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Understanding the Impact of the Required Metro Infrastructure in a Fragmented City

The case of Villa el Salvador and its Metro Station

**A Thesis submitted in the Partial Fulfillment for the Requirement of the Degree
of Master of Science in Integrated Urbanism and Sustainable Design**

by

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Abstract

The current situation in Lima according as what we can read in the news and charts is very promising. Reduction of poverty level, a new politic panorama, social movements asking for reforms on the streets. This scenario presents an active country that is considering its difficulties for its progress. Nowadays, cities are measured by their economic strength, but the city's protagonists, the people, are often left out.

In Lima there is a diversity of cultures and individuals settled in an unequal space, and the solution is not clear since only extensive and complicated solutions are sought. Focusing on particular problems and not transversal ones that affect each fragment. Neighbourhoods are the roots of the city and strengthening their interaction is necessary to clarify their impact. It is here that the new subway system assumes significant responsibility. After 34 years of struggle, Lima has now one line running that is joining two very populated and important parts of the city. Giving the opportunity for this fragments, to coherently work together or to negate one from another. This master thesis aims to find the impact and further scenarios of the metro system and its metro stations around the fragmented city of Lima. Taking a sociological approach, it will encourage the analysis of other fragments in the city. Taking into account the correlation and the autonomy of the actors under study. Also this research would attempt to glimpse an integrative solution for districts that comprise Lima, a city loaded with different nuances and specific visions that must be taken into account for their development. This proposal longs to be constantly discussed and debated by the city's actors, as a tool to reinterpret the ongoing and future challenges of disparity and disaggregation on the centralized capital of Peru.

Keywords: scale, neighbourhood, city, fragmentation, polarization, mobility, infrastructure, vision, impact, urban transformation

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Definitions

Villa el Salvador	This term refers to the entire current district with emphasis on the population within the district. Villa el Salvador belongs to South Lima and is one of the 51 districts that make up the current city of Lima. Its name means people of the savior, it has a religious connotation where the savior is Jesus Christ, from the Catholic vision.
Metro de Lima	This phrase refers to the subway that is in operation (line 1) and involves all the future extension of the following lines to be built. It is a holistic definition of the whole project, as its material form that is recognized by the users.
Metro system	This refers to the metropolitan railroad system that covers the city of Lima. It directly involves the entities in charge of its operation. In turn, the basic network of the Metro de Lima, which makes up the legal framework that allows the development of studies to raise the following lines.
Line 1	Line 1, is the only line that is in operation of the Metro de Lima. It runs from the centre of Villa el Salvador (South Lima), to the centre of the city and to the district of San Juan de Lurigancho (located in East Lima).
Invasion	It refers to the informal settlements that occur in the city of Lima, starting with an illegal occupation of the land. They lack basic services and urban infrastructure (Habitat III definition)



Picture 1. District cultural movement and the metro line in the background. Source: Rodrigo Abd.

1. Introduction

Currently, cities around the world are constantly struggling to excel each other. An important factor in improving and achieving a better citizen's position is and has always been infrastructure. Such infrastructure, in all its presentations, appears as a necessary and perennial element to guide the development of each city, with a complex system that reflects the city where it is located (Graham, 2009). Although sometimes this factor does not benefit all city residents. The infrastructure that enables social and economic mobility, in many cities has acted in different ways. In some parts of the world, infrastructure systems are applied with the function of enabling the activities of economic agents to develop, promoting growth that benefits society (Buhr, 2013). However, in Lima, the opposite has happen. While the city has developed, without planning, in a large desert area conditioned only by its hills, Peruvian resourcefulness has always been set as a self-sustaining solution for communities. This has naturalized a distancing from the government with its inhabitants, conditioning that the population is not taken into account. Therefore, a future vision becomes a transversal problem of rulers and city, where the former do not pose one and the latter are not heard for an urban transformation.

Taking into account that the functionality of cities depends largely on urban mobility, in which the movement of resources and the economy takes place. The Covid-19 pandemic, which so far the way to combat it is through social distancing and quarantine, makes Lima's future uncertain. A city that has grown up disjointed for decades is affected to a greater extent since many of its activities depend on urban mobility. It is precisely in the city that an unequal confrontation with this virus is observed, while mobility has been reduced, making it necessary to reinterpret activities and recover the neighborhood scale (Espinoza, 2020). n Peru, Lima is currently the epicentre of the pandemic, and

while in the consolidated parts of the city it is possible to stay at home and work in virtually all of the fragmented city, this is not possible. People living from day to day life now find themselves deciding between dying from the virus and dying from hunger, where an estimated 70% of the population lives this way (Clarín, 2020). Since the World Health Organization declared the global pandemic on 11 March this year (WHO, 2020), the disease has been consistently minimized by much of the population in Peru. The collapse of the health system in the country has led to a late realization of the consequences of this outbreak. And this is a problem that reflects the disconnection between society and the experts.

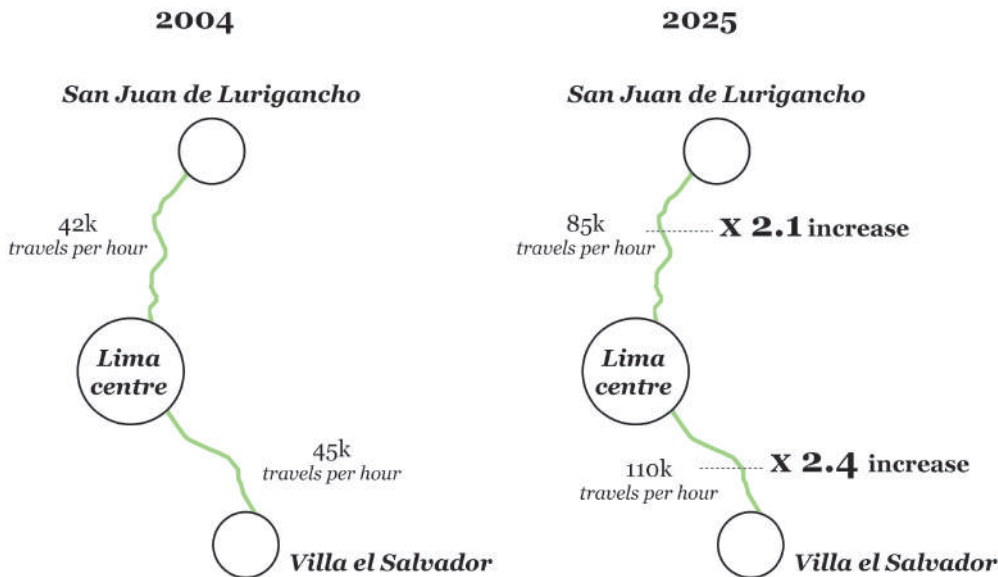


Figure 1. Estimations of travels in the Metro Line 1 in rush hour. Source: author based on data presented in the Master Plan for Urban Transport in the Metropolitan Area on Lima and Callao (PMTU 2025).

A city with better infrastructure and more connections, is presented as a more competitive place and that consequently will host a better quality of life. However, in the global south, cities have to choose between a better economic status and improving their quality of life. In these cities, subway services are being promoted that try to integrate and reorder the city, joining the Latin American ecosystem of

mass transport (Albiser, 2020). Lima presents the same idea, but in a particular way. The only functioning metro line in the city connects two fragmented districts that currently have the highest number of trips in rush hour, according to future projections to 2025 (JICA, 2013; PMTU Master plan for urban transport in the metropolitan area on Lima and Callao, 2005).

Although these two districts have many similarities like those mentioned above, they also have several particularities that mark social differences in the city (both districts have problems of citizen insecurity and are considered popular districts that grew due to internal migrations because of the economical crisis in the country). Villa el Salvador is one of the first districts with its development due to community self-management. Although since its beginnings, the community has managed its own development, at present there is a growing sense of not feeling part of the city, due to the low socio-economic status and the remoteness of central and developed Lima.

1.1 Problem Statement

These disjointed districts are the components that have formed the city of Lima in its years of history and irregular growth. The disjointed districts are the components that have formed the city of Lima in its years of history and irregular growth, becoming a norm in the expansion of the city. This heterogeneity has complicated a comprehensive understanding of the city. To date, Lima has 50 districts, each with its own mayor and urban policy, making integrated city planning difficult. At the same time, different nuances appear conditioning a disintegrated development. The city is densifying at great speed recently, and this growth is occurring to a greater extent in the areas away from the city centre or cardinal Lima. Places where there is less infrastructure and more poverty.

After a difficult journey, Lima now has a metro system, of which one line is

running in the city. This metro is an important opportunity to connect different parts of Lima. But considering the scale of this project, this district was never prepared to receive this improvement which was stopped for many years, leading to an uneven development of the two segregated parts. The upper part of the district (IPD) has developed a strong economy due to the industrial zone that has been connected to Pachacutec Street, an important artery that connects all the southern districts of Lima. Having now a part of the district with a diverse economy; while the lower part of the metro line (CDD) has not developed as well, finding a district that requires a long road for development.

A current problem is that Lima is not prepare to face the lack of infrastructure currently affecting the city. Mainly due to underestimating the requirement of the people that this master thesis tries to reveal from the visions of the people. Lima has been accustomed to fix problems. Taking away from the city a necessary vision that can sustainable manage its upcoming challenges. The measures only fix the present, overlooking the immediate problems to come. From here we recognize the transversal problem that involves all areas of the city, the lack of vision in the city.

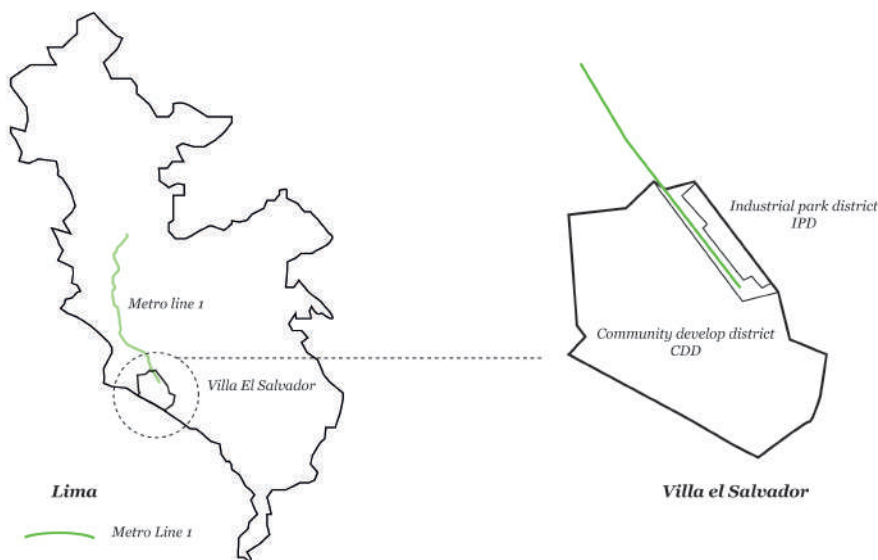


Figure 2. Metro Line 1 in the city scale and in the district scale. Source: author.

Now in Lima, a new normality is proposed to be taken after the pandemic is overcome. This is where urban mobility has to be rethought in order to function in these new circumstances, while a structured informality extended across the city should be included. In the case of Villa el Salvador and many other parts of Lima, transportation is still largely informal. This informal or unregulated transport is the main agent that allows urban mobility in the city. While formal urban transport where its use can be controlled still does not represent more than 10% of use in the whole city (Lima Cómo Vamos, 2019).

1.2 Research aim and objectives

As mentioned, Lima is now in the process of implementing an integrated subway system throughout the city. To date, the first line of the Metro de Lima is in operation, while its functionality for the population has not been fully understood. This is why it is relevant today to understand the social impact of the integrated transport system in one of the fragments that form the country's capital. The research is aimed at understanding the different factors that involve the infrastructure in a fragmented city, as well as what is missing for people to leave the comfortable informality and involve the formal system in their lives. At the same time, the research also intends to discover different challenges that will appear soon, taking into account that this transportation system will integrate different parts of the city that may have certain similarities with Villa el Salvador. Leading this research while the Covid-19 pandemic continues to spread around the world, where it is observed that it is sharpening the inequalities present in the city, makes this precise moment to take a stand on this problem that has been living for years normalized in Lima.

To reinforce the focus of the research, it is proposed to investigate the issue by reviewing the literature and collecting field data, for which the following objectives will also be addressed.

- To rethink the uneven development of the city and its consequences in a district affected by different layers,
- Understanding the fluctuating Metro de Lima implementation process and factors to be considered,
- To build a framework to be capable of analyzing future challenges in fragmented areas,
- To understand people's vision and their relationship with the metro system to be implemented in the city,
- To explore the underlying factors and consequences for the future of young towns in Lima,
- To reinterpret the panorama of the city, according in the requirements and visions of the people,
- To recommend strategies to address problems in fragmented areas by taking advantage of the metro infrastructure.

1.3 Research questions

The scope of this research begins by questioning: How will the required metro infrastructure impact the already fragmented city of Lima? Several internal and external aspects arise that involve its planning, execution and most importantly, how it could be used as a tool for development.

To investigate the nuances of the research, the following questions are formulated.

- How is the infrastructure in the city's fragments working?
- Why does the infrastructure not work well with self-managed neighbourhoods?
- How does stagnant infrastructure exacerbate uneven development in fragmented neighbourhoods?

- What are the reasons that determine the distance from the plan with the population?
- How could an integrative strategy for sustainable mobility be generated in the city?
- How can an integrated transport system help combat the pandemic?

1.4 Research methodology

This research begins by conceptualizing the infrastructure and the fragmentation situation in cities belonging to the global south. It takes into account the problems experienced in the city of Lima for all the components that imply urban development.

After determining the problem, one has to ask what one wants to find in the city and what are the deficiencies in these areas. This implies, given the situation, a constant rethinking according to what can be obtained as indicators.

Proceed with the collection of data, which will be mainly through digital questionnaires to understand the current situation, as well as the relationship with the Lima metro.

Once the results are obtained, they have to be complemented with indicators already studied, in terms of the number of trips, mobilization patterns in Lima and the prevailing relationship with citizen insecurity.

Analise the results obtained, and superimpose them with the social and mobility surveys carried out in the city. To be able to understand which are the gaps, incompatibilities and relations with the concepts raised. This analysis will take into account mainly the relationship between the infrastructure and the citizen.

Define recommendations to reinforce the structural plans in the city so that they can be appropriate for their users, ensuring their maintenance and improvements for the population. In turn, it will take into account how this formal system can be addressed to reactivate the city, giving it a safe and sustainable option for the city, which for many years has had to grow at its own pace.

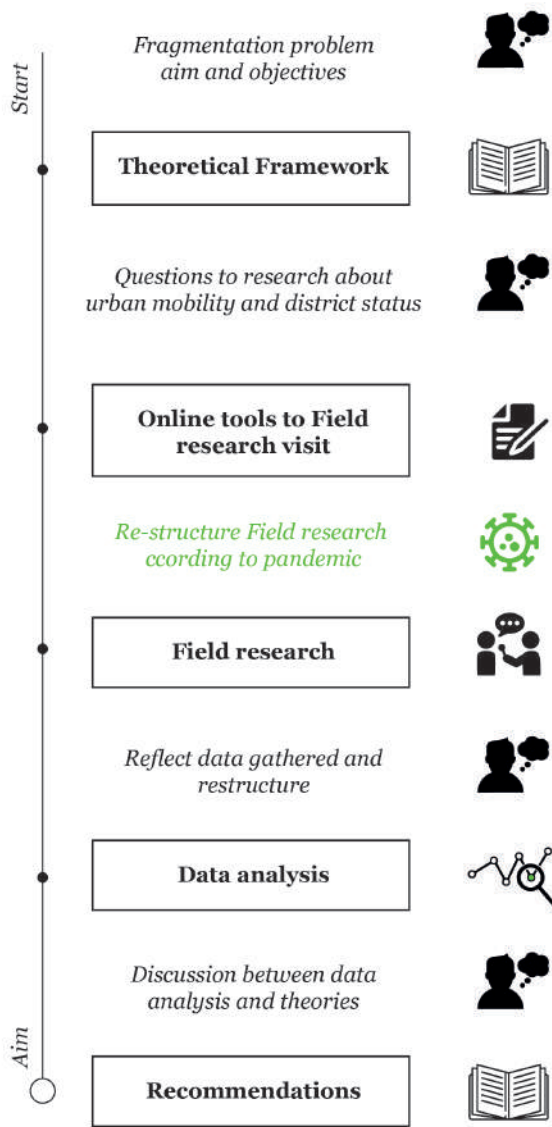


Figure 3. Research methodology plan. Source: author.

1.5 Limitations

The main limitation found while conducting this research has been found in the people, the reaction of the country to control the pandemic is stop the mobility. This means for many residents in the city now being able to work for the day and many people is currently struggling to produce the money.

Not everyone have the possibility to do home office, a large amount of people travel many hours from their homes to the workplace, so this new normality has sharpen more the inequalities rooted in Lima.

This are the main limitations found while doing the research:

- Interviews to experts have been limited to phone calls and emails.
- People's response to online surveys have also been limited. The responses have been brief since not conversation has been possible.
- Another related problem is that as a complex context is occurring, the responses may not reflect the real impact of the transport infrastructure in the city. The most serious problem now in the country is the insufficient health infrastructure and loss of jobs for the population.
- Complementary data had to be obtained from studies and articles that address the same issue but on a broader city scale.



Picture 2. The metro passing above a commercial area in the centre of Lima. Source: Lineauno.pe website.

2. Theoretical Framework on Mobility infrastructure

In order to compete in this globalized world, cities must be in constant motion. Lima is not far behind in this respect, positioning itself as the next megalopolis that will host a large percentage of Latin American economic activity. Cities around the world required to improve their infrastructure to embrace all their activities. This current scenario leads cities in LA to improve their transport infrastructure.

This investigation begins by reviewing some concepts, revealing in each one the gaps they may have when investigating them in the Lima context. Aiming to construct a theoretical framework to conduct this research and that allows to comprehensively analyze the problem in the research.

2.1 Infrastructure conceptualization

Infrastructure is a constantly changing term and has received several meanings over the years. As Alehashemi says, Williams defines it with this phrase: “Infrastructure, like technology, turns out to be a recent term and promiscuous term”, showing the conceptual adequacy of this word (Alehashemi et al, 2017 ; Williams, 2002). By understanding this conceptual function in continuous variation, a sense of dependence is interpreted. If we analyze the word by its composition, *infra* comes from the Latin prefix, below and *structure* has reference to construction, meaning the foundations or roots of a building that ensure its functionality. If we overlay these two perspectives, a correlation becomes uncertain since foundations do not have a sense of dependence, but rather provide the necessary support to erect a building.

In cities, the function of a city's foundation is not necessarily provided by its infrastructure. In some cases in LA we have examples of cities that have reinvented themselves through their new structural systems for mobility, gas production or mining (Cáceres, 2016). Of all these examples, it is the users and the activities that remain in place to ensure their functioning. Infrastructure is the starting point while the service is achieved when the users require it to achieve their plans (Cavallo et al, 2020).

Nowadays that the world is urbanizing in a fast pace, the complexity of this object is getting difficult to comprehend (Graham, 2009). Graham also points that the infrastructure are immobilized and always working for the city, under this perspective them can be interpreted as an asset for a city that is there to work for it. That notion can be interpreted when is already placed and working, but it does not explain what happen when it comes after the requirement and is tamper by dissimilar actors. In cities from the global south, where the disturbances and disorders describe the city and where there is a constant requirement to improve (Graham, 2009). Taking this notion of Graham and applying this to the context in Lima, becomes very relevant. Infrastructure improvements have a history of corruption where different stances battle each other continuously. In another hand, the city never had a proper plan to develop. Infrastructure provisions by the government appears as a tool enforce economic growth that also have lead to bribery. Access to infrastructure is determined by the socio-economic status and proximity to urban centres, which in turn increases the price of land according to its proximity to infrastructure (Cavero, 2018; Boullon, 2012). This implies that the infrastructure adheres to its concept a determining factor in the configuration of the city.

In terms of what can be achieved, the infrastructure marks socio-economic strata according to what a certain population can achieve. Isolating categories as opposed to integrating systems for the city.

2.1.1 Infrastructure, a continuous political problem

A tool can range from utensils for mastering a craft to the military's ability to fight a war, such as a strategy used by the United States in World War II to develop their economy. According to Buhr, the infrastructure is a task for the state and the different actors involved. But nowadays public-private attempts are in motion to facilitate its implementation. Infrastructure has always being a political function (Buhr, 2003). In Peru, infrastructure is a very delicate topic. A wide number of the infrastructure already in the city has been made under corruption or weak materials. But the main problem is the continuity of it. Normally when a new government is set into office, the promised projects at campaign time start to delay. And until the last years, they start to be constructed and never ended by the next government that normally is against the previous political party. That is exactly what happened with the metro system in Lima. Struggles between political actors for insubstantial reasons set aside the requirements of the city and focus only on winning elections, denying promised projects and constantly depriving continuous and focused development.

It is necessary to take into account the determining role that infrastructure represents in urban policies, since these are generated to benefit the requests of the population (Monstadt & Coutard, 2019). But this is difficult in a city like Lima, where there are 50 districts governed by different entities that generate a dis-articulation in integral solutions for the city. In Chile, the Ministry of Housing and Urban Development, since the 90s, bet on a national plan to encourage and support the construction of housing has promoted that they settle in peripheral territories where prices are more accessible and can generate more disintegration (Heinrichs et al, 2013). In Peru, these integral plans have not occurred, and rather, territorial occupation has been determined by self-managed decisions such as invasions and informal settlements (Wiese, 2016; Cole, 1956).

