no?
5. En su experiencia, ¿diría que es sencillo o difícil conseguir trabajo en su zona? ¿Por qué? ¿Qué cosa lo haría fácil o difícil?
6. En su opinión, ¿cree que hay alguna relación entre el aspecto social y lo económico en su zona? Podría explicar por qué sí o no.
7. Desde que inicio la pandemia, ¿cuál diría que ha sido el impacto más grande en el trabajo de las personas de la zona? Explique, por favor.
8. En su caso, ¿ha perdido trabajo? De ser así, ¿Cómo lo ha superado?
9. ¿Cuál de las medidas realizadas contra la pandemia ha afectado de mayor forma las actividades económicas y el empleo en el área? ¿Por qué?

Con eso damos por terminado la tercera y penúltima sección de la entrevista. Ahora pasamos a la parte final, relacionado al sustento económico.

Sección 4:

1. En cuánto a los servicios públicos del área, ¿Qué tan fácil es acceder a servicios públicos en la zona? (hospitales, escuelas, recojo de basura, etc.) ¿Cómo describiría los servicios públicos presentes?
2. Relacionado a su trabajo, aproximadamente, ¿cuánto dinero gana al día? ¿este número es distinto a comparación de hace 1 año? ¿por qué?

3. Aproximadamente, ¿cuánto dinero gasta el día? Y, ¿varía a comparación de hace 1 año? ¿en qué es lo que más gasta usted?
4. Con sus ingresos, ¿suele ahorrar algo de dinero?
5. Si perdiese su empleo en los siguientes días (o si lo ha perdido), ¿Qué tan fácil sería/fue para usted conseguir uno nuevo? ¿Tendría/tuvo problemas para ‘sobrevivir’ sin empleo por un tiempo? ¿Cuánto tiempo aproximadamente? Explique, por favor.
6. ¿Cómo describiría la estabilidad laboral de su trabajo? ¿Tiene alguna opinión sobre ello para el área donde vive? Explique, por favor.
7. De las medidas tomadas para prevenir el contagio de la COVID-19, ¿cuál de ellas afectó su día a día más fuertemente? ¿Por qué?
8. ¿Cuál su percepción para el futuro laboral de la zona una vez la pandemia se vea más lejana? ¿Cree que habrá cambios fundamentales o grandes? ¿O volverá a como era antes?
9. ¿Hay alguna lección que aprender de cómo el vecindario enfrentó las medidas ante la pandemia? ¿Qué pudo ser mejor?

Esa fue la última pregunta de la entrevista. Le agradezco mucho su tiempo y toda la información que ha brindado en cada pregunta. ¿Tiene alguna consulta o duda que desea realizar?

Bueno, ha sido un placer conversar con usted y aprecio su aporte. Finalmente, me gustaría asegurarle nuevamente que la entrevista es estrictamente confidencial y únicamente con fines académicos.

¡Muchas gracias! Hasta luego

Good morning/afternoon/night, my name is Diego Carracedo and I'm a master's student at IHS, Erasmus University in Rotterdam, Netherlands. Currently, I'm developing thesis research and I would like to ask for your time to conduct an interview that will be approximately 40 minutes. The purpose of this is to investigate the impact that the COVID-19 pandemic has had on the local economy of your area.

For this, I would also like to ask for your permission to record this interview and be able to make a transcript. I assure you that all the information and personal details will be treated confidentially and will be used exclusively for the development of this research. In addition, if desired, a copy of the written report will be sent to your contact.

Beforehand, I appreciate your time and collaboration.

The interview consists of 4 sections where the first part is related to personal details such as name, age, among others; the second one we'll talk about the social aspect of your neighborhood; on the third one we'll discuss economic activities of the area and yourself, and the fourth is concerning livelihood.