2.1.2 The role of transport infrastructure

The transport system has function over the years as a key player to develop cities across the world. Transport infrastructure plays a major role in development, De Grange captures the impact of the metro system on the number of jobs in cities with and without a rail transport system. Where we see a 15% growth in jobs in cities with a transport system (De Grange, 2010; Partridge, 2007). This is in line with what Vuk verified, which in its analysis of the origin of users who adopt the metro system, indicates that there is 15% new user demand, while the other 85% is due to mode migrations (Vuk, 2015). According to these notions, the transport infrastructure takes on an important role as a developer of cities, since by changing the system it adds new users. It is not only a change of mode but it gives a new vision to the users. Moreover, due to the homogeneous cost throughout the population allows it to be used by people regardless of their affordability status, improving economic efficiency in the city due to better connectivity and generating more activities by bringing together new economies by agglomeration (De Grange, 2010). It is important to add the role that O'Connell tells us, where people prefer to reside near subway stations, even if these are not used by them, thus there is a relationship not well defined (O'Connell, 2015).

But it must be taken into account that the infrastructure conceives a positive role at its initial point and this can change when it is in operation. This can be seen in the centre of Lima, two districts are now divided by a bridge that tried to unify them providing a public space to the city. But bad municipal management between these two districts has led to it now being called “the bridge of discord” because of the new fence that restricts free pedestrian traffic (LA Network, 2020). In this case, the infrastructure began with a clear role and objective, but due to administrative, political and citizen factors, its function contrasted completely. It is imperative to take into account the stakeholders and their respective intentions with the infrastructure in order to manage it and really benefit the citizens.



Picture 3. 'The bridge of the discord' that attempts to unify but avoids the connection between two districts in Lima. Source: LA Network, 2020.

2.1.3 Reinterpreting urban mobility

Through all this time, mobility is framed as the movement from point to point. Focusing just on the physical movement, push cities to look in the efficiency of the action. Taking the motorized transport as the most important aspect to focus. But mobility is so much more. As cities have developed and enlarge their dimension, moving from place to place is not more a defined task. According to Vega-Centeno, the complexity of the urban form gives to the city a new setting and frames the time as a crucial element in this activity (Vega-Centeno, 2003). Nowadays, the activities and vital functions are dispersed in the city, forcing to mobilize in an automobile to cross these new city nodes.

Framing a holistic meaning may be impossible as mobility has many interpretations. According to Costa, Morais and Bertolde, mobility is the ability to move around the city while helping to fulfill a social function in it (Costa et al, 2016). If we take into consideration the complexity that the city is currently

gaining as mentioned above, moving freely with wide access around the required places can be difficult. Movement in the city requires technology to be more operational and efficient to make this activity real and constant.

Today, Lima is in seventh place in the traffic range of cities around the world. With an average congestion level of 57% that can reach over 120% at peak hours (Tomtom 2020 traffic data), it appears to be one of the most congested cities and a great challenge to work on. One of the main reasons for the city's traffic is uneven development. Lima is made up of several parts, which can be characterized in two groups: modern Lima and the urban cones that are unrelated to the former. This generates daily excess of motorized trips since there is a need to be formed by work and education that normally is in the centre. According to Vega-Centeno, mobility is strongly related to proximity. And this can delimit the use of space by having to include important displacements that demand time and resources (Vega-Centeno, 2003). While Ramirez emphasizes that this is due to the reticular structure that has emerged in an already built city, it has been imposed. Ramirez also characterizes Lima as a dual city, which implies a concentration of resources and services in one sector (Ramirez, 2006). Leaving remote areas lacking the same opportunities. As implied later in his article, spaces that do not constitute nodes and do not generate interest for profit are excluded from the system.

Moreover, in 2017, he emphasizes that it must be taken into account that Lima has been urbanized in a large percentage through informal and illegal occupation. An occupation system that requires the presence of the state to be established (Ramirez, 2017). The mobilization in the city, therefore, has been done to a greater extent by political actors. And these, in turn, require the citizen mobilization of neighbours to form the social base necessary to strengthen political projects. Within this framework, Ramirez invites us to have this other perspective. The mobilization is highly related to political projects, which must be integrated from

the beginning. And in this, the levels of the city's actors concerning their mobility will be affected by their role.



Picture 4. 'Combis' (little white buses) in Lima respond to a necessity to move in an affordable mode to drivers and convenient for users since more of these units give more places to reach. Source: Andina, 2020.

Given the above, it is understood that common activities are local and a district may not belong to a city system by only moving locally. Now that the city is growing with the vision of becoming a megalopolis, movements have to take place on a new scale that mixes these different existing neighbourhood scales. At the same time, Ramirez takes up Vega-Centeno's interpretation that the metropolis is a social phenomenon from its base, where centralities are articulated in a network of centres that form the city (Ramirez, 2006). Changing the systems on presented on a city already used to informal transportation can have unexpected consequences.

2.2 City fragmentation

The term fragmentation is used to refer to various characteristics of a city. It has been meant to explain the necessity of a new approach for architecture in the city (Martuccelli, 2018), making clear the intrinsic requirement for a new interpretation due to fragmentation. This is a problem of many countries in LA, where they have in common that the cities facing fragmentation are the capitals of these. If we define it from a natural point of view, the fragmentation of habitat has always been present throughout history and in turn, has been required for the species that inhabit the planet, but in a city, it acts differently. Fragmentation is the separation of parts in a common space that is now affecting the environment, making it more difficult to recover (Mullu, 2016 ; Fischer and Lindenmayer, 2007). In a natural environment, fragmentation usually occurs due to human activities and the consequent destruction of the ecosystem. While in the city, fragmentation occurs due to several reasons. In this sense, this research needs to understand the reasons why a city fragments itself. In order to understand social fragmentation we are going to review it on two scales, from individuality and plurality recognizing its problems and reasons for sustaining it. One of the main factors is how to involve different actors in the same vision, as in an urban development project. Another important factor is the requirement of interaction to form a common identity that responds to urban fragmentation.

2.2.1 Individual identity formation

The identity has been formed over the years mainly by the movement of the masses, this occurs in two directions: a vertical one that holds the history and tradition that identifies each individual and a horizontal direction that is determined by the interaction and collective understanding of social reality (Postdem et al, 2006). It can be assumed that identity is formed according to the sense of collective destiny that is achieved through interaction. While history and

tradition are the engines of identity, common vision and issues would be the fuel that feeds the identity. The horizontal factors are a constant need for an identity to be maintained, the context is a determining factor to achieve it. Moreover, it is necessary to underline the importance of the contrast created between the different identities, which is given by human nature to try to differentiate itself from others. According to these notions, we can interpret that a city already differentiated between its parts already conveys different identities already formed, where individuality does not go hand in hand with group mobility. And within this individuality, identity develops through an exchange of horizontal influence that is generated in the relationship with other individualities. There are two ways of understanding identity. It can be conceptualized through the autonomous analysis of individualities, while if one seeks to understand its management, it is preferable to compare it with other similar groups that are understood through social interaction and mobility (Cinoglu et al, 2012).



Picture 5. Resident placed a wood workshop infrastructure on the street near metro station in Villa el Salvador, converting it to a family business. Source: author.

In natural environments, fragmentation has been due to natural factors such as mountain chains or lakes. But in a city like the one analyzed in this research, the reason cannot be natural since Lima is homogeneous in territory, only limited by mountain chains that are now being populated. This research will focus on analyzing a district where there are no natural factors that can determine its fragmentation. Therefore the generation of incompatible identities is due to sociological factors, where the interaction is vital to be able to weave them.

2.2.2 Plurality of identities in urban development

One of the main challenges for urban planning in the future is to balance the needs of the population without compromising environmental sustainability and the resources needed for survival. An important actor in the environment is the people and their differences can be apart from the challenge, their solution. Professional approaches have always been directed towards proposing a novel solution, contrary to the problem. But as we can understand in medicine, vaccines are created by modifying the virus, using the actor.

2.2.2.1 *Participation involvement*

Social identity begins with the personal, and these are each of the nuances that form the culture. Although it is individual, it is formed from the collectivity, since it is through the reflection of contrasting ideas in a society that identity is generated (Abrams, 2001). These benefit personally and therefore provide collective benefits to society (Jeannotte, 2003). To ensure these benefits it is important that an interaction between the individual identities takes place.

Social interaction is not achieved with the new infrastructure, since it does not necessarily imply access to it. What can be achieved as a direct consequence is education, capacity building and new opportunities, but more elements are needed

for social interaction. Since infrastructure entails more opportunities for personal development, we can stipulate that this is more related to the approach in which the generation of infrastructure is directed. According to the International Initiative for Impact Assessment (IIIE) report, communities with infrastructure lose interest as the project is located, in what the report calls the attrition funnel. Citizen awareness in the stages of a community development project begins at more than 60 percent in terms of recognition of the idea and progressively decreases to less than 10 percent awareness of its cost. This means that by the time the project is carried out, there is no knowledge of it. The detachment to new projects for the city becomes usual, generating the sensation of not feeling part of the change. Where participation is mainly conditioned by the need that frames the project. If there is no need, it ends up being an infrastructure project disconnected from oneself. The emphasis ends up being on the object but not on the user. Therefore, from this perspective, the use of the object can only be measured when the object is affected, leaving aside the actor and his identity, who uses it and interacts with it. The relationship between need and individual benefits mentioned above becomes relevant in order to reinterpret this synergy between change projects and beneficiaries.

2.2.2.2 Connectivity interaction

The interaction takes place in the urban space, which are spaces that circumscribe the different actors in the city in a group level as passing from an individual level, which is a loop builds knowledge through communication and action (Postdem et al, 2006). This urban space depends on the infrastructure to be able to function integrally for all the inhabitants. This interaction requires the functioning of the city, understanding that a city without infrastructure will have difficulties in doing so. It is also understood that the interaction is generated by its inhabitants since they are the ones who have generated through the years social processes for its improvement (Sousa, 2018).

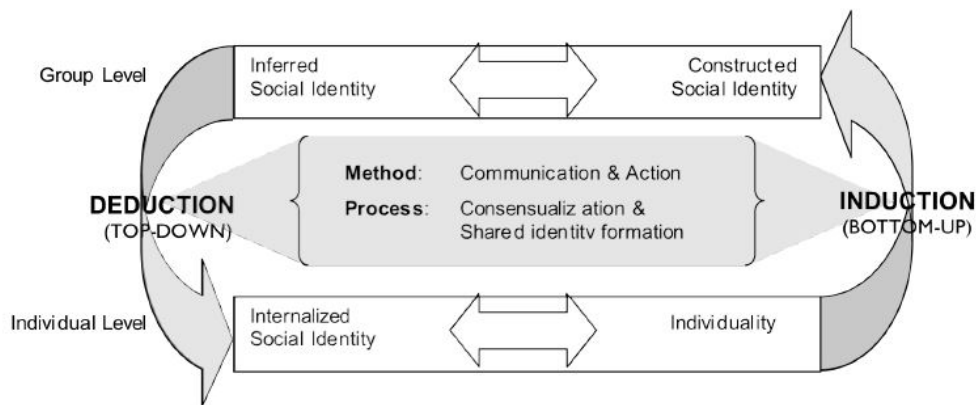


Figure 4. An interactive model of (social) identity formation. Source: Postdem et al, 2006.

In the case of Bogotá, the capital of Colombia, which now has a bus system that connects the city, this is an example of how to repair an already fragmented city that was experiencing various social difficulties. Generating a city with the possibility of healing itself through new social interaction. This was achieved by not determining the solution of parts, but a comprehensive vision of the city that generated an integral system for all its residents. (Cesafsky, 2017; Castro and Echevarr , 2011). But it should also be noted that connectivity does not necessarily induce integration. In a city like Lima with so many social differences and an innate need to seek to differentiate oneself from others, integration is limited. And it is here that the above-mentioned point becomes relevant.

2.3 Infrastructure and fragmentation relationship

The fragments are the result of a whole that contained them. To reintegrate them again, a structure is needed to keep them unified. The infrastructure and the fragmentation present a direct relation to amend and give a platform for social interaction. The role of infrastructure is necessary to set a direction for development. Infrastructure can encourage different reactions apart from urban mobility, in some cases it can stimulate population growth, as well as generate gentrification.

While a study conducted by CityLab concluded that metro infrastructure does not necessarily stimulate population growth, because unlike cities in the global south, the urban growth occur before car use and when these cities were at the beginning of their expansion (Florida, 2016). Nowadays, cities like Lima are dependent on the automobile, generating a relationship with the infrastructure after the initial challenge, which is its growth. Having to adapt to it and redraw its development since this factor was not present for its initial development.

Perhaps then, the relationship of the mobility infrastructure is with the activity, as more opportunities for movement are generated more economic activities in the city and around the stations. Possibly, the more mobility axes are attached to Lima, this can generate an economic growth and cultural and urban knowledge exchanges, generating a city that functions as a network, where it determines its growth through information and technological improvements (Castells, 2006). In this sense, users are a key element and the starting point for these growths to occur. Since the users are the generators of the activity, from this perspective it is imperative to delve into what the future visions are and how they can be related to urban mobility (See Figure 5).

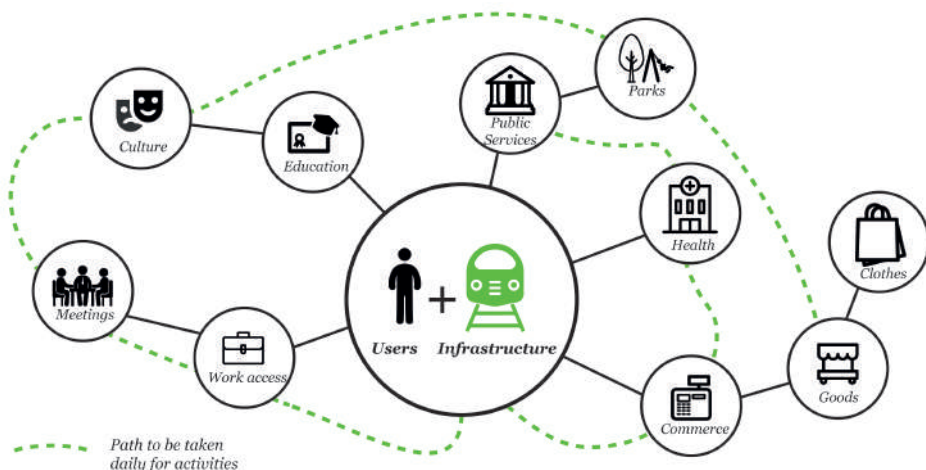


Figure 5. Users as transformers to decide their future. Source: author.



Picture 6. Arrival of public lighting to the district of Villa el Salvador in 1972. Source: amigosdevilla.it website

3. City review

This research attempts to tell the story of Lima on two different scales, and while merging these two establishing the perception of the city that this master's thesis seeks to address. Cities are made by the actors that perform in it, the resources, institutions and economy are the tools but the one that uses it is the people. As years pass by, we are accustomed to measure the city in its economical level or the infrastructure it has, rather than noticing the players that are driven the development in it. Lima is a city without infrastructure that continuously lacks of it. Having different parts that do not relate to each other makes more difficult to address and aim towards its development. Lima is today full of problems, where each of these is reflected in an attempt at solution with little impact. This causes improvements to be inhibited on a smaller scale where this in turn cannot propagate or increase their impact. Normally the city has been thought of from a larger scale in demographic levels while urban studies in social sciences have always focused on the neighbourhood scale. At the same time, this neighbourhood scale is given the prominence in a more complex scenario than the neighbourhood itself. I always try to extend it to higher levels so that isolated strategies are obtained that do not converse with the other sectors of the city. This master's thesis will take these two stories at different scales, seeking to relate from a sociological point of view to the different actors who swarm the city.

3.1 City scale, a larger interpretation of Lima

The capital of the country was first conceived to be settled in the valley of Jauja, belonging to the department of Junín. A city in the central highlands of Peru very rich in minerals and culture, where more than 30% of the city's territory is granted to a mining company. Then being a city in a high altitude, the capital of the country was rethink to be in Lima (Mayma, 2018). As it is located in better conditions in the coast, with a moderate climate, next to the sea for commerce purposes and protected by its cliffs against sea attacks. Lima in its beginnings settled down like a walled city, it was located between three valleys annexing to the Rimac River mainly. This river is born in the altitudes of the Huarochirí region, generating an industrial and mining axis that now connects and establishes the type of Peruvian economy. Lima being a desert had to take advantage of the Rimac River to generate a network of channels aiming to sustain a desert city ensuring agricultural production (this channels began to be built about 2'000 years ago; Lizarzaburu, 2015), which were defining what now the main streets of the city are (See figure 6). Nowadays, the remaining channels still irrigate green areas in the centre of Lima.

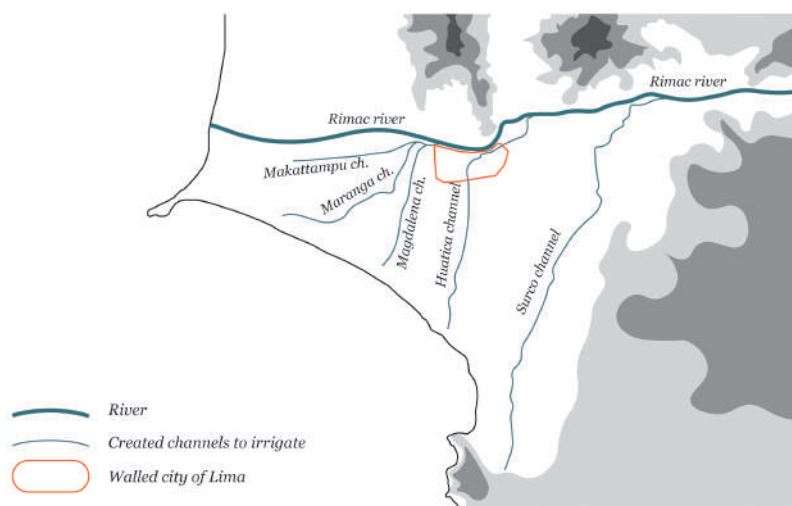


Figure 6. Rivers and channels that formed the development of Lima. Source: author based on Canziani publication (Ciudad y Territorio en los Andes: contribuciones a la historia del urbanismo, 2009).

After the fall of the wall, the formation of new districts and the need to set up a better scenario, the development of the city was not planned and was formed from several illegal occupations (Facho, 2018; Calderon, 2005). Most politicians came from a military coup without strong ideas of planning or how to structure the challenge (The state's capacity was overwhelmed in the face of strong migratory waves). Between provisional governments, weak democracies, military reforms and the internal armed conflict, the city was never able to implement a defined north for its development. But governments did agree to some extent, extracting natural resources from the altitudes and selling them abroad (Henrich, 2000). Therefore the Rimac River took a strong protagonism in the future of the country. Two main axes were marked by the city's traverse system which in turn determined a triangular-shaped city. One of the axes followed the line of the river taking an industrial character converting the resources before being exported. While the other one went to the south, it took a residential character, to become in the future the commercial and business axis that is the engine of the economic development of the city.



Picture 7. Huatica channel taking part to the community of Barrios Altos in the centre of Lima, first half of the 20 century. Source: Image from book 'Haciendas y pueblos de Lima' of Flores Zúñiga, 2018.

After these urban axes were strengthened and the urban triangle of the city centre was consolidated, the tramway system was canceled. The city became more and more oriented to the particular use of the car. Setting a grid of highways and streets guiding the city towards the commercial port of the country (See Figure 7).

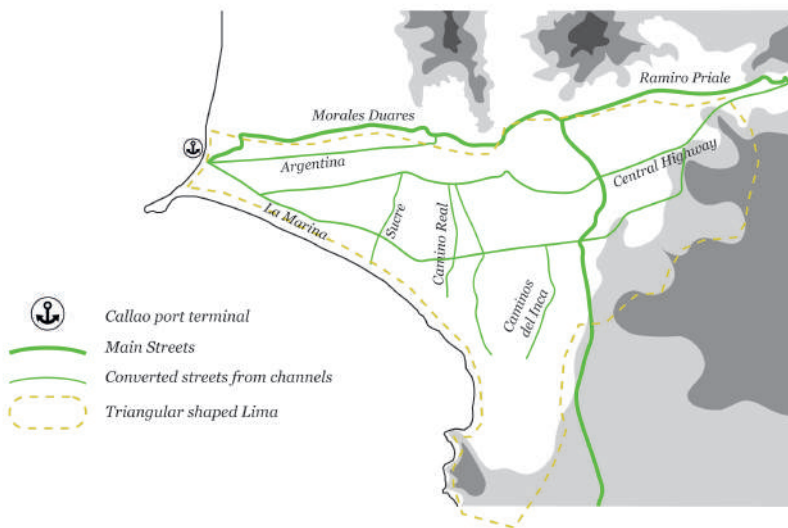


Figure 7. Highways and main streets in Lima. Source: author.

Then for various reasons a migratory movement began from different parts of the country seeking new opportunities and to address in order to mitigate internal problems of the country. Lima presented itself as a new opportunity for many people. With a mat under their arm they gradually populated the other valleys and other parts of the desert. Where the use of this material became an emblem of poverty in the city (Giraldes, García & Roch, 2010). From these facts it is relevant to take into account how nature has played an important role in the growth of the city, by defining its infrastructure and its first city base.

At the beginning, these migrations settled in the city without any plan in mind, while the government gave no options for their integration into the developed triangle of the city (Zucchetti, 2019). While nowadays this system has become a corrupted way of settling for many migrants through the sale of land without drainage. The unplanned

location of the migrants generated a dispersion and the sense of not belonging that led the city to fragment unrestrainedly, without an horizon of integration. The politicians of the moment did not give importance to this new scenario, taking it as an external development, since the main axis of resource extraction continued to work for the country's economy. Informal settlements began to be seen as an easy vote to get (Fernandes, 2011; see Figure 8). Year after year, the presidential candidates took them into account during the campaign, promising each of the needs they required, while once elected they looked the other way. Over the years, Lima became an unequal city, where the economy is the priority, leaving aside the actors that shape it.

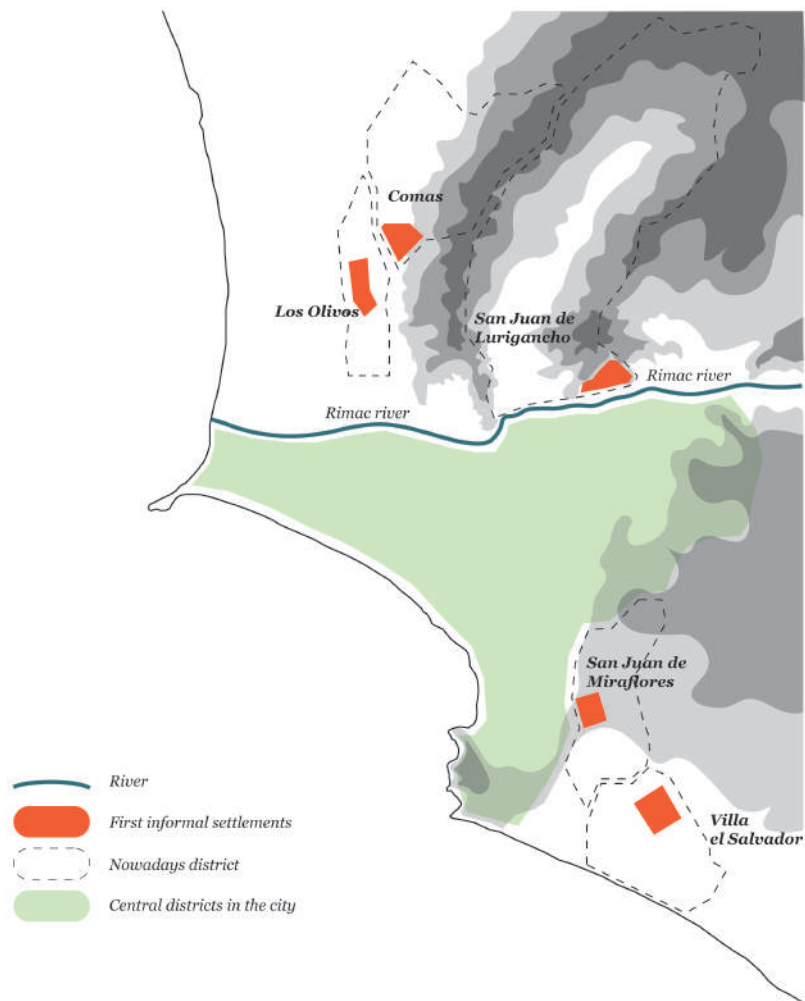


Figure 8. From informal settlements to districts that form Lima. Source: author.

In this new scenario, the real estate development has not played hand in hand with the growth of the city, the young neighborhoods have determined many problems that today suffocate the city (Fernandes, 2011). Health risks due to settlements in risk areas, citizen insecurity due to the lack of opportunities and the presence of poverty. It is important to emphasize that each of these settlements, which are now large districts, have a particular vision and identity (According to the citizen survey conducted by Lima Como Vamos in 2008, the district identity is stronger in the districts of southern Lima and the socioeconomic sectors D/E, more than 50%). All these factors determine a great challenge for the city, to build a comprehensive and sustainable planning that integrates the 50 districts that now conform Metropolitan Lima. This means 50 different visions that make it difficult to find the same direction for Lima (Lizarzaburu, 2018; Alegre, 2018). Thus, a planning that not only provides a solution to the present but also serves as a tool for the future.



Picture 8. Informal settlements, putting aside their problems, present themselves as a opportunity for the development of the city. Source: Image 'Fiesta y fútbol' from Cuadros, 2015.

One of the most relevant problems in the city, which is the main focus of this research, is that they generate a lot of traffic in the city (Lima Como Vamos, 2019), which will be further analysed in the following points of this chapter. Perhaps one of its main reasons is due to the centralism of the city that for decades provided the central triangle with infrastructure for its development, and the prevailing need of the population to go to the centre daily for study and work activities. Various sources were taken to propose a metro system to unify Lima. This will, on the one hand, alleviate the city's traffic, but social unification in the city is still uncertain.

As previously mentioned, Lima is currently composed of 50 districts, which are led by different political entities that make a first level of fragmentation in the city. Where although there is a restructuring in the city returning to a polycentric model, there is still a strong dependence on the central activity of the city (Avellaneda, 2008). This amount of districts that conform Lima, now are divided in 5 sectors decided by their geographic location. The triangular Lima that was indicated in the previous paragraphs now composes the Centre Lima, where the districts are located but developed at the moment and with greater population density, where the majority of services and work places are concentrated generating the dependency before mentioned (INEI National Institute of Statistics and Information 'A glance to metropolitan Lima', 2014). While the construction of high-rise buildings is more encouraged in Centre Lima, it is recommended that other sectors of the city also adopt this idea for their development (CAPECO, study 'The Urban Building Market in Metropolitan Lima and Callao 2013'; Wiese et al, 2016). While this approach is necessary for district regulation, it also implies that districts must be prepared to integrate these plans into their development.

In this research, we will focus on the district of Villa el Salvador that belongs to South Lima, where the highest percentage of poverty is found in the entire city (INEI Provincial and District Poverty Mapping, 2013), but the lowest population density in the city, which may be due to the large percentage of green areas and uninhabitable

land in the sector. Also, Villa El Salvador does not have a large territorial extension compared to its neighbours in the sector, so its population density must be particular (see Figure 9). These inaccuracies in the data invite us to review this district in more depth in the following point.

NORTH LIMA

2'725'625 hab total population

9'729 hab/km2 population density

19.9% poverty level

AN - Ancon

SR - Santa Rosa

CAR - Carabayllo

PP - Puente Piedra

CO - Comas

LO - Los Olivos

SMP - San Martín de Porres

IN - Independencia

CALLAO

1'125'760 hab total population

13'336 hab/km2 population density

19.2% poverty level

MP - Mi Perú

VEN - Ventanilla

CA - Callao

CL - Carmen de la Legua

BE - Bellavista

LP - La Perla

CENTRE LIMA

2'264'132 hab total population

15'656 hab/km2 population density

4.4% poverty level

SM - San Miguel

CE - Cercado

RI - Rimac

MA - Magdalena

PB - Pueblo Libre

BR - Breña

LV - La Victoria

JM - Jesús María

SI - San Isidro

LI - Lince

SL - San Luis

MI - Miraflores

SU - Surquillo

SB - San Borja

BA - Barranco

SS - Santiago de Surco

LM - La Molina

EAST LIMA

2'571'670 hab total population

8'399 hab/km2 population density

17.9% poverty level

SJL - San Juan de Lurigancho

EA - El Agustino

SA - Santa Anita

CHO - Chosica

ATE - Ate

CHA - Chacabayo

CIE - Cieneguilla

SOUTH LIMA

2'025'112 hab total population

4'555 hab/km2 population density

21.5% poverty level

CH - Chorrillos

SJM - San Juan de Miraflores

VES - Villa el Salvador

VMT - Villa María del Triunfo

PAC - Pucallamarca

LU - Lurin

PH - Punta Hermosa

PN - Punta Negra

SBA - San Bartolo

SMM - Santa María del Mar

PUC - Pucusana

Metro Line 1

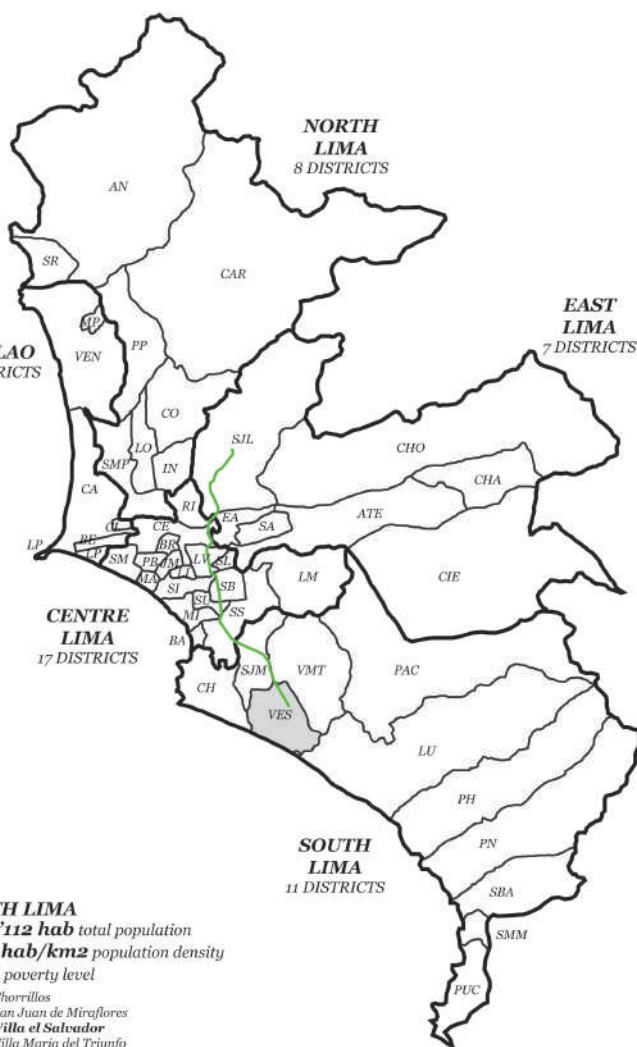


Figure 9. Current distribution of metropolitan Lima with averages of density and percentage of poverty by sector. Source: author based on different sources from municipal data to INEI publications, 2013.

3.2 District scale, an interrelation between the government and the neighbourhood

In the 70's, a big earthquake occur in the country, forcing the people to move from their cities to a more stable place. Apart from that the inner war that started to take more relevance in the highlands, a strong search for new opportunities and a better life start moving a huge number of people to the capital (Noel, 2009; see Figure 10), this determined two types of migration movements, by push and pull factors, at present the most important factor that remains in the city is the pull factor due to the globalization of the city and the need for labor (Stanojoska et al, 2012). They did not find a place to settle in the city so they settled on the slopes of some hills at the back of the city, a place that is now Pamplona Alta (See Figure 11). This terrain to date is an area of risk, of loose terrain prone to collapse from rain and tremors. This led the government to enact Law 13517, which conceptualized the invasions as slums or marginal neighbourhoods (Ramirez, 2006). And it also gave an alternative to eviction, they had to relocate to the outskirts of the city and without any infrastructure. Somehow, this helped migrants in the beginning, not to move to risk-prone areas, but it stigmatized the popular neighbourhoods, which may be one of the initial reasons for the polarization of the city.

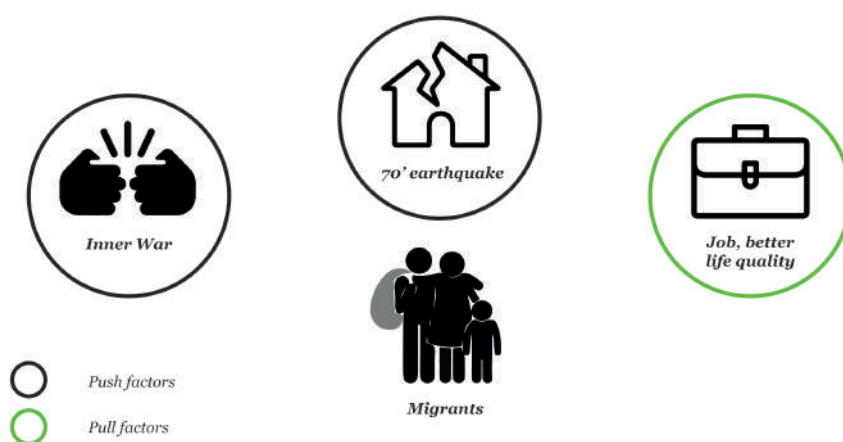


Figure 10. Push and Pull factors that motivated the migrants. Source: author based on Ramirez, 2003.

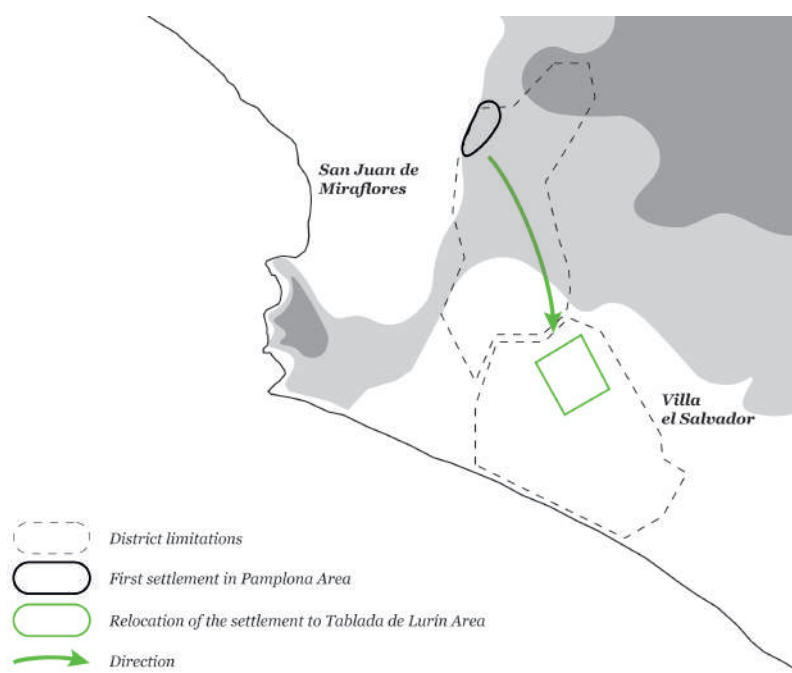


Figure 11. First invasion and resettling of the community. Source: author based on Ramirez, 2003.

The community of Pamplona had to relocate to a deserted area south of the city. Forming the young town of Villa el Salvador (see Picture 9). As the initial community felt isolated from the city and unable to be included in it (Vulliamy, 2016), a social cohesion was generated which strengthened the participatory processes that directed their neighbourhood progress (conceptualized as the willingness of the community in order to survive and prosper; Stanley, 2003). From the beginning the district had a complete vision of the city, defining spaces for roads, small businesses and commercial activities (Abbot et al, 2016). The early district was planned through residential groups comprising 16 blocks around a free zone for communal use, thus ensuring that the future district would be occupied in a planned manner (Ramirez, 2003). This is an interesting factor that differentiates it from the other young towns in the city, the migrants found a land previously defined by the state, generating a positive synergy of state and community. The country's Ministry of Housing had already planned the expansion of the city towards the south since before the previous settlement in Pamplona, making it possible to carry out an urban habilitation project for the capacity of 250,000 people (Sinamos, 1974).



Picture 9. Arrival to the assigned land in Tablada de Lurín. Source: Photo from Amigos de Villa, side website from the Documentation Centre of Villa el Salvador.

However, the community, considering the upcoming shortage, left spaces to facilitate the supply of water to the young city. A development plan was defined through agreements with the government and the local community. All these internal improvements were taken as examples for various informal settlements in the city. Villa El Salvador owes its progress to its own local actors. When the armed conflict arrived in the city, the district was one of the first places to be taken over by terrorists. Other actors defended the district which could never be appropriated as a rebel base due to its erroneous ideology which did not agree with the poor class of Lima.

To facilitate the attention of these preventions the communal organization CUAVES, Urban Self-managed Community of Villa El Salvador was formed in 1973, which generated plans that integrated the community and placed them as the main actors in its growth and organization (Montoya, 2010). This methodology for the Peruvian political conjuncture at that time, since it did not look for to be in any extremist side of the

political spectrum, but rather raised an own identity by means of the active citizen participation that was rejected at its moments (Marañón, 2016), something that is a common denominator in the national policy in front of the new urban ideas. The following are the 4 pillars mentioned above that erected the said organization, gathered from the CUAVES statutes, (published in ESTATUTOS CUAVES, 1973 by a general assembly).

- To seek human and social development according to the solidarity values of freedom and justice,
- To generate a productive base and economic support, by means of communal and social property enterprises of production and services,
- Improve their mechanisms of local self-government as a revolutionary expression of a social democracy of full participation,
- To contribute permanently, to achieve and consolidate a socialist, humanist and solidarity-based society.

In the '80s, the self-managed community became distracted. It began with this the construction of infrastructure necessary to be able to position itself as a district where Professor Michel Azcueta was elected as the first mayor (see Annex 02). This mayor led a good relationship between the institution and the community, signing an agreement between them that was inscribed with the slogan 'Ley comunal es ley municipal' (Communal law is municipal law; Municipalidad de Villa el Salvador, 2008). Construction began on basic requirements such as schools and pharmacies, having 3 main axes: health, education and food supply. It is important to point out that at the end of 1983 FEPOMUVES was created in sector 3. This is the popular women's federation of Villa El Salvador, and it was the municipality and CUAVES that were the main promoters of its social development and district growth. After its development and position as an example district in the city, it was awarded the Prince of Asturias Award in 1987, where it is recognized as a messenger city of peace by the United Nations (Municipalidad de Villa el Salvador, 2008).

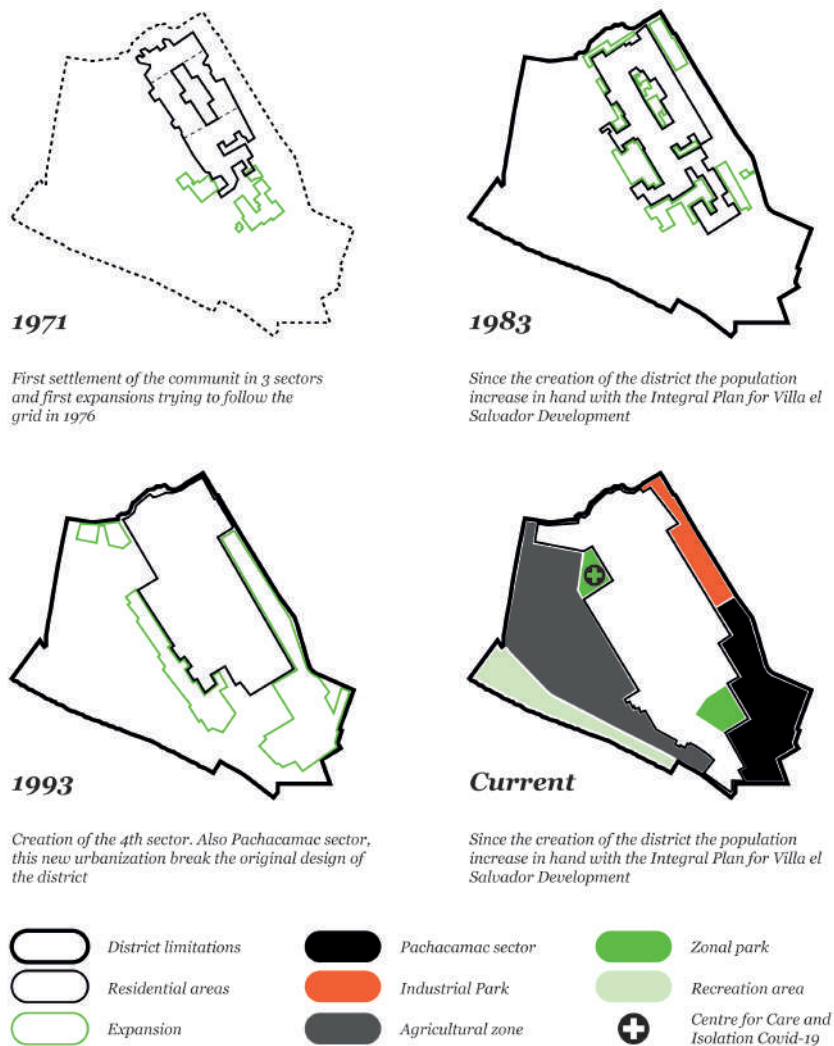


Figure 12. From the first settlement to the current status of the district. Source: author based different sources and Obseatorio Urbano Desco, 2005.

The '90s began as a sad time in the district and much of the country. The internal war had come to Lima and shook the stability of the district (Kruijt et al, 2013). All these acts of social and political violence generated in turn a response of integration and cohesion in the district. In 1992, the district signed a twinning agreement with the Miraflores district (which is part of Lima Centre) as the districts most affected by the internal war. Another symptom that the inner war was the lack of work in the city and alongside

several parts in the country (Limanchi, 2017). Lima had a lot of people as residents but no production, making the economy unstable and weak. Moreover, this economy cannot be sustainable under just an extractive perspective. Apart from that, the internal expenses that caused the internal conflict, deteriorated the productive level of the capital. This scenario prompted the government to establish an industrial park that would serve the southern cone and the city, determined to be large and medium scale. This idea were originated since the 70', the project started on a neighbourhood scale to now be a sector known throughout the city for its furniture manufacturing (Alvarado et al, 2019). At the same time this industrial park diversified, now has metal mechanical companies, some shopping centres and has become an area of strong economic development attracting investment (Abbot et al, 2016; see Picture 10). While the other side of the district still lacks infrastructure and development, becoming mostly residential with low quality housing and a local economy.