Section 1:

Now I will be asking about your personal details:

1. Please, tell me your full name, age, sex, and nationality.
2. Where do you live and how long have you been living there? (district and neighborhood)
3. If you haven't lived there for your whole life, where do you come from?
4. What type of housing do you live in? (house, apartment, 'quinta', improvised // rent or bought)
5. Do you have legal titling of the house you live in?
6. What is your education level?
7. If you have a university or technical degree, do you practice the profession or trade you studied?

Section 2:

Now we'll move on to the social aspect of your neighborhood:

1. First, how many people do you live with at home? And – if living with someone else - what is the relationship you have to the people there? (family, friends, acquaintances, strangers)
2. Do you have relatives living in the area? If so, was this a factor that led you to live in this area?
3. Do you have friends/acquaintances living in the area? If so, was this a factor that led you to live in this area?
4. Do you feel identified with the neighborhood where you live? Could you tell me a little about the type of activities that are present in the neighborhood?
5. How would you describe the type of relationship you have with your neighbors? Do you think it is the same case for most people there? Please explain.
6. How close are the residents of the neighborhood? Would you say that there is cooperation and support between them? Why?
7. How would you describe the impact of the pandemic on the social aspects of the area? What about the measures taken by the government? Do you think that people in the area feel the same way? Why?
8. Which of the measurement taken by the government has affected the most the way social relationships are in the area? Why?

We have finished this section of the interview. Now we'll move forward to the section of economic activities.

Section 3:

1. Are you employed right now? What is your job about – or was about? (sector, what is that you do) Would you say that job is the most common in the area? Please explain.

2. Do you have/had more than 1 job? Why? Is it common for residents of the neighborhood to have more than one or just one?
3. The job that you have/had, was it independent, wage-employed, house job, employer? Was that job formal or informal? Was there a specific reason for it? Please explain.
4. How long have you been/were you doing the same job? Do you use to change often? Why yes or why not?
5. In your experience, would you say it is easy or hard to obtain a job in your area? Why? What is the thing/s that would make it easy or difficult?
6. In your opinion, do you think there is a relationship between the social aspect and economic activities of your area? Could you elaborate on why yes or not?
7. Since the beginning of the pandemic, what would you say is the biggest impact on the economic activities of the people in the area? Please explain.
8. In your case, did you lose your job because of it? If so, how did you tackle it?
9. Which of the measures taken against the pandemic has affected greatly the economic activities and employment of the area? Why?

With that, we conclude the third and almost last section of the interview. Now we'll go on to the final part related to livelihood.

Section 4:

1. About the public services of the area, how easy it is to access them? (hospitals, schools, waste management, etc.) How would you describe the public services present?
2. Related to your job, how much money do you make a day? Is this number different from what you earn a year ago? Why?
3. Approximately, how much money do you expend every day? And does that number varies from what it was a year ago? In what is that you expend the most?
4. With your income, do you get to save money?
5. If you lose your job in the next few days (or if you lose it) how easy will it be/was to obtain a new one? Would you have/did you have issues to 'survive' without a job for a while? How long approximately? Please explain.
6. How would you describe the employment stability of your job? Do you have any opinion on the area that you live in general? Please explain.
7. Of the measures taken to prevent the pandemic, which of them affected the most your day-to-day? Why?
8. What is your perception of the future working scenario of the area once the pandemic looks in the back? Do you think there will be fundamental changes or will it bounce back to what it was?

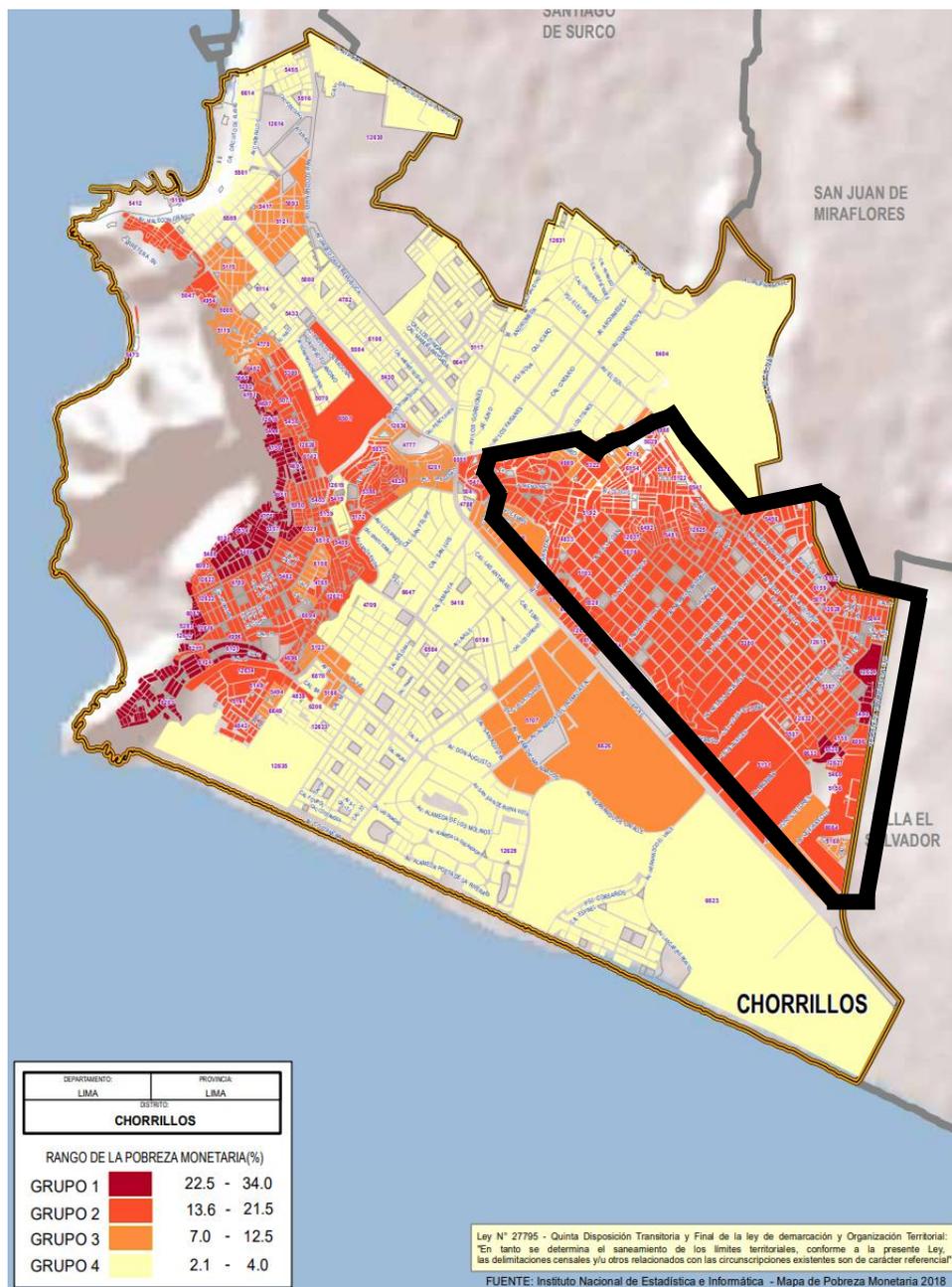
- Is there any lesson to keep about how the neighborhood faced the measures taken against the pandemic? What could have been better?

That was the last question of our interview. I really appreciate you for taking the time and sharing all the information that you provided to the questions. Do you have any questions or doubt that you would like to ask?