Picture 10. 'Boulevard del Cuero' (Leather Boulevard), located on the avenue that leads to the Villa el Salvador metro station in the industrial park.. Source: Photo from Stereovilla.pe website.

Since the current decade, the district begins to improve many aspects that were left aside, generating a stage of urban and infrastructure improvements mainly. Taking into account the above-mentioned conversion, where large-scale planning was modified to a scale appropriate to the district, the government recovered the focus on mobility, which had been proposed at the end of the 1980s. From the conception, this idea was positive for the city, where an urban mobility infrastructure, such as the one that helped the city to develop previously (by means of the tramway until 1965 of its cancellation, a system that accompanied the development of the city for 87 years of Lima's history), would again be available. This promised to be a successful solution that would help the city to unify and lighten the traffic that was beginning to fill the city. Due to corruption and the weakness of the authorities, the project was stopped. The southern section, which was the land section of the metro, was built and then not used for 34 years and act as a crime focus (Chavez, 2019). This infrastructure acted as a barrier for many years because the pedestrian bridges were closed for security reasons, annulling part of the district and generating a possible polarizing axis. This affected the development of these two parts of the district, as this solution was no longer one for the district, and in turn, it did not work for several years. There were differences between the industrial area of the district and the residential area that was divided by the city's subway, which can be seen today in the district (See Picture 11 and 12). Today it presents a fragmented picture for cohesive development. This same scenario appears in different fragments in Lima, sometimes not at the same level and with different times between the parts but the result remains the same.

Through various stages where the main actor was the community, the history of the district continues to be written (See Figure 16). Nowadays the district is dealing with 2 main problems, these are informality and job losses (Informality rate in Lima is 57.2%, INEI, 2016). The current Covid-19 pandemic, is increasing these problems throughout the city of Lima (70% of the city's population lives from day to day). Lima's metro could perhaps be presented as the necessary tool to refocus the development of the district, hand in hand with the needs of its residents.



Picture 11. Variety of commercial activities in IPD area. Source: stereovilla.pe, see Figure 2 for references



Picture 12. House located in CDD area . Source: Author, see Figure 2 for references

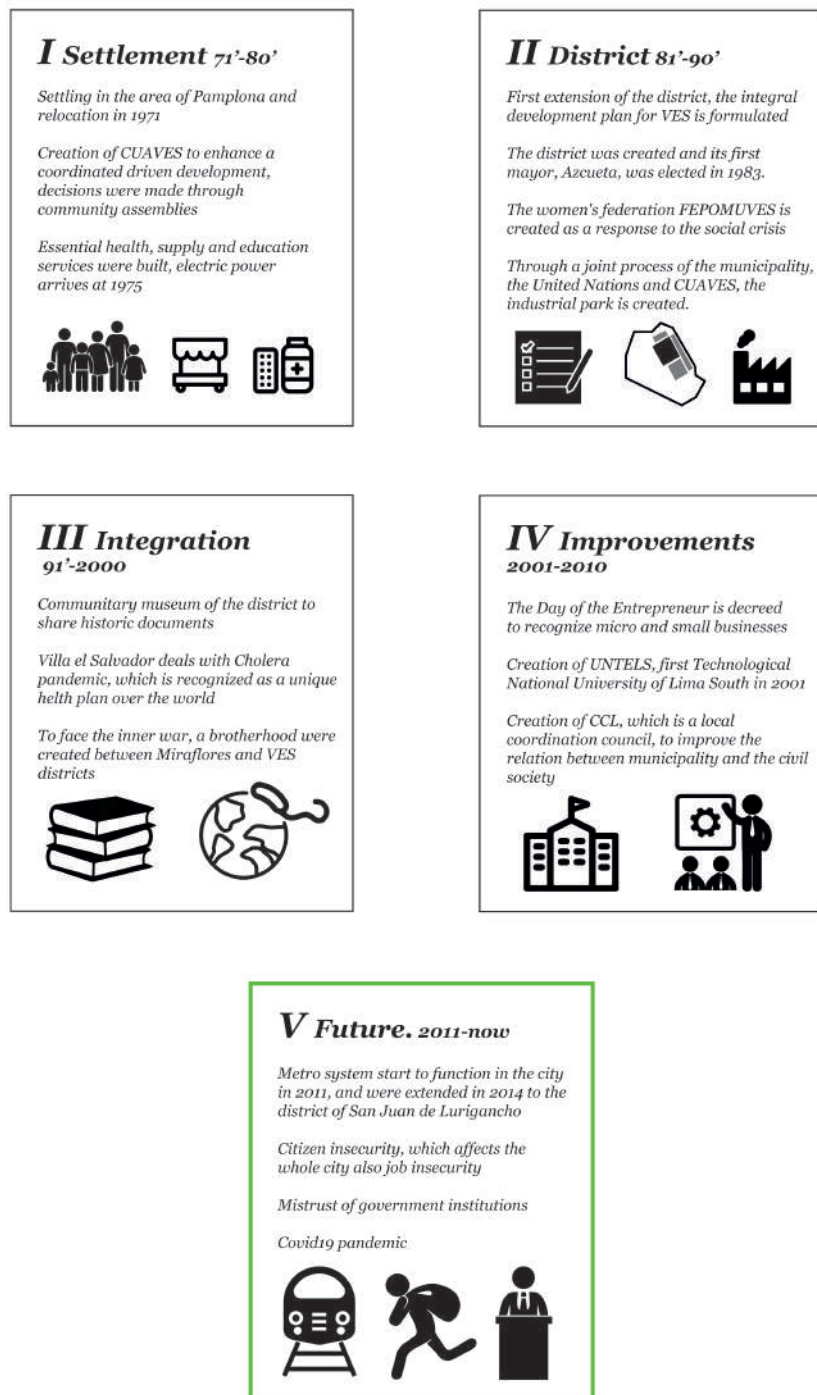


Figure 13. Stages of the community through the decades and what is expected next. Source: author based different sources and interview to ex major Michel Azcueta, 2020; see Annex 02).

3.3 Urban mobility in the city development

Urban mobility holds many perspectives in its conceptualization. As seen in the previous chapter, it can refer to people as well as to goods and services operating in the city. In the city of Lima, mobility has always acted to address a need. In the 1950s, due to a major earthquake in the high Andean areas of the country, many groups of families began to settle in the still undeveloped areas of different cities in the country (Zevallos, 2015). Then due to the internal conflict that took presence in the province of Ayacucho, located more than 550 km away from the capital. As we saw in the previous point about the district, the population decided to move to a safer place and began to settle in free zones in Lima, fleeing the insecurity of living in the war zone (Nugent, 2016). Here the sense of urban mobilization changed to being a push factor. Given the circumstances of the city, the government was not prepared to accommodate these families and they began to settle in risk areas (Zevallos, 2015).

It is important to understand how urban mobilization has changed its causes over time. It began as a pull factor changing to a push factor due to the country's circumstances. Even though today we no longer have a war, the population is still mobilizing to the capital city in search for a better education system, and better jobs, these in order to improve their quality of life. But this is not necessarily what was found, the city became overpopulated with newcomers, each with a different vision, until the city lost its axis.

But this is not necessarily what was found, the city became overpopulated with newcomers, each with a different vision, until the city lost its axis. An axis of development that was never taken over by any government, rather the country got used to blaming the previous government. Urban development in Lima has been uneven, with developed districts getting infrastructure improvements while self-formed districts have always been neglected. Until the idea of making a transportation system that serves as an axis in the city, while unifying all its parts, emerged. This

resulted in much of the city being developed informally, making the generation of urban land in the city over the last 19 years, 93% through informal settlements (Fort, 2020). Determining that the city has generated itself by necessity more than by community vision.

As soon as the new urban expansions were settled, a new difficulty arose, how to move in a city that has not been designed to accommodate them. Apart from the physical remoteness of these environments, there is also a social divide that makes it difficult to integrate the city equitably. These urban movements in the city respond to two important needs of the population: to aim for a better education and to improve their economic situation by escaping from poverty. For these two, the city requires constant movement, which at the same time cannot be intermittent. Other needs involving infrastructure are water and drainage, as well as overcoming malnutrition in the country. Social requirements are also important, gender equality is imperative considering the chronic machismo that is lived daily.

Focusing on mobility, let's see how Lima moves. Reviewing the citizen survey conducted by Lima Como Vamos in 2019, several results stand out. For food and home shopping activities, the main mode for this activity is walking in 50% of the respondents, while the next in choice is combis (small white buses) and mototaxis (similar to an Egyptian Tuk Tuk) which comprise almost 30%. For personal or medical activities, the buses and vans represent 55% and for recreational activities, the main choice remains the first one mentioned, with 30% of the total. In the case of work and study activities, public transport is still the main option with 65%, and it is surprising that with all the traffic in the city, the lowest percentage is for private transport, representing almost 13%. It is interesting that within the high percentage of public transport, only 3% is represented use the Metro de Lima (See Figure 14). This clearly indicates that the Metro is not acting hand in hand with the citizens, although it may be for a reason that it does not reach all the necessary places, it may also be because the Lima Metro is not in tune with the reality of Lima.

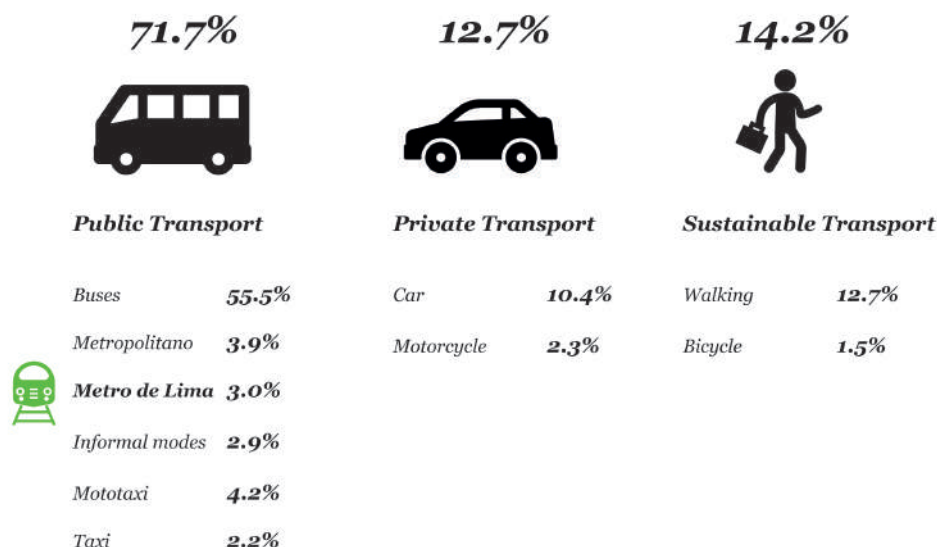


Figure 14. How the citizens of Lima mobilize to their work, office or study centre. Source: author based in Lima Como Vamos, 2019.

Lima is a city that moves mainly in public transport, the traffic and the amount of private cars is mostly taxis and informal services that not having a order, increase the traffic. Bielich shares with us the idea that the problem of transport is that it has not been for more than 3 decades that of managing, but only that of regulating. And it puts the responsibility on the institutional framework of the city, but not on the actors as drivers (Bielich, 2008). This defines the labor system with which transportation is handled in the city, as an important agent in how problems occur. This analysis responds to an institutional scale while there is another important issue of other urban actors that is how users move, and this is intrinsically determined by the centrality in Lima. The largest concentration of activities in the city is concentrated in Centre Lima and this generates the overlapping of routes and the amount of people who move to the same place and at the same time. Piselli shares with us that only 13% of Lima's citizens work from home, which indicates that a large part of the city has to move daily. At the same time, the trips for work, that are made from South Lima where

and motorized means are used, mainly go to Centre Lima in 40%, following the trips made to the same district that are 40.9% and follow East Lima, North Lima and Callao with 6.8%, 1.8 and 0.3% respectively (Piselli, 2013; See Figure 15). Remembering on district needs like education and economic improvement and how the city performs. The city requires a transportation system that serves as a basis for integrating citizens with their needs and that is attuned to their needs.



Figure 15. Urban movements for work using motorized means. Source: author based in Piselli, 2013; IEP (Institute of Peruvian Studies), survey of transport habits.

3.4 Corona virus pandemic sharpens informality and lack of mobility infrastructure

Since the outbreak of the Corona Virus in the city of Wuhan and spreading through mobility between countries. Until now, it has become a global Covid-19 pandemic, the world has not had a precise strategy on how to combat it. To date, in Peru the measures that have been indicated to the population are to stay at home, social distancing and washing as often as possible. Critically, responsibility for the pandemic lies with everyone, which in Lima is not possible. This generates more problems in a country where a large part of the population has daily earning potential (70% of the population in Peru lives from day to day according to the newspaper Clarín; Agencia EFE, 2020), making it very difficult to stay at home and at the same time the possibility to clean continuously is limited, due to the lack of water and drainage in many of the country's homes (INEI, 2016). These two difficulties are related to two main infrastructures that are not well provided in Lima. The first problem describing the need for social immobilization, has a problem in the informality and the lack of having an integrated transport system that serves the city. Lima depends on informal transport and the city is used to a fragmented system that involves more time and more traffic. And in the current circumstances, since it cannot be regulated, it can also rapidly become a focus of contagion. This informal system running in the city has several reasons.

One of the main factors leading to in relating the two problematics already described. As people are forced to go out to produce money for their day and as the city is in a state of compulsory social immobilization, the only way to go out is to opt for the informal transport systems. And this occurs even on trips between cities throughout the country. Informality is not part of an cohesive system. In the business model that the informal modes employ, the profit depends on the amount of passengers you can mobilize per trip. Turning these informal buses into crowded spaces (Moyano, 2020). Presenting your level of organization as the main problem. The organization of the city is not integral, we have a scenario of many groups where productive activities are

concentrated in Centre Lima. This is reflected in the complexity of the city's systems and the current situation of the pandemic in the city; one way of seeing the effects of this is in the work in the city. The district of Villa El Salvador is mostly composed of socioeconomic level C, which is precisely the level that has been most affected in terms of total loss of work and decrease in monetary income (Municipality of Villa el Salvador; Chacaltana, 2020; see Figure 16). In turn, it can be seen from these results that the majority of workers who depend on constant mobilization such as informal workers are those who have lost their jobs the most, at 44%, so therefore a strong relationship exists between mobility and job security in the city.

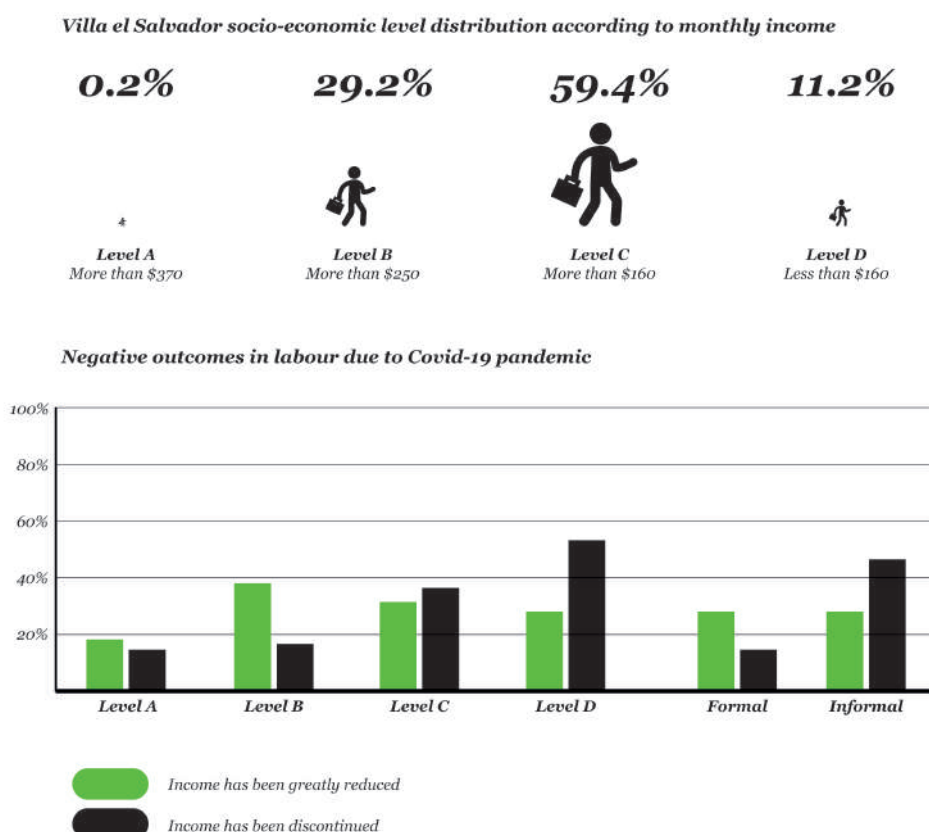


Figure 16. Socio-economic strata in Villa el Salvador and negative outcomes due to Covid-19 pandemic according to socio-economic level in Lima. Source: author based in data shared in Municipality Villa el Salvador; Chacaltana, 2020; Ipsos Perú, 2020.

But the pandemic has now created a great opportunity for the city, which is now being wasted. The transportation system was halted for several months and there was no development or comprehensive plan to deal with the contagion driven by the authorities. The country is at the moment in the disjunctive between paralyzing the country or paralyzing the economy, which as we saw in the previous paragraphs, Peru does not adjust to any of those possibilities. As the city of Lima is paralyzed, new routes could be built and the immobilized means of transportation used to reactivate coordinated mobility, which guarantees the security and order required to face this new virus, and which at the same time can improve the current situation of Lima's transportation. According to Fuster in his article shared by the PNDU, one of the biggest challenges is that of mass transport systems, such as the metro and buses in cities. This is due to the delicate economic situation that has decreased due to the decrease in demand, which is largely due to the insecure perception of mass transport systems by citizens (Fuster, 2020). Rather at present, users are preferring to travel in private vehicles, considering the great problem of air pollution, this attitude that only a small part of the population of Lima can choose (20% of Lima's households own a car, data shared in Wealth and living conditions in the homes of Peru published by INEI, 2000), is counterproductive with the environment and sustainable development so necessary at present.

Returning to a citizen's scale, the pandemic is affecting mostly Lima and within that, Central Lima to a greater extent. While in South Lima, the most affected district is Villa El Salvador, having to date 1.8% of its entire population infected which is greater in relation to the amount of infected throughout the country, which is 1.5% (According to covidatos.pe, data shared until late July 2020; MINSA Situation Room Covid-19 Peru). In the case of the number of infections per week. On the first week of August of the current year, Villa El Salvador is the district that has had the most infections in all of southern Lima to date, and is to date one of the districts where a return to high social contingency measures is recommended (See Figure 17).



Figure 17. Epidemiological traffic light according to the weekly number of positive cases per 100,000 inhabitants. Source: Open data platform, INEI, 2017; data compiled at amigocloud.com.

Bearing in mind the opportunity presented by the transport system and the challenge posed by this disease, which is significantly affecting all countries throughout the world, the response to this must come from the city's actors, since they are the ones who can best organize and respond, as they are the city's constant users. And as we saw in previous points, this has been the case since the beginning of Villa El Salvador's growth. Although cities cannot stop moving, they can reform their bases to be able to improve their response to the new challenges of the world.

Villa El Salvador still has a long way to go in managing the situation, and the district holds weekly community meetings to develop strategies to address the disease and update efforts (see Annex 2). In the same direction, the government has modified the district's unused infrastructure to make it an important tool for containing the city-wide pandemic. It is now home to the Centre for Care and Isolation Covid-19, which is equipping the towers of the Pan American Village (built to host athletes participating in the 2019 Pan American Games and redeveloped to be a post-Games real estate development; see Figure 12). This facility now houses non-severe patients throughout the city, providing medical services for the early stage of the disease (Garay, 2020). The initial idea was to isolate these non-severe cases to stop the spread of the disease, reinventing the infrastructure and providing the city with a much-needed prevention centre at this time and in the future.



Picture 13. Centre for Care and Isolation Covid-19 in Villa el Salvador . Source: Andina, peruvian news agency, 2020.

3.5 Towards a new interpretation of the city

When we merge these two scales described above, we can begin to elucidate a vision of Lima and its parts that is itself fragmented. While one part of the city, downtown Lima, seeks to grow and position itself economically in South America. The other fragments of the city seek to appease their needs and an integration. In a mobility perspective taking the metro as the protagonist, while the city requires relief from traffic and congestion, the district may consider this solution to be a tool that is not tailored to its needs. It is perceptible that the vision is polarized and cannot be conjugated to achieve a holistic view of this city. This is precisely the intrinsic problem in Lima that has endured all these years of its history, not integrating any plan or vision. At present, Lima is made up of 50 districts that are governed by different political forces. While this helps the political debate, it hinders any attempt to integrate the city. Hence the question of this research that tries to interpret the impact of the metro on a fragmented city in all aspects that make it up.

Moreover, taking into consideration that the metro system is an opportunity to integrate the different parts of the city. The variety of scales in the same area is disrupting links in the district to achieve an integrated city. A city that has constant urban mobility and can keep pace with all its parts. In this scenario three scales are presented in the same sector, the adjusted city scale (Industrial Park district), the neighbourhood scale (residential sector of the district) and these are divided by the city scale which would be the metro line. After describing the history of Lima and Villa El Salvador previously there is something true, each of these stories has had the same actors playing different roles. The politician, the infrastructure and the migrant community. This research attempts to confront these two scales by analysing the actors and trying to interpret a new vision that will allow it to be the basis for new urban challenges in the fragmented city of Lima.



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* LOMO Y BROSETTE
* ARROZ POLLO Y CREMA
* PURÉ ASADO DE POLLO
* CHUZA Y BROSETTE
* ENSALADA RUSA Y VENTURA

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+ CEBICHE S/ **5.00**
ARROZ C/ MARISCO Y CEBICHE S/ **5.00**

Picture 14. Sidewalk in front of the metro station. Source: Author.

4. Case study

This research took data from 51 residents of Villa El Salvador who shared their stories and visions in an on-line questionnaire. This sample was obtained through on-line district groups, presenting them with a brief explanation of what the research seeks and ensuring total anonymity in the results of the questionnaire.

4.1 Data presentation

This on-line interview is formulated to serve my master's research on urban planning. I was a close neighbour of the district and have always consider that one of the strongest problems that have led to the fragmented development of Lima is the remoteness.

Now there is a metro system that will make it easier to connect the city with its peripheries, but in its 10 years of operation this development has not been constant. I invite you to participate in this questionnaire to understand your perceptions and visions of the district and the city.

The entire questionnaire will be anonymous and the data collected will only be used in the study. Thank you in advance for participating!

Online invitation to participate in the questionnaire.

The questionnaire is developed by seeking to understand the situation in the district through the everyday perceptions of the respondents. First of all, it seeks to understand the general characteristics of the sample, such as their work or student status and their relationship with Villa el Salvador, taking into account that since the questionnaire is on-line, not everyone necessarily resides in the district, so their relationship is interesting to understand. Social data was then obtained from the perception of the district, the problem of insecurity and the

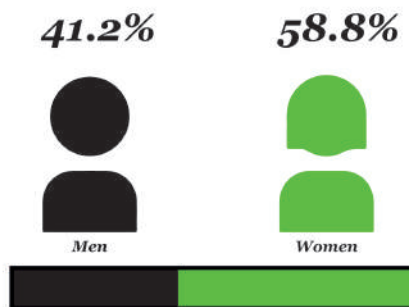
impact of the infrastructure in Villa el Salvador. In the latter, we sought to contemplate three main aspects of the infrastructure. These are its physical presence, improvements and the perception of this in the district.

4.2 General characteristics of the sample

From this sample, 60% were women and 40% men of the respondents.

In terms of their age, the 66% were young adults, 14% in young age and almost 20% adults. Most of the respondents are at a young age, which presents a sample at an age with responsibilities and with a still modifiable vision of the future. This is positive for the research as it promises to have a variable vision and perception. Of those under 25, only one respondent is a minor.

Gender



Age Groups

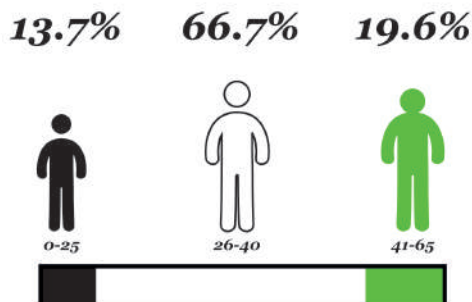


Figure 18. Gender and age groups percentages. Source: author based on questionnaire results.

In education, most of them indicated that according to their highest academic achievement or their current study was technical studies. This can be understood since the industrial park is home to a technical studies centre, which hosts a large influx of district residents upon completion of school. At the same time, a large number of them continue their studies in another entity or in search of a higher university degree, reaching almost half of the respondents. One thing to keep in mind is that of those surveyed, it is still a large percentage of residents who have not sought higher education after basic education, and this is interpreted by overlaying the data mentioned in the previous paragraph explaining the age of the respondents.

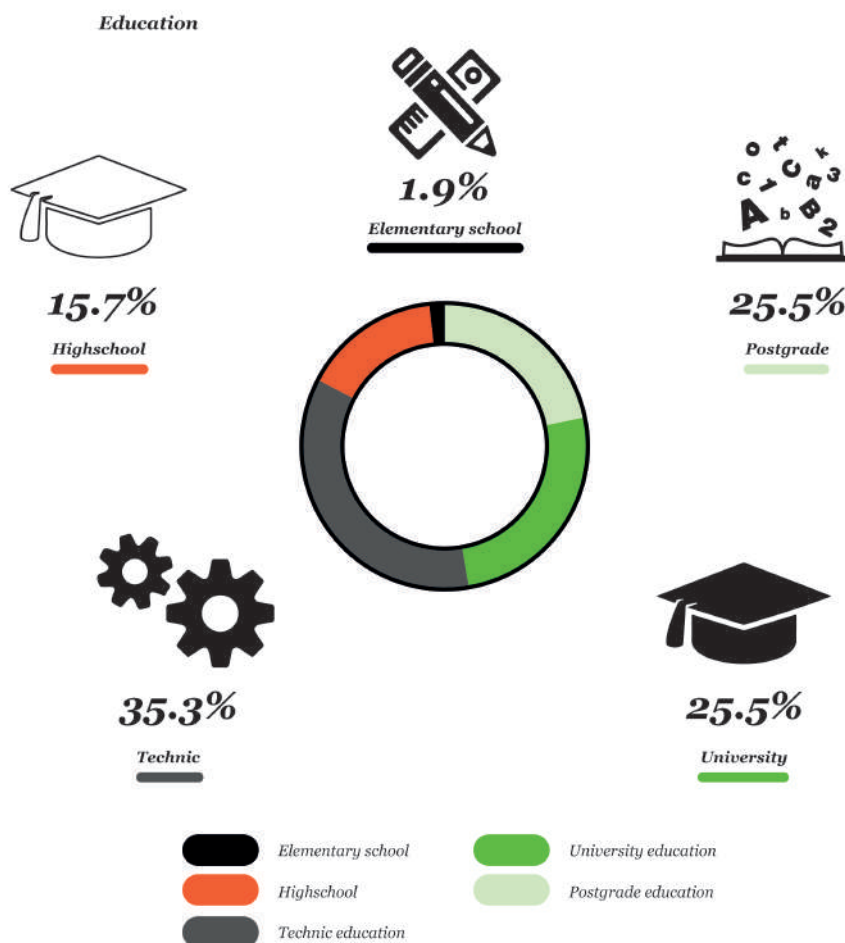


Figure 19. Education level. Source: author based on questionnaire results.

According to their marital status, respondents are balanced according to whether they are single or have a family. In this case we can assume that their views will be balanced according to whether they are views of a person or are views considering a family or a partner. It is important to point out that the Peruvian culture is familiar, therefore it is estimated that the data obtained will have a connotation thinking about the relatives. Therefore, it is considered a homogeneous sample in that sense.

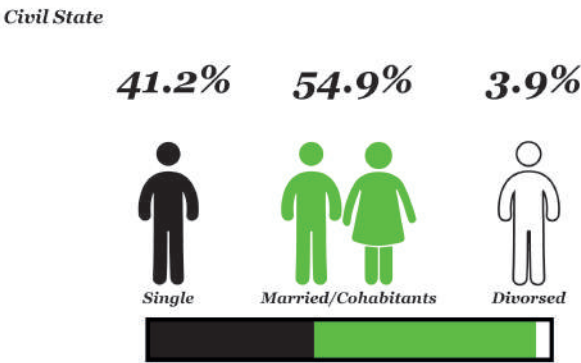


Figure 20. Civil state status. Source: author based on questionnaire results.

The residential situation of the respondents is considered. With a majority of almost 90% of respondents currently living in the district. Of these, three groups are distinguished: Those living in the district since birth, people who were born and raised in the district implying that their parents were also residents, more than half of the respondents marked this option. Leaving interesting stories in turn, recalling their parents as the first residents of the young town in its beginnings. There is also a significant percentage of residents who have grown up in another district and have now moved to Villa el Salvador, either by choice or by their parents. This number represents 35% of the sample. This is interesting because it shows that the district has a level of attraction for newcomers. Lastly, people who do not live in the district reach a little over 10%, the two groups have a close relationship with the district, where they still feel part of the district even though they no longer reside there and those who live outside but work in the

district. It is important to note that several of the respondents who do not reside in the district still have family and friends who reside in the district and that it gives them a shared residence, feeling part of the district.

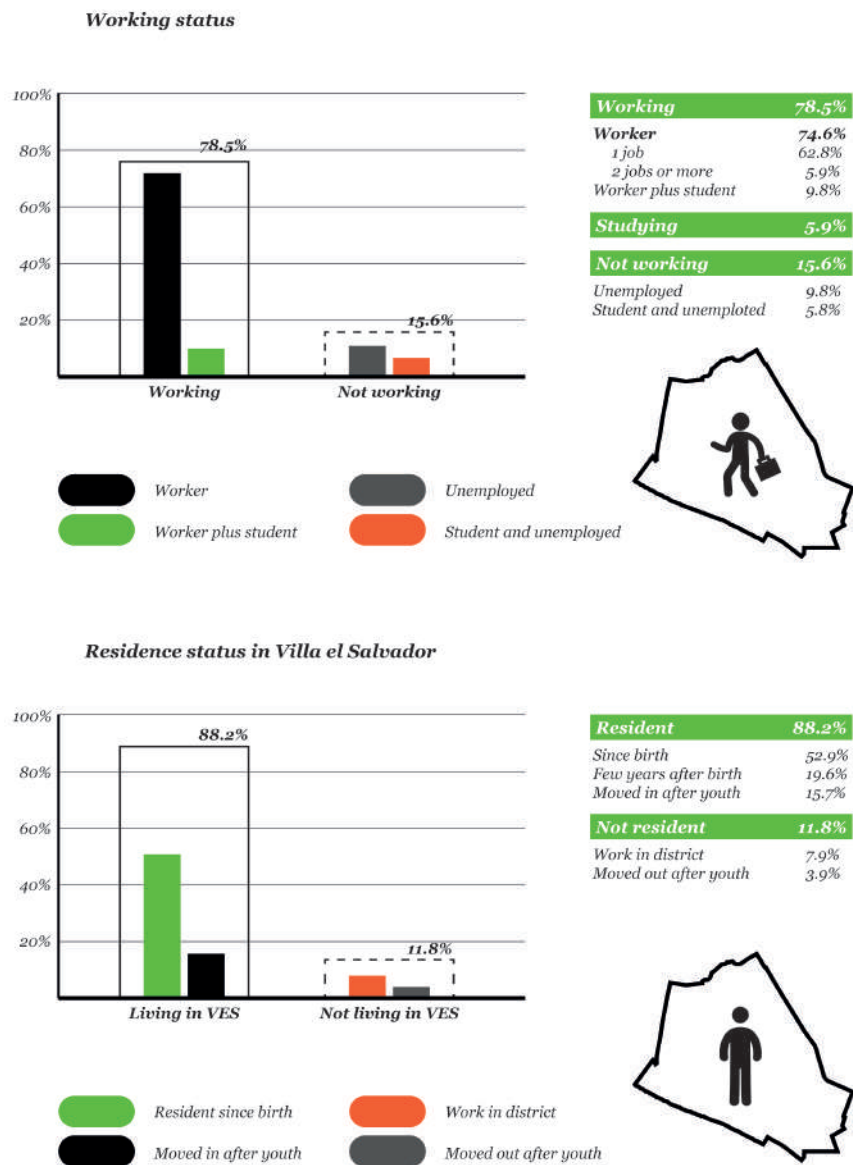


Figure 21. Working and residency status and its presence in the district. Source: author based on questionnaire results.

4.3 Social facts

As mentioned at the beginning of this chapter, the questionnaire focuses mainly on social aspects, to feed into residents' perceptions of the fickle issues in the district. These issues depend on the development of the district and to a large extent on those who make up the district, with the interviewees being the focus of the results. At the same time, comments from the interviewees are cited to accompany important points to be shown, such as their relationship with the district and the factors that determine this. According to the results, two main points are defined that define the relevant social aspects in Villa el Salvador. Firstly, the perceptions of living in the district in terms of the level of relationship, the issues to be highlighted and which require improvement in their daily lives. From this last point, the prevailing theme of the whole city emerges, the problem of insecurity which arms the second point to be reviewed.

4.3.1 Outcomes of living in the district

The residents of Villa el Salvador have developed a strong attachment to the district since its founding in the 1970s. From so many events, social and historical moments, the district develops itself showing an unwavering drive in its prosperity. This has determined a relationship where it is important to determine which factors solidify it and which can affect it.

4.3.1.1 *Relationship level*

Currently the figures show a large proportion, almost 60% of respondents, of people who have a good and strong relationship with the district. This question sought to know how people feel about being part of the district, in order to understand their level of engagement as part of Villa el Salvador. While residents who believe otherwise are just over 10%, this figure is important to keep in mind

since the level of discontent represents a population that is strongly seeking substantial change. Whilst a very interesting result is the maximum level of good relationship with the district, this is almost 30%, which is the highest value of all the options. It also suggests that this relationship may depend on the length of time they have lived in the district, so it would be interesting to see how this sample is composed according to their state of residence and how their relationship with the district begins. It is also interesting that, considering that the district has a young history, the results place it as a good place to live (see Figure 22).

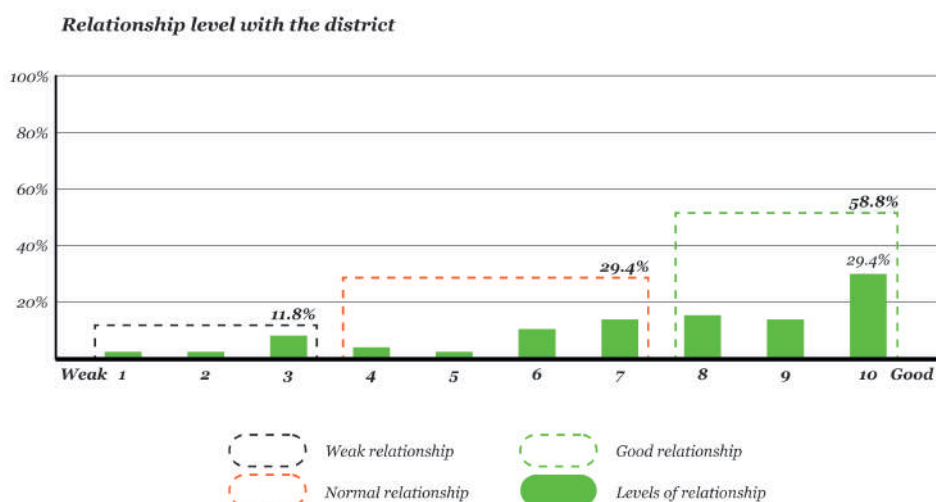


Figure 22. How is the relationship formed with the district by living or working. Source: author based on questionnaire results.

Considering the responses indicating a good relationship with the district and comparing them with their state of residence, most of the respondents are people who were born and raised in the district since childhood (see Figure 26). These residents have a greater time of knowledge and therefore an ownership of the development of the self-managed community of Villa el Salvador, in results presented below we will see that factors are considered as the best of living in the district. As we reviewed in the second chapter, here is a sample of how an individual identity is formed in a plurality of identities that cohere the

neighbourhood identity (see Figure 2). The people who no longer live in the district still have a strong relationship even though they have already moved, from which we can infer that there is a strong base that maintains a strong relationship with the place of growth. While those who only work in the district represent the lowest percentage of responses. These indicators show the conditioned relationship between time of residence and the link with the district. Showing interesting relationships where not only can a strong link be created by having lived in the district since childhood, but also this relationship can be generated in other stages of life, depending on other circumstances which are going to be explore further below.

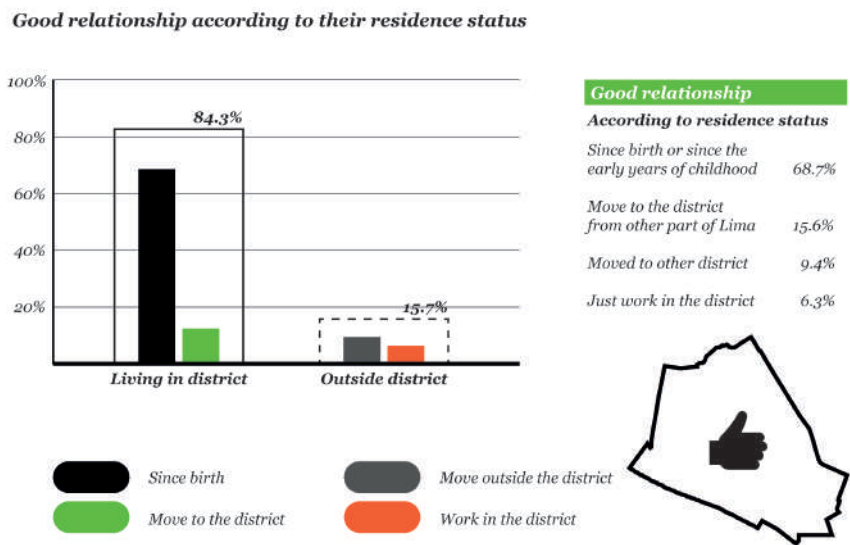


Figure 23. Good relationship according to the status of residence in the district. Source: author based on questionnaire results.

This may be related to several factors, among the responses to what they perceive as the best of the district, many interviews indicate people-related responses. The main features relate to social and historical issues such as their ongoing improvement, community solidarity and their family or friends. Of these the most

interesting in the answers obtained is the ongoing district improvement primarily involves the continuing development of the district, but many responses also take pride seeing how many families came through despite the adversity. Also the human quality dealing a problem, meaning how thriving people stand and gather forces to face it, but since the community is not organized, new problems arise.

4.3.1.2 *The best aspects in the district*

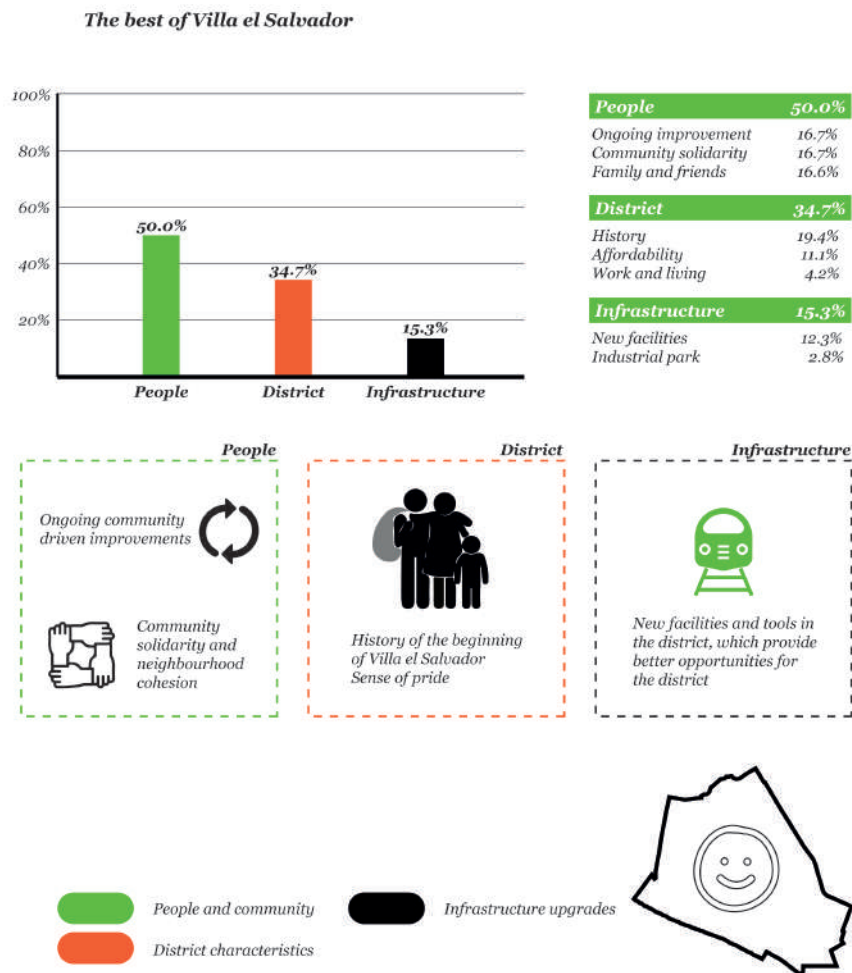


Figure 24. The best features recognized by the community in Villa el Salvador. Source: author based on questionnaire results.

The district shows two interesting opinions in this research, which also have the highest response rates. Its history and its ongoing improvement, these being the ones most chosen by the interviewees and the community is an important piece in both. This is something that has been maintained since the district's inception and is present in many of the city's fragments, the community work that plays a major role in its improvements. While the history generated by the community represents the largest of all the results, obtaining almost 20% of the responses. This is very important to consider since history should not only be kept in books, it also has to be expressed in public spaces to become an urban reference for the community, allowing the community to constantly re-interpret it. The infrastructure also obtained positive results, where Line 1 of the Lima Metro, the housing complex built for the 2019 Pan American Games and new hospitals (see Figure 25) are the infrastructures best perceived by the residents.

Quotes shared by interviewees:

“...to see how so many families came through despite so much adversity...”

Woman, 28 years old

“...affordability to obtain a house avoiding debt...”

Woman, 33 years old

“...I like people, because they are humble and many shake hands when needed and also the importance they give to studies...”

Woman, 26 years old



Figure 25. New facilities in Villa el Salvador well perceived by the respondents. Source: author based on questionnaire results.