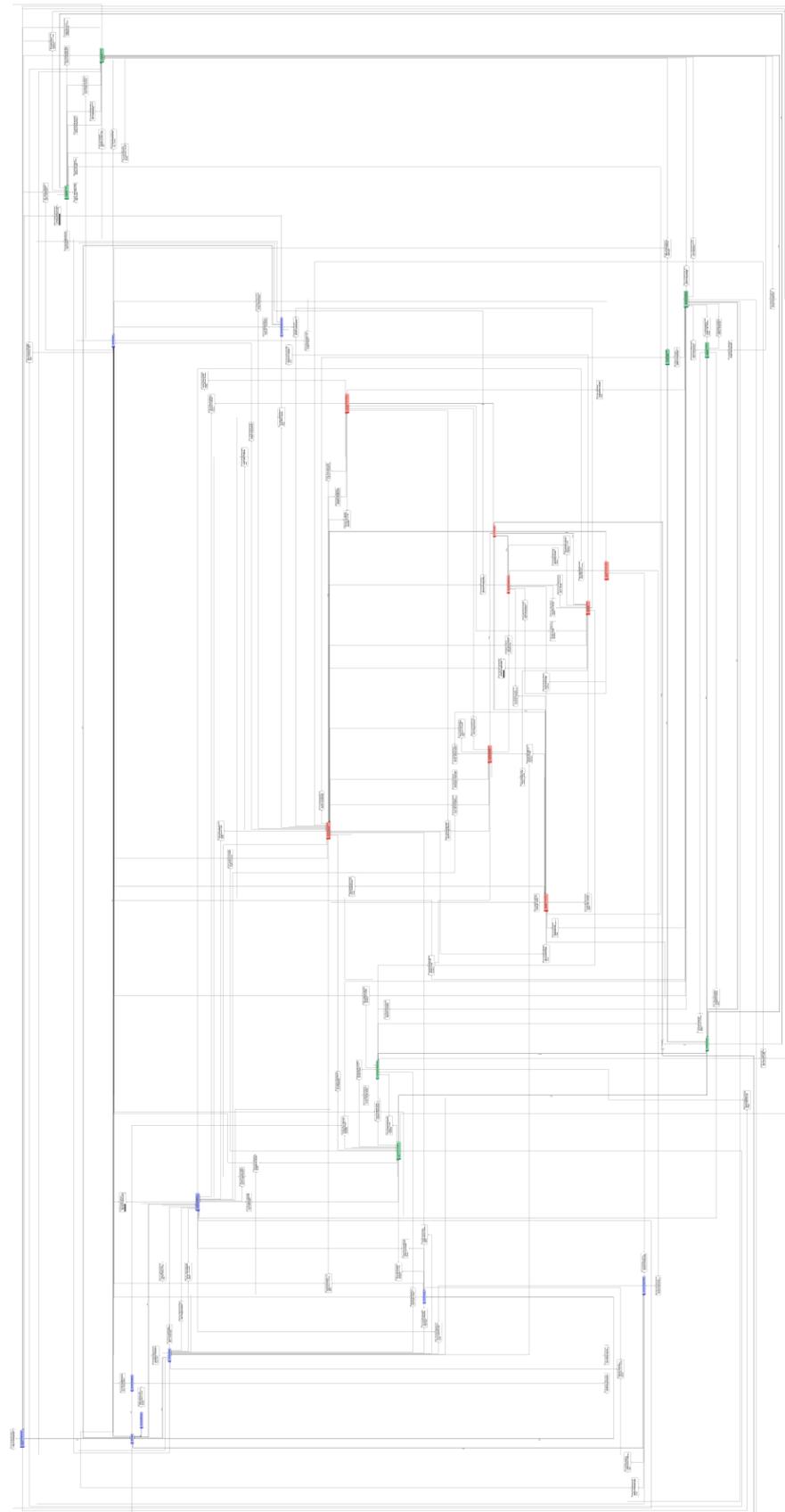
Well, it has been a pleasure to talk with you, and thank you for your input. Finally, I would like to assure you again that the interview is strictly confidential and solely for academic purposes.

Thank you very much! Goodbye.

2. Monetary poverty in Las Delicias de Villa, Chorrillos



4. ATLAS.ti Network



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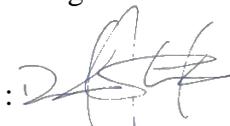
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