4.3.1.3 *What is currently affecting the district*

Residents show that insecurity is the biggest problem in the district, accounting for almost half of all responses. This problem will be reviewed in more depth at the next point, in order to determine its connotations and consequences. In turn, the results present a problem with the community, mostly related to issues that are generated, such as the loss of community organization, the informality that prevails in the district, the bad behavior of some neighbors, and the new residents of Villa el Salvador who are perceived negatively by the community. Of these three community issues, one that affects all of these social aspects is informality, in which problems are expressed such as street vendors who produce garbage in the streets and informal transportation that is the mototaxis that invade the metro station and cause delays and insecurity. With less presence, we find the

traffic caused by a bad management of the infrastructure and the corruption that the community perceives in the governors of the district. It is interesting to see how the infrastructure is the only element that is repeated in the best and worst of the district, which indicates that it is an aspect to improve and be part of the community. So that it works hand in hand with the district and is not just an isolated improvement of the district.

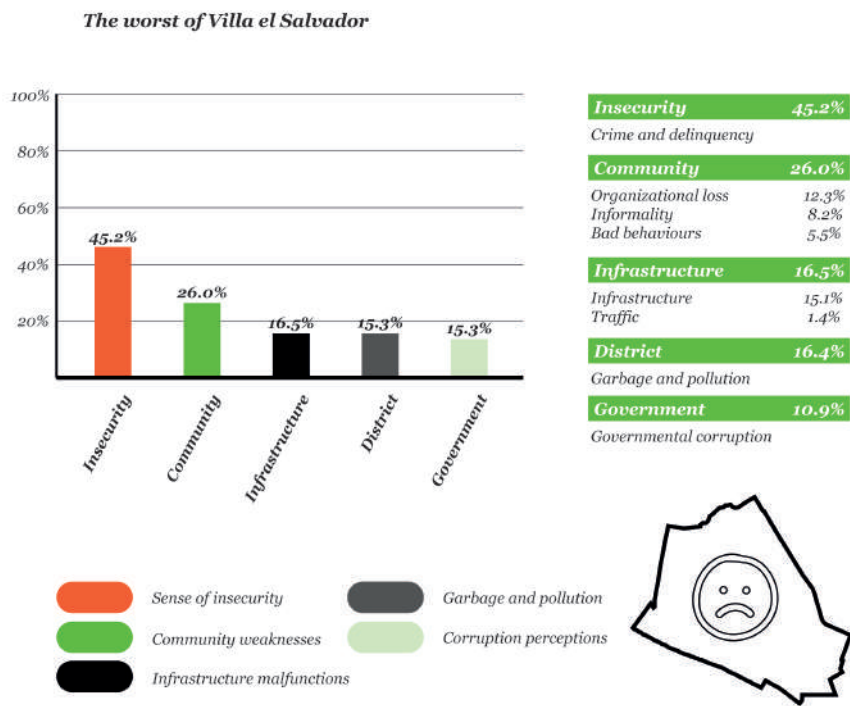


Figure 26. Aspects to take into account and improve that are currently affecting the livability. Source: author based on questionnaire results.

With less presence, we find the traffic caused by a bad management of the infrastructure and the corruption that the community perceives in the governors of the district. It is interesting to see how the infrastructure is the only element that is repeated in the best and worst of the district, which indicates that it is an aspect to improve and be part of the community. So that it works hand in hand with the district and is not just an isolated improvement of the district.

This, the infrastructure is considered as something negative with considerable percentage, referring to the incomplete infrastructure that is a common denominator in the district. Those who point out these infrastructure problems blame the district authorities directly, indicating that the governors are holding back the growth of the Villa el Salvador, a district with high potential for prosperity. Garbage is also a problem that is related to several of the responses, mainly to the state of the infrastructure, it can be related to the bad behavior and informality that generates waste in the streets. This perspective goes hand in hand with the state of public infrastructure and how it generates spaces that are unprotected by the community and prone to being filled with garbage and unsafe in the end. Also mentioned are the spaces where drug use, pollution and lack of modernization of public spaces occur. From this we can conclude a strong relationship between infrastructure and insecurity, where the former due to a poor state of maintenance can generate the district's main problem. Generating spaces that are friendly to pedestrians and for active community use is a transversal need in Villa el Salvador.

Quotes shared by interviewees:

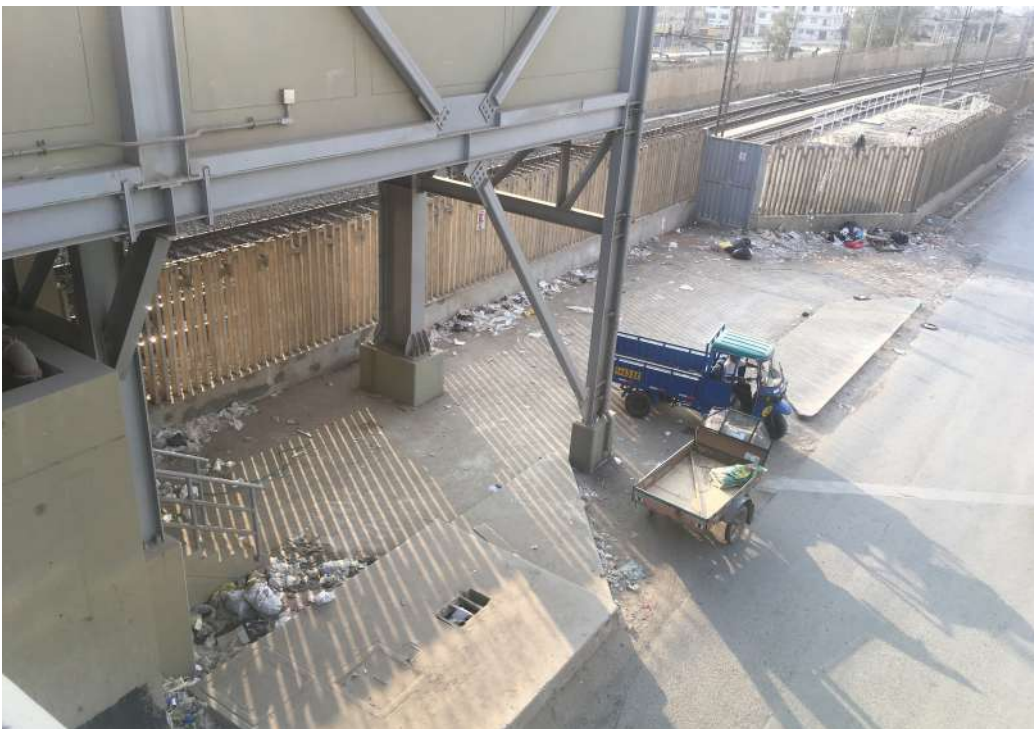
“...lost of social organization due to no further goals were sought after initial objectives, lack of youth participation in CUAVES and other organizations...”

Man, 37 years old

“...informality, street vendors that produce waste on streets, and excess of mototaxis in transportation...”

Woman, 39 years old

This, the infrastructure, is considered as something negative with considerable percentage, referring to the incomplete infrastructure that is a common denominator in the district. Those who point out these infrastructure problems blame the district authorities directly, indicating that the governors are holding back the growth of the district, a district with high potential for prosperity. Garbage is also a problem that is related to several of the responses, mainly to the state of the infrastructure, it can be related to the bad behavior and informality that generates waste in the streets. This perspective goes hand in hand with the state of public infrastructure and how it generates spaces that are unprotected by the community and prone to being filled with garbage and unsafe in the end. Also mentioned are the spaces where drug use, pollution and lack of modernization of public spaces occur. From this we can conclude a strong relationship between infrastructure and insecurity, where the former due to a poor state of maintenance can generate the district's main problem. Generating spaces that are friendly to pedestrians and for active community use is a transversal need in Villa el Salvador.



Picture 15. The side facing the industrial park of Villa el Salvador metro station . Source: author.

4.3.1.4 Saving capacity

Considering the labor aspect, the district shows an average saving capacity. Most of the district considers that it has an average saving capacity, where the most represented indicator is level 5 with more than 20% of responses obtained. The high savings capacity is better represented than the low one, which is positive considering the prevailing inequalities in the city. The result to highlight is that the lowest level of savings capacity was not answered by any of the interviewees, which cannot be taken as a sign of district improvement, since it has to do with the fact that all the interviewees have internet, which is a limited component of the city's infrastructure (only 63% of the citizens in the city of Lima have internet access; INEI, 2020). While the new survey conducted in times of pandemic by the INEI determined that 65% of Peruvians are in a situation where they can balance their expenses with their income in the national urban environment. This is similar to the results obtained, reinforcing the idea mentioned above that the majority of the country's population lives on day-to-day earnings.

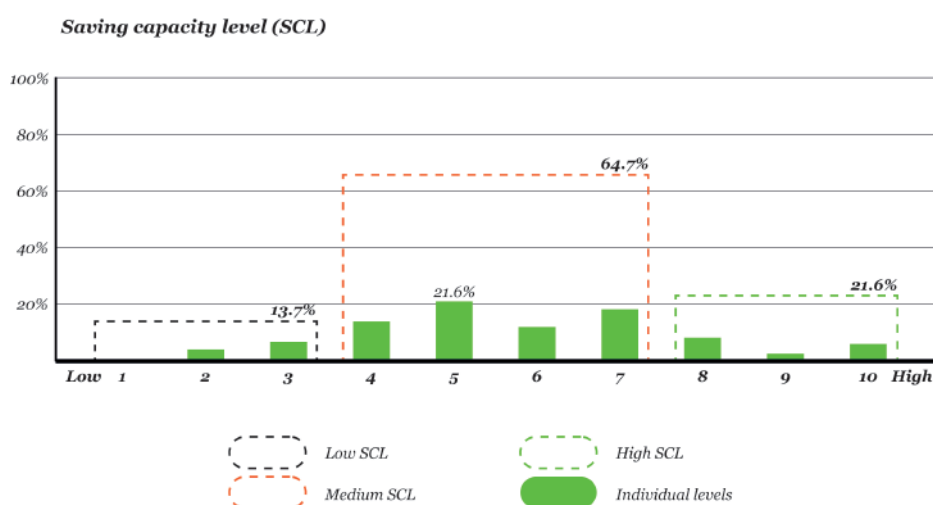


Figure 27. Saving capacity level of the respondents in the district. Source: author based on questionnaire results.

4.3.2 The problem of insecurity

In the previous point we reviewed that the biggest problem in Villa el Salvador is the perception of citizen insecurity. This is an endemic problem in all parts of the city and takes advantage of the lack of friendly public spaces in the district. The level insecurity perception in the district is quite high, where the highest level is almost 60% and the regular level of insecurity represents 33.4% of the sample. Besides, few residents feel safe in the district. The level that obtained the most votes is level 10 (which is a quarter of those interviewed), which being the maximum indicates that a large part of the district has to deal with this problem constantly (see Figure 28). This is quite worrying and is another point to be taken into account in any urban improvement intervention. The problem of citizen insecurity is a social issue that contains several variables, these can be by gender, age and something particular to the city that is determined by the length of residence (see Figure 29). This last point is important to test, since there is an urban myth in Lima that because you live in a district, you are more secure because you belong to the neighborhood.

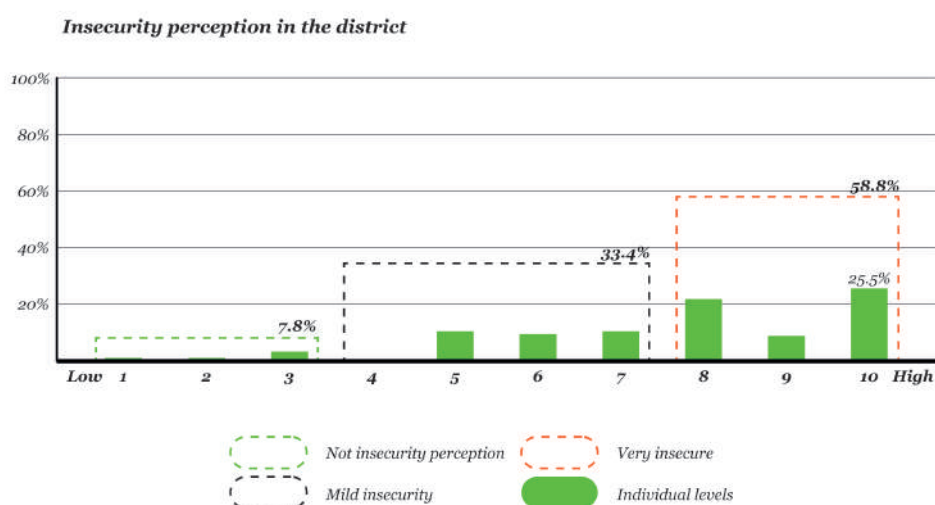


Figure 28. Insecurity perception levels in the district. Source: author based on questionnaire results.

Reviewing the insecurity according to the gender of the interviewees, women feel more insecure. But taking into account that there are more women than men with a similar proportion, we could consider that the level of insecurity is equally proportional in both genders. Furthermore, according to the age groups mentioned in the previous chapter, young adults represent the greatest amount of insecurity, followed by adults and finally young people. This table raises some possibilities about the reasons for insecurity, where mobility according to age may be related to it. This data will be seen in more depth when the infrastructure is analyzed.

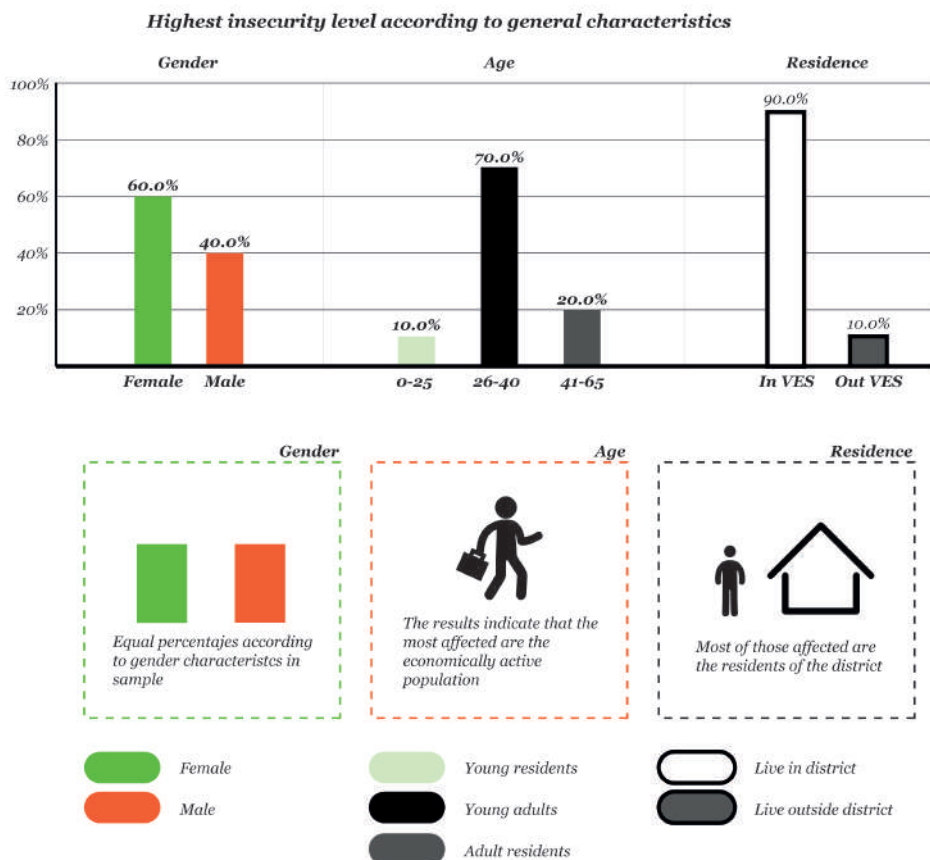


Figure 29. Highest insecurity level according to general characteristics in the sample. Source: author based on questionnaire results.

Whereas if we review this data according to their state of residence, it shows that the majority of people who answered feel a high level of insecurity, reside in the district. Disregarding the urban myth mentioned above (residents are not affected by insecurity) While in the responses from people who do not live and only work at Villa el Salvador, many commented that they feel the highest level of insecurity. This experience happen in quarantine times, which has intensified insecurity in the city.

Quote shared by interviewees:

“...I left the metro station on my way to work, my cell phone was stolen and a gun was pointed at me as I was followed from the metro station...”

Man, 34 years old

Among the objectives that the current municipality set at the beginning of the administration in the Plan of Concerted Local Development of Villa el Salvador (PDLC), which governs from 2017 to 2021, one of the keys to district improvement is to increase the level of citizen security. This objective has two strategic actions that respond to municipal actions. On the one hand, it seeks to strengthen CODISEC (the district committee for citizen security, which belongs to the municipality) and implement a plan against family violence (which has not been implemented in the district to date). The plans presented by CODISEC for this year are joint actions between the Municipality of Villa el Salvador and the Peruvian National Police (PNP) for patrolling and operational activities (see Figure 30). These are reaction plans, leaving aside prevention and the inclusion of the community in the strategy. The need to include the community and respond from a bottom-up approach is recommended.

Objective 2, Increase the level of public safety

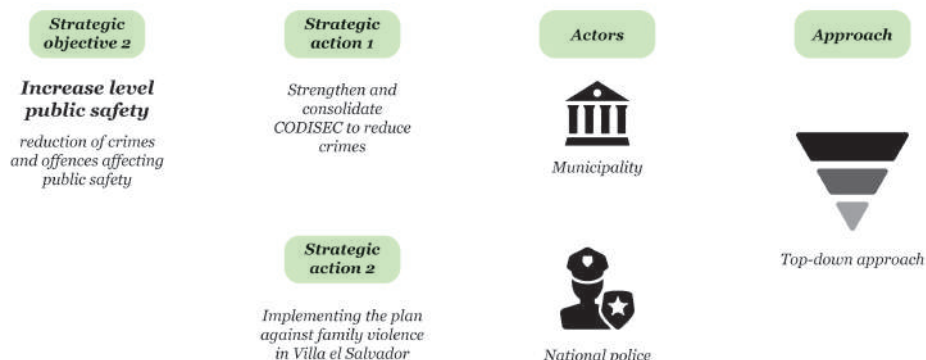


Figure 30. Strategic objective to deal against insecurity. Source: author based District citizen action plan by CODISEC, 2020; PDLC Concerted Local Development Plan by Villa el Salvador municipality, 2016.

Villa El Salvador therefore requires that this problem be tackled from an angle that integrates the community in the strategy. The street vendors can no longer be considered as the enemy to be reduced, they are an important actor in the neighborhood society that has to be considered for its development (As reviewed in the plan prepared by CODISEC for 2020, the main strategies concern patrols and surveillance. Providing the strategy with a prevention approach, which includes these actors and attracts the large percentage of unemployment in the district (15% of the sample indicates lack of work; see Figure 21).

4.3.3 Good relationship vs very insecure perception

By superimposing these two themes we obtain interesting results. More respondents indicate that they feel only one level of insecurity and do not have a good relationship with the district than those who indicate the opposite. While those who express both at the same time are the majority. This indicates a strong relationship with the

district, where insecurity is not considered a specific problem of the district but rather a problem of the whole city.

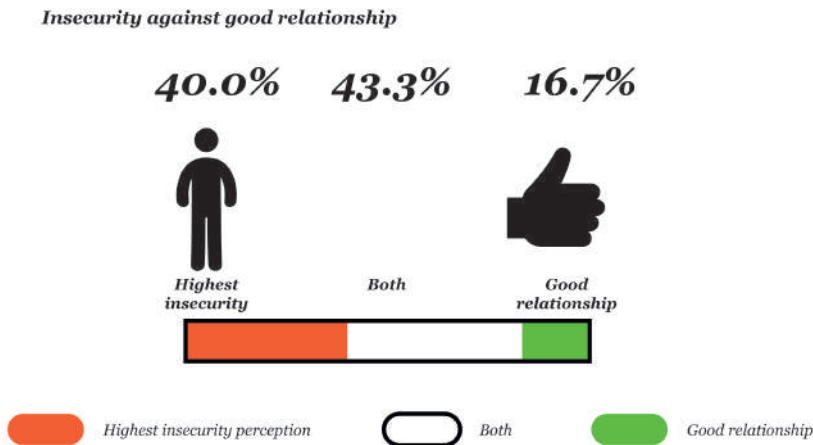


Figure 31. Highest insecurity perception against good relationship feeling. Source: author based on questionnaire results.

4.4 Infrastructure impact

4.4.1 Infrastructure presence in the district

As mentioned above, the districts in Lima are uneven in the services they offer. In Villa el Salvador, this is clear from the answers obtained. The highest results indicate food, education, health and commerce as the most present infrastructure. While the least represented were work and sports, indicating in the first case the main need for urban mobilization from the district. But there are particularities to be highlighted by studying the results in more detail. For example, when we consider the results of the study, universities and institutes obtain almost 8% that would mean a reduced percentage of presence of places for higher studies, which implies a prevailing necessity to move to other districts to be able to access these services. The same is true in hospitals, with the greatest number of responses coming from pharmacies and drugstores, while the presence of

hospitals and clinics is reduced. This is happening in the current situation, where the lack of health care services has become more evident in districts far from the city centre. Intensifying the need to move to other parts of the city to get the required attention. From this point we can infer the need for three important infrastructures for the development of the district, universities and centres of higher education, workplaces and hospitals (see Figure 32).

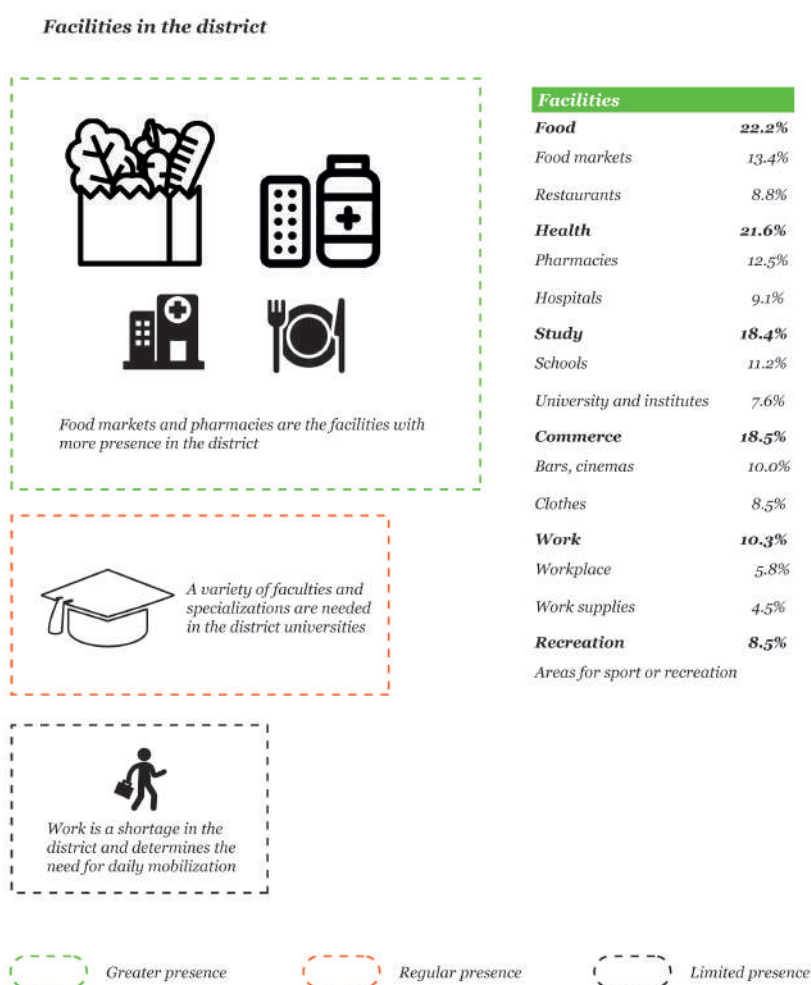


Figure 32. Facilities that residents find closest to home and are necessary for their daily lives. Source: author based on questionnaire results.

4.4.2 Requirements in the district

Among the requirements demanded by residents, the two main groups are related to physical infrastructure and social improvements. The two infrastructure services required are educational infrastructure, such as universities and technological institutes for better academic preparation in the future, and better public spaces in the district for sports or recreational activities. Here there is a clear relationship between mobility and activities, which condition the quality of life in the city of Lima, thus generating a social problem (the further away the services are from the city, such as study and work, the more time people spend traveling, which will translate into less time in their neighborhood and in personal activities). As we reviewed in previous chapters, health and work spaces are concentrated in Central Lima, making this a condition for much of the city. The next requirements are health centres and, to a lesser extent, an improved transportation system. This reflects the impact that Line 1 of the Lima Metro has had on these parts of the city, where the metro is perceived as a citizen improvement. While most of the requirements focus on informality in transport and better connection options to the metro station. The metro line helps the district but the transport system is not integrated into the city, which means that these informal modes of transport (motorbike taxis) make up for this shortcoming, making residents uncomfortable (see Picture 16).

Quote shared by interviewee:

***“(the informality is)...
also in transport, because of
the unnecessary amount of
mototaxis...”***

Woman, 36 years old



Picture 16. Informality around Villa el Salvador metro station. Source: author.

The district also shows a significant need for social improvement. The biggest problem in the district, as we saw in the previous points, is the lack of security for citizens. This is a problem that depends on many reasons, reflected in the other points to be improved. The policy in the district has been handled in a very messy way lately. There has been a change from a community political model (where citizen improvements were discussed as a community), to a model where the district has lost its way and as we saw in the plan for the improvement of security, measures are taken in reaction but not in response. The neighbors indicate that this reality means that the community of Villa el Salvador has a very limited response to the current problems of the district. Although it is a low percentage result, the requirement for a community social organization is a response where it is shown that the community wants to recover its identity. This identity has already served them to become one of the most populated districts in the city, considering that it is relatively young (less than 40 years since it was declared a district in the city).

Quote shared by interviewees:

“...the governors of this district do not take their work seriously and delay the growth of a thriving district with a great deal of potential...”

Woman, 23 years old

“...crime and the authorities in charge who do not do their job in the face of this...”

Woman, 37 years old

It also depends to a large extent on the improvement of the socio-economic level. The economy of the population can in turn indirectly generate insecurity, which leads to theft generated by poverty and makes the atmosphere around the population unsafe. This is compounded by the new residents of the district who, finding no opportunities, end up working underground. But the problem is not necessarily with the new residents, Villa el Salvador was created in this same way, and this did not determine the population as negative for Lima.

Quote shared by interviewees:

“...what is unworthy of it is that people like to work in a clandestine manner and are very conformist. They don't like to follow rules, just to get their benefits they don't care who they pass for, now more Venezuelans have emigrated even worse, they don't like to respect, they are not empathic...”

Woman, 51 years old

The order and cleanliness requirement is also mentioned in the district, to a lesser extent, but it is still an issue to take into account among the topics that need to be improved since it relays both previous aspects. The results clearly reflect two pillars of requirements in the district with almost equal proportions. These, in turn, can be viewed differently with requirements for new infrastructure, maintenance of infrastructure and improvements in social infrastructure (see Figure 33).

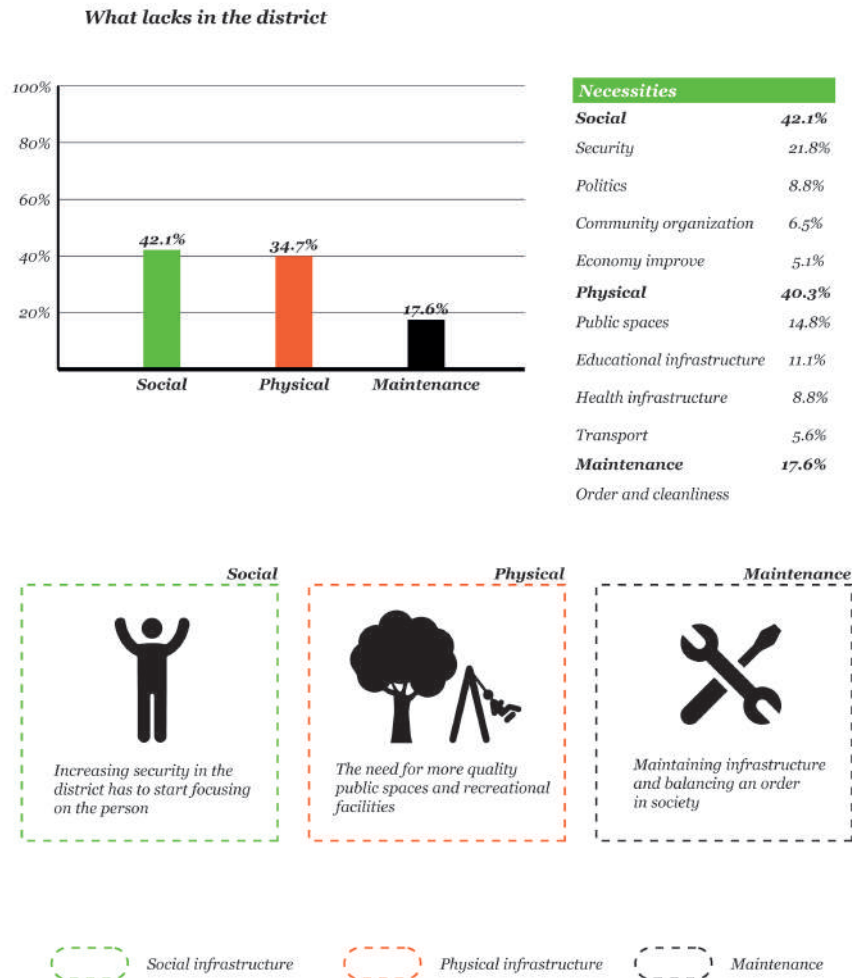


Figure 33. The requirements shared by the residents grouped according to their nature. Source: author based on questionnaire results.

4.4.3 Metro system perception in the district

4.4.3.1 *Mobility in the district*

To begin to describe the impact of the Lima Metro in Villa el Salvador, it is important to start by considering how the population moves. The majority, more than half of those interviewed, move at intervals of 0 to 2 hours, which is a fast time of daily urban mobility. There is also a considerable percentage of people, almost 40%, who move 3 to 4 hours, which increases the time people spend on transport for their daily activities, and this indicates that a considerable group of people have to move to other districts to carry out their day. People who have to travel for more than 5 hours a day make up a smaller percentage. Neighbourhood requirements mainly indicate work and studies, this is related to mobility. Many of the people in the district do not move around much in the city because they do not find opportunities in their district to do so, such as the economic capacity to look for new study options. Taking into account these mobility results, it is perceived that most of the interviewees work in the district.

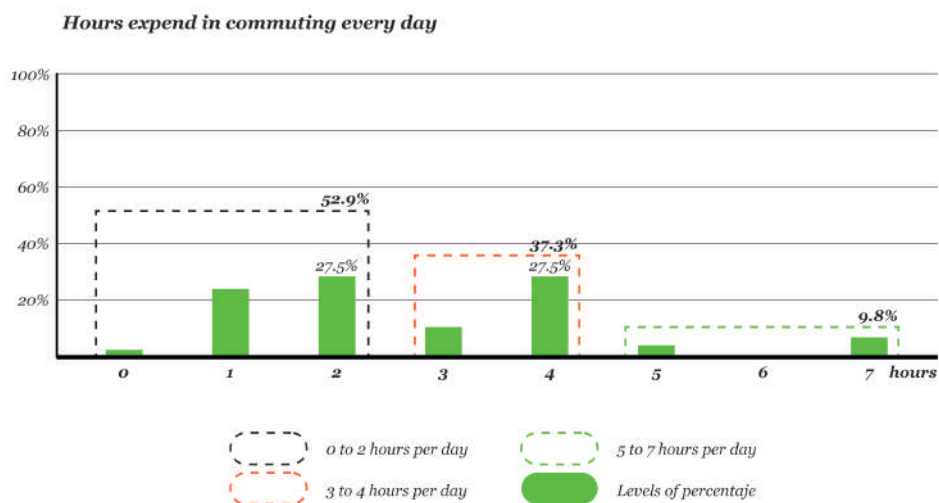


Figure 34. Hours expend in commuting per day. Source: author based on questionnaire results.

4.4.3.2 *Relations of the Metro de Lima and the district improvement*

We have reviewed how infrastructure plays a role in the improvement of the city and this role is determined by current social problems. Almost 60% of respondents indicated that the metro has played a regular role in improving the district and 35% indicated that the metro has brought about a total change to the district (see Figure 35). If we take into account that the beginning of the irregular metro (the metro was stopped for more than 20 years due to political problems in the city), it is understandable that the natural perception of the community towards the metro does not have to be totally positive. It is interesting to take into account the quote shared by the interviewee, where it is indicated that the improvements of the metro are external to the district, while very few people shared an opinion where the metro is identified with the district.

On the other hand, that low levels of improvement indicate or that the metro triggers no development, indicates that residents of Villa El Salvador see the metro as an important improvement to the city's infrastructure. This generates a doubt that needs to be reviewed further in the next point. Which allows for a comparison of whether the metro is perceived as a citizen improvement or a district improvement.

Quote shared by interviewee:

“...it makes transportation between distant areas faster (the metro is allowing to commute to distant locations around the city), allowing people to better manage their time and access other places, for recreation or study...”

Woman, 27 years old

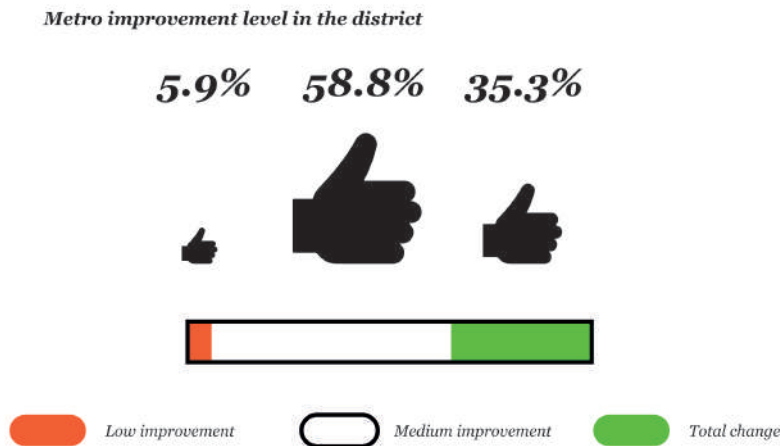


Figure 35. Metro improvement level in the district. Source: author based on questionnaire results.

One of the problems of the whole city, which is the focus of this research, is fragmentation. With the new metro system it helps to integrate the city with all its parts, the perceptions indicated by the interviewees are different from those previously reviewed. Most indicate that the Metro de Lima is helping in some way, representing more than half of those interviewed. Those who are not completely sure of this statement represent 15%.

Quote shared by interviewee:

“...in some ways it is allowing mobility to other districts to occur more quickly, it facilitates transit, but it does not necessarily integrate other districts with ours. This is perhaps because there are not so many places of recreation or business centres in our district that promote visits from people from other districts...”

Man, 32 years old

There are two contradictory results in which people who indicate that the city's metro is helping enormously in improving the district are twice as likely to believe that the metro is acting against the integration of the city. To see this we propose to make a comparison between these two results, those who perceive improvements in the district and those who see that the Metro de Lima is helping on a city-wide scale (addressing the fragmentation of the city). The metro is only seen in a negative way at the city level (the metro is playing against fragmentation), in the district nobody shared a negative opinion. While in the middle level of improvement the results are equal, the low and high levels are totally opposite. On the one hand, at the low level, at the city level, representation triples, which indicates that there is a lot of uncertainty on a larger scale. While at the high level, the result obtained at the city level is half that of the district. This investment in the appreciation of Metro de Lima, not only indicates that there is the uncertainty mentioned above, hand in hand with the above quote, Metro de Lima is perceived as a tool for the district in improving traffic and mobility, but does not necessarily invite other districts to join Villa el Salvador. Connectivity has to go hand in hand with ensuring the flow of citizens and this requires reviewing what might be the factors attracting other parts of Lima, and mainly be an element integrated into the district.

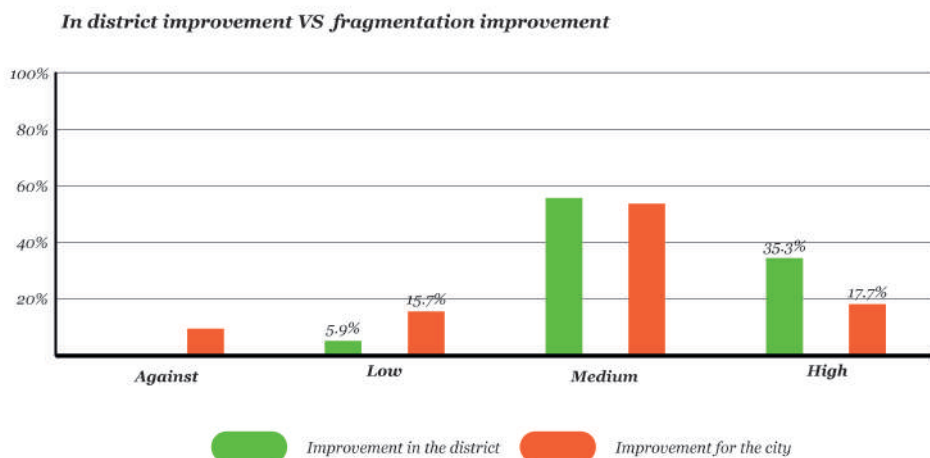


Figure 36. Metro improvement level in the district. Source: author based on questionnaire results.

4.4.3.3 *Improvements required in the Metro de Lima*

The results to this question are equal among them if they are posed in three groups: a system group, a metro station and the metro itself. But if seen individually, the need for more connections is essential, consisting of more than 40% of the responses obtained. Reviewing the recommendations for the metro station, culture and education have the greatest representation, as well as improving the stations to host urban activities, looking for the station to have a multi functionality. It is imperative to remember here the high relationship of the district with its history and community development. Although there are spaces that commemorate historical moments in the district, these are among other activities that overshadow them. It can be a good strategy to turn the metro station that is already a nodal space in the district into a space that shares the history of the district (see Figure 37).

Improvements to the subway itself were also considered. The main one is the time and speed of this one. The Metro de Lima at the moment has an average frequency of 5 minutes (according to nowadays Metro schedule), changing to 10 minutes on Sundays, so it is inferred that they do not refer to the speed of the train but rather to the time spent waiting to enter. Long queues are made at various times of the day and this is mainly due to the first point indicated, the lack of more connections.

Quote shared by interviewees:

“...there must be feeder routes, as the Metropolitano has (first Bus Rapid Transit system in Lima, which has feeders from far districts), that take people to a Metro station...”

Man, 50 years old

“...they should moderate their capacity by increasing the flow of trains or through increasing more connections. Since the crowding and long queues that often occur at rush hour are intolerable and considering the context we are living in of a pandemic, congestion can result in an infectious outbreak. Another thing that should also be improved is the cleanliness in their bathrooms, it is questionable whether the bathrooms of certain stations are kept impeccable while others located in more popular areas, is quite the opposite...”

Woman, 28 years old

“...increase the number of trains and queues that people make should close the top as both in summer people who queue get sunburned and in winter people who queue get wet...”

Woman, 31 years old

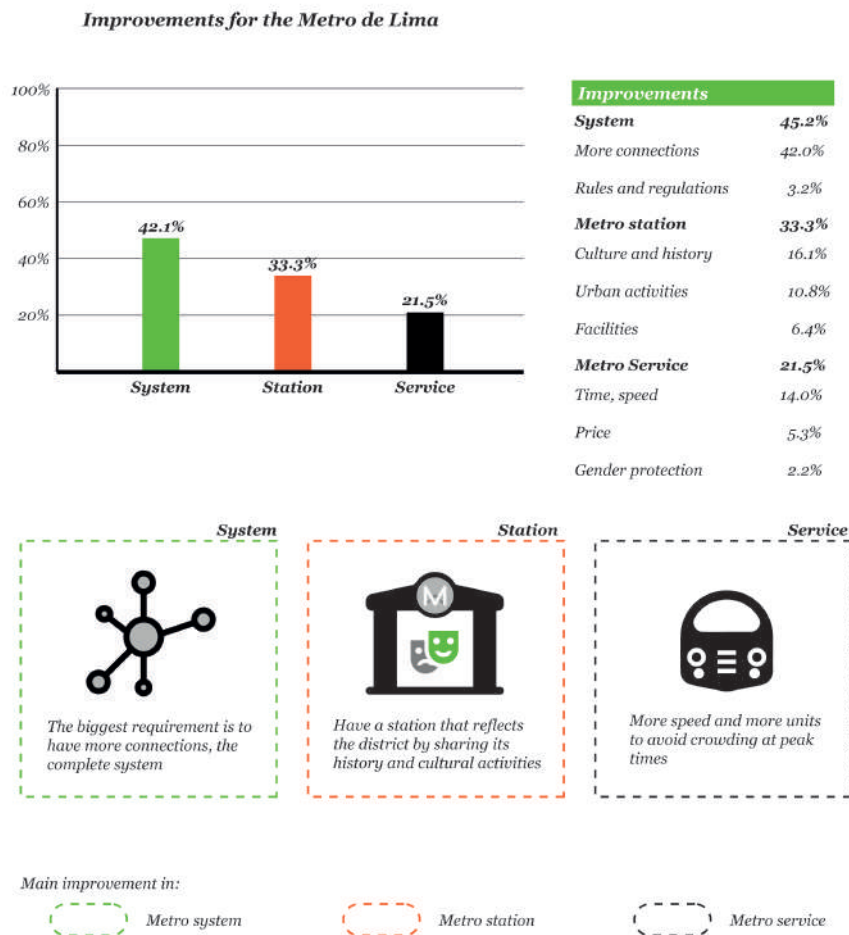


Figure 37. Requirements to improve the Metro for the district. Source: author based on questionnaire results.

4.5 Vision in Villa el Salvador

An important factor in the development of cities is vision, and this is important to mark at the beginning of every venture. The complexity in the city of Lima has determined the development to particular visions, so the city has not captured a guide for its development that integrates all the population. The visions in the city are disintegrated into 51 parts (one per district), which generates an important social challenge. To start reviewing the district visions, it is imperative to remember the state by understanding the socio-economic status of the population to review their visions (see Figure 16, Figure 27). The results of this question can be classified as good. There is less than 15% poverty, while the level of high savings capacity is higher than this, with 1 in 5 people having high capacity (30% of the population is in a favorable economic position in the district; 20% of the sample has high savings capacity). Giving the district a favorable capacity to consider a future vision of integral change.

These visions can be grouped into three groups considering the main tool to achieve them (see Figure 38). The vision most present in Villa El Salvador corresponds to two objectives that require urban mobility, such as obtaining an economic and educational improvement in order to grow professionally. This group represents almost 60% of the interviewees, pointing out the importance of urban mobility in the personal growth of the district's population. The next group has almost 15% representation, and indicates visions of personal and family development, housing social aspects and improvement of quality of life, becoming this vision facilitator of the first mentioned above. Also with 15%, it marks a group of vision that requires economic factor, this implies to have an economic power for the acquisition of new a new property, a new car and also the transfer to a new district (looking for better opportunities to develop oneself in the city), which relates it directly to the first vision where it looks for better education and work for an economic growth.

This frames the search for a new relationship that integrates these visions, through which the way to achieve them is reinforced. We must also take into account the role that the infrastructure takes in this, since it is the vehicle by which the three groups of visions can be achieved, the infrastructure again acquires a relationship with the users. It should also be noted that a considerable percentage did not share their vision, which is interesting since this was the only question that remained unanswered, possibly this is related to the reality of the city where you live day to day more than living planning the future.

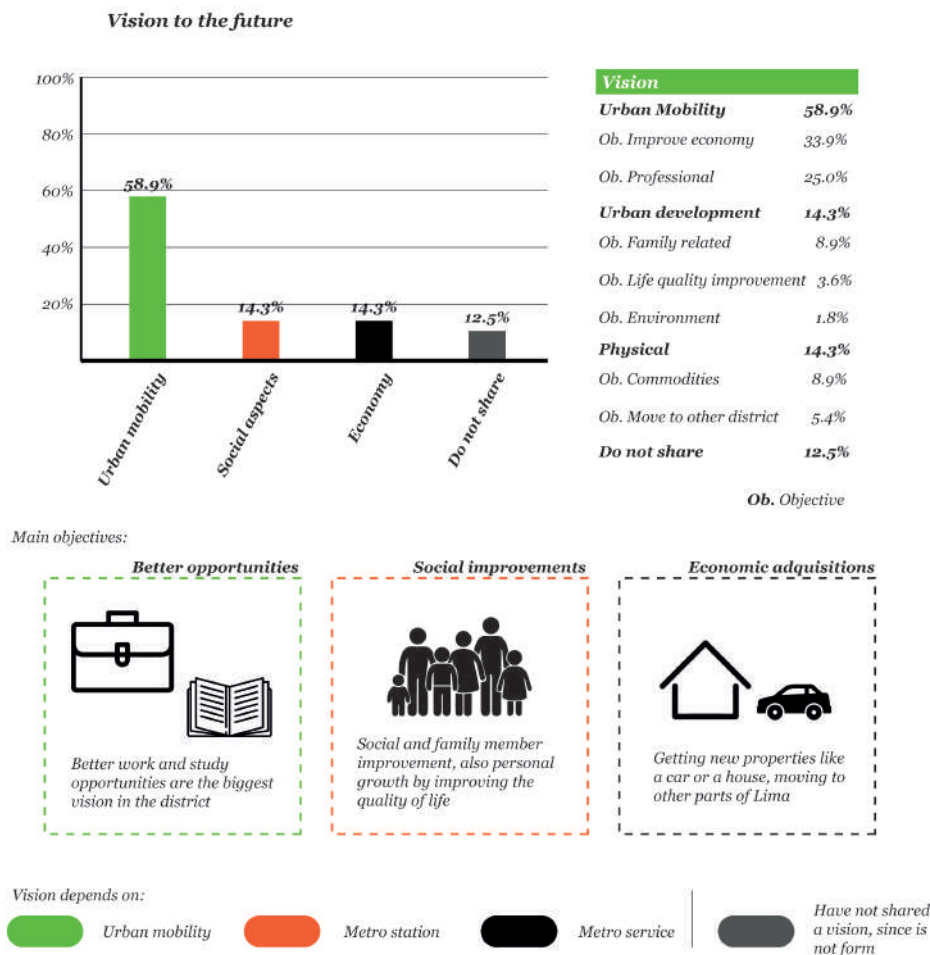


Figure 38. Visions shared by residents in Villa el Salvador and categorizing them. Source: author based on questionnaire results.

Quotes shared by interviewees:

“...buy my machine so I no longer go out in order to make service ... my work requires it and thus to consolidate my company...”

Woman, 36 years old

“My plans are to finish studying and working together, so I can form a micro business and start an independent economy...”

Man, 22 years old

“...study what I like and move to a province to breathe fresh air...”

Woman, 28 years old

“My plans are geared towards continuing to develop professionally and career-wise. To follow a postgraduate study and obtain greater job stability that will allow me to invest in an independent home”

Woman, 28 years old

“...that my children finish their studies and carry out all their projects...”

Woman, 37 years old



Picture 17. Mototaxis around Villa el Salvador metro station. Source: Author.

5. Discussion

5.1 Infrastructure refreshed interpretation

It is necessary to examine and improve the function and role that infrastructure takes, to function in the unification of the city, it is important to give it road with the community. For this it is necessary to work again with the community to strengthen social development and transform it into a sustainable model that is remodeled according to the new circumstances of the members of the neighborhood, ensuring formal work to overcome informality and the penny war mentioned by the disruption of transport in the city (penny war is working for the income of that day, more income means more passengers; Bielich, 2009).

The role of infrastructure, on the scale of the Metro de Lima, is intensely political; this can also be reviewed in the interview with Michel Azcueta (see Annex 2). The metro appropriated the idea of the presidency, starting its construction from Villa el Salvador, since there was no plan for its execution. In any case, the fact that it was initiated from the periphery does not constitute a mistake. It is the result of the separation of the users and the community. It is necessary to reinterpret the subway system so that it works hand in hand with the community, including the informality that has emerged in the city due to governments that do not make comprehensive decisions for its improvement (Buhr, 2003). Therefore, decouple the infrastructure from its political role and return this role to the community and its use.

It is important to keep in mind that districts like the one researched are still in the process of development, determining their own vision. And one of the issues that most affects this is citizen insecurity, apart from insecurity in the use of the city, this also appears in the long term decision making. The infrastructure, for the time being,

can provide users with the citizen security that affects all parts of Lima. This can happen by improving its infrastructure, giving better integrated payment options for all modes of the city. The district is still in the process of development, seeking its own direction. The problem of insecurity in the city needs to be addressed, and infrastructure plays a key role in overcoming this problem starting by reinterpreting it towards the society.

5.2 An articulated system for urban mobility

Urban mobility conceptually indicates the capacity to mobilize to acquire a social function, while in the district it does not necessarily exist in this form. Most trips are made on weekends to go shopping and, to a lesser extent, to study or work. On the one hand, mobility continues to be associated with the city's other transportation systems, which as we reviewed are not integrated with each other. The problem to be reviewed from the point of view of mobility is the lack of connectivity, and a coherent articulation to mobilize the nuances that make up the city of Lima.

On the other hand, in the district it is not perceived as a need to provide more technology in the transport system, but it is required that there are more lines that connect other sectors of the city, as well as that there are feeders to the metro station. Current technology, such as vehicle loan methods or bicycle systems, are necessary to implement, but do not solve mobilization in districts far from the city center. These fragments of the city maintain an urban complexity, which makes the stations inaccessible to all residents, so other formal and paid methods have to be ensured to ensure access to the metro stations. Furthermore, as the pandemic is controlled, urban mobility will return to normal. Transportation will need to be reformed and reconfigured for this new normality, allowing access for all users and reaching all parts of the city. The metro will be the first level of the mobilization system, but it will not take a leading role, it will be taken by the

articulation of all modes of transport that generates a system that connects with the whole city.

5.3 Identity interaction

The identity is generated from the social interaction, understanding that the community forms the personal identity and this one generates a social identity in all those who conform it, this is felt that it is losing (Postdem et al, 2006). In several examples in Lima, people have lost this identity as a whole and this is generating that many citizens do not contemplate a community vision, making personal objectives more prevalent.

In Villa El Salvador, the community vision played a major role in the formation and development of the district. In the district, this is being lost and many people feel that the community union that organized the development is the main lack in the community aspect. This community vision in the development of an urban improvement project is necessary for its functioning, not only for its generation. The city is formed by particularities and it is the responsibility of those who participate in it to ensure its maintenance. From this point of view, the metro station can play a role in ensuring the recovery of identity and history, which is of great importance to the district.

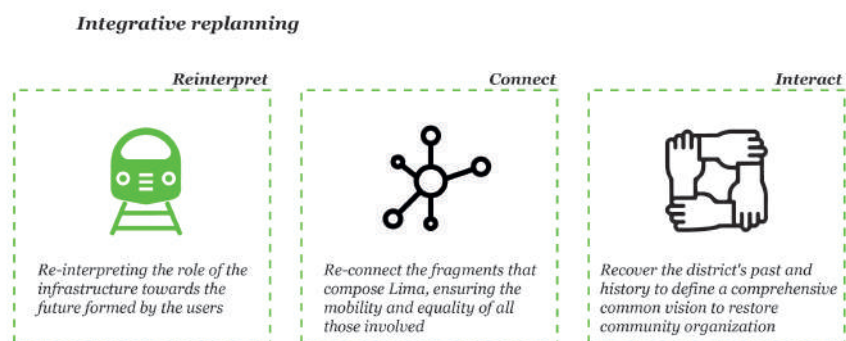


Figure 39. 3 steps to reinforce the vision, to develop the fragments of the city. Source: author.



Dirección **Villa El Salvador**
Andén Sur



Lima
¡SABE!

¿QUÉ ES VÍA FÉRREA?
EL CAMINO POR DONDE PASAN
LOS TRENES, JAMÁS LAS PERSONAS.



**¡¡PRECIOSA
VEN AQUÍ!!**



¡MIAUUU!
¡MIAUUU!



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SI VES A UNA
PERSONA O UN
ANIMAL EN LA VÍA
FÉRREA, UBICA
EL BOTÓN DE
EMERGENCIA EN LOS
ANDENES Y REPORTA
LA SITUACIÓN.



¡MANTÉN LA CALMA!
EL EQUIPO DE LÍNEA 1
RESOLVERÁ LA SITUACIÓN.



PROHIBIDO
CORRER



NO DELICUATOS
REACTIVAR A LOS
TRENES



POZO
A TIERRA



Picture 18. Panels in the subway station in Lima Centre providing knowledge about dangers in their use.

Source: Author.

6. Conclusion

To narrate a story, 3 elements are required to ensure a reflection by the reader, past, present and future. We have reviewed how the past is important, but easily forgotten; how the problems of the present are tried to be solved without taking into account the actors; and how for the future the bases and concepts are not reinterpreted. It is imperative to give a social focus to the urban and infrastructure improvement projectors, since it cannot connect fragments by itself, it needs people to really integrate the parts and generate a flow that allows to drive the infrastructure for the future.

This research has shown us how community participation and organization largely defined infrastructure provision and sustainable development in the case study. While at present, we are disengaging from social power and opting for technology as a driver of development in cities. In developing cities in the global south, community vision is the most versatile tool for addressing prevailing problems. This implies reforms that should focus on the main actor and guide us from experience to improve.

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Annexes

Annex 01

Questionnaire:

Living in Villa el Salvador and its relationship with the metro

This online interview is formulated to serve my master's research on urban planning. I was a close neighbour of the district and have always consider that one of the strongest problems that have led to the fragmented development of Lima is the remoteness.

Now there is a metro system that will make it easier to connect the city with its peripheries, but in its 10 years of operation this development has not been constant. I invite you to participate in this questionnaire to understand your perceptions and visions of the district and the city.

The entire questionnaire will be anonymous and the data collected will only be used in the study. Thank you in advance for participating!

- **What is your gender?**

- ☐ Male
- ☐ Female
- ☐ Other

- **What is your age group? Choose one**
 - ☐ 05 years old to 25 years old
 - ☐ 26 years old to 40 years old
 - ☐ 41 years old to 65 years old
 - ☐ 66 years old and over

- **What would be your highest educational achievement? If you are currently pursuing those studies, choose that option.**
 - ☐ Primary education
 - ☐ High-school
 - ☐ Technical education
 - ☐ University education
 - ☐ Post-grade education
 - ☐ Other

- **What is your marital status?**
 - ☐ Single
 - ☐ Co-habitant
 - ☐ Married
 - ☐ Divorced
 - ☐ Widower
 - ☐ Other

- **What do you do at the moment? You can select several options.**
 - ☐ I am a student
 - ☐ I am a worker in 1 job
 - ☐ I am a worker in 2 jobs
 - ☐ I am unemployed
 - ☐ Work at home
 - ☐ Other

- **How did you come to reside in the district? You can select several options.**

- ☐ I live in Villa el Salvador since birth
- ☐ I moved in a few years after I was born
- ☐ I lived my childhood in the district, now I have moved
- ☐ I grew up in another district, now I have moved to the district
- ☐ I live in another district, but I work in Villa el Salvador
- ☐ I do not and did not live in the district, but I have always been related to it.
- ☐ Other

- **How do you feel about living or working in the district? You can tell us on this scale your level of relationship with the district.**



- 1** I don't feel part of the district
- 10** Villa el Salvador is part of my life

- **What would you say is the BEST thing about Villa el Salvador? In terms of what you value most about being part of it. You can explain in a short sentence or a short story what the best thing about Villa el Salvador is to you.**
- **What would you say is the WORST thing about Villa el Salvador? In terms of what it hurts the most and/or affects being part of it. You can explain in a short sentence or a short story what the worst thing about Villa el Salvador is for you.**

- **Do you find everything you need close to home? You can select several options and leave unchecked those that are not close to you.**

- ☐ Food (markets or shops)
- ☐ Restaurants
- ☐ Schools
- ☐ Institutes or universities
- ☐ My workplace
- ☐ Work supplies
- ☐ Pharmacies
- ☐ Clinics or Hospitals
- ☐ Clothes (Malls or others)
- ☐ Cinemas
- ☐ Spaces to practice sports
- ☐ Other

- **How much time do you spend per day mobilizing? You can count on this scale the amount of hours you spend per day moving around by adding up all your daily activities (school, work, shopping, etc.)**



- 0** Less than 1 hour per day
- 8** 8 hours per day

- **What would you say is missing from the district? That your quality of life would improve. You can select several options.**
- ☐ Better education
 - ☐ More health centres
 - ☐ Increase security

- ☐ Order and cleanliness in the district
- ☐ Improve transportation
- ☐ Improve policies
- ☐ Improved socioeconomic level
- ☐ Natural and recreational spaces
- ☐ Community living
- ☐ Other

- **How unsafe are you in the district? You can use the scale to tell us the level of insecurity you see in the district.**



- 1** Completely safe
- 10** Totally insecure

- **Tell me your worst experience with insecurity in the district. You can explain in a short sentence or a story your worst experience.**
- **Have you had the ability to save by living or being a participant in Villa el Salvador? Being 0 a null capacity of saving and 10 maximum capacity.**



- **Tell me your future plans. What is important to achieve in the near future? You can explain in a short sentence or a short story your goals and vision to achieve.**

- **Do you feel that the district has changed now that the subway is working? With 0 being an imperceptible change and 10 being a total change.**



0 No change

10 Total change

- **Knowing that Lima is a fragmented city, where accessibility is limited Now that the metro is working (Line 1 of the Metro de Lima), do you think it is helping to integrate the city?**
- **What do you consider should be improved in the metro? You can select several options.**
 - ☐ Time and/or speed must be improved
 - ☐ There should be more connections and thus lighten the overload of passengers
 - ☐ Must improve the price
 - ☐ The stations should have more urban activities
 - ☐ Use the stations as spaces for culture and education
 - ☐ Other

Annex 02

Interview:

To Michel Azcueta

He was mayor of Villa el Salvador in 3 terms. Educator by profession, with a Master's Degree in Education from the University of Montreal, Canada and a Doctorate in Education from the UNMSM (Universidad Mayor de San Marcos), Peru. Founder of neighborhood groups in the district, which promote joint work in the community. Currently he is a resident and active neighbour in Villa el Salvador.

Hector Flores: ***Good morning and thanks for your attention. As I told you, my research topic is focusing on the development of the district and the Lima Metro. How this is being adapted to the new infrastructure, designed to integrate the city. I would like to see from your position as a former mayor, and from a manager in its beginnings, how you see these developments and if it is going hand in hand with Villa el Salvador.***

Let's start by talking about your beginnings, you were the first mayor of Villa el Salvador and have been a participant in its self-management development.

Michel Azcueta: I have already lived about 50 years in Villa el Salvador and next year will be the golden anniversary of the district (since 1971-2021) and one of the things I always say is that they gave us the desert, in which there was nothing, only absolute poverty. So there was the opportunity to plan in a unique way in Peru, of this magnitude. There were many popular slogans, like the one that says *“Because we have nothing, we will do everything”*, this is very beautiful and very true. And I speak to you with much joy about this, because I learned a lot here.

HF: **In your perspective, how was the formation of the district?**

MA: It was planned from the community, always inventing new things. Since the state only gave us the residential group (the plan of 1 block = 24 families, 16 blocks = 1 residential group) The state didn't plan a city, the community did. And that's how the district was formed, through a community plan, 384 new families arrived and a new group was formed; half a year arrived and education was needed, a block was erased and a school was built. The same thing was done when a market was needed. When a large number of people arrived, the large avenues were formed. In addition to this, there was the industrial park generated in an immense pampas and these new types of hospitals.

HF: **You were then elected as the first mayor of the district.**

MA: In 1980, democracy returns to Peru, and there are elections.

In 1980, democracy returns to Peru, and there are elections. Then, in 1983 the district is formed and what I do as the first mayor with the CUAVES, is the second development plan. Everything was always done in an extraordinary joint relationship, with mixed commissions, CUAVES and municipality advancing in that plan. And to finish this first part. Villa el Salvador is a collective creation that has fulfilled, I dare say, 80% of these plans, in only 20 years, something really unique in the country.

HF: **Villa El Salvador can continue to be an example to the world?**

MA: I don't think so, now with the neoliberal system, which is based on individualism. People can't believe that there are collective creations. Yet human history is full of collective creations.

HF: **Collective creations that managed to build up the district.**

MA: I called Villa el Salvador, the little China, because Saturday and Sunday we were thousands opening trenches to bring water, which makes the district an incredible example, there are young towns in Latin America that do not have water for 50 years, in Villa el Salvador was made only in 4. The oxidation lagoon is also something very remarkable, when there was water (which was done with me as mayor), the leaders said "we are not going to waste it", thus creating the handmade lagoons.

HF: **Then the district had to connect with the city.**

MA: First, line 42 from Villa el Salvador to Surquillo was created, because it was the closest connection, line 53 that connects with the Cercado de Lima and the Vanchelo that goes from Villa el Salvador to Acho (all in Lima Centre). These 3 lines were connected with the city mainly for work. I don't know if you are locating.

HF: **Yes, I grew up very close to Villa el Salvador, I grew up in Tablada de Lurin and Villa was always a constant journey for me.**

MA: I tell you an anecdote, when we presented to the government of Belaunde (former president of the country in the time of Azcueta first mandate as mayor), the distribution of the district, Tablada de Lurin was going to belong to Villa el Salvador and the people of Tablada wanted to be part of us. Villa presented itself taking Tablada, Lomo Corvina up to the Lurin bridge, but President Belaunde told me *"No, you ask too much"*, I wanted to cover everything to have more strength as a district and as a teacher I wanted to include (in the district) the sanctuary of Pachacamac, which has always helped so much to the culture in the city.

HF: **Villa El Salvador as we mentioned before, always developed by its own self-management, this metro arrived as an external infrastructure to the district?**

MA: Not exactly so, the idea of the train was initiated by Alan Garcia

(president 1985-1990) mind when I was the mayor of the district. I was introduced to Alan with the phrase “meet a weird mayor from a weird district,” which is a definition that I like, and the relationship was very good. When the metro idea originated (1987 - 1988), the whole country was against it, it was considered crazy. He told me that the machinery to build the line was already arriving, but that he had no land to do so. I signed a document, with the Minister of Housing, giving him the 50’000 m2 of the industrial park. So the train is in Villa el Salvador, by Villa el Salvador. Many people were against it saying that I was handing over the industrial park, but for me this meant that we were going to have the train forever.

HF: **And how was the route of the metro decided?**

MA: The route of the train was determined by watching the movements of the people, deciding to go from Villa el Salvador to the Grau station (in Lima Centre), which is also particular, since the subways are built upside down, from the centre of the city to the periphery. While this is a crazy experience, where it starts in the periphery and goes to the centre.

HF: **The metro is in Villa el Salvador at ground level, this has affected the district?**

MA: My idea was to make the two tunnels (at El Sol Avenue and Velasco Alvarado), to avoid cutting the district that could have caused two parts, the town of Villa el Salvador and the industrial park. An attempt was made to make a third tunnel, but for geographical reasons it was unfeasible.

HF: **So for you, Villa el Salvador developed differently than the city of Lima**

MA: Going back to the beginning, the history of Lima can be written as the history of the slums and the invasions. Lima was planned until the first centenary, where the main avenues of the city were planned. And this makes me sad, since there is nothing for the bicentennial (2021). Due to bad management, nothing has been done, even though there is a Bicentennial Plan (12 years ago). There are only 5 months left for the bicentennial and maybe there will only be fireworks, so the main problem is that it is not planned. Lima as a city has grown because of the invasions, which are still happening today.

HF: **So the problem of non-planning is a government problem?**

MA: Well, I see it as a more serious problem. It's a problem of Peruvian society because we don't like to plan, no one does. We live by means of short-termism, and we are all in it. Something very different from the Chilean reality, where nobody moves a hair without going through the planning office. Similar to Bolivia and Ecuador, these are not countries that are strange to Peru. There is a CEPLAN (National Centre for Strategic Planning) in the country, but there is no municipality that pays attention to it. And there are good documents there. This means that there is no planning of any kind in the country, whether agricultural, industrial, research or urban.

HF: **Another issue is the lack of continuity, where the government changes and everything that the previous one did is erased.**

MA: It should be different, a new mayor arrives and the good that the previous one has done, must be continued. Unfortunately, this is done in thought, the new mayor destroys the previous one so that they do not say it was better than him. The success of Villa el Salvador has been 20 years, 10 through the CUAVES and another 10 through CUAVES and municipality, where a plan has been maintained for 20 years. There have also been problems, the lands where they were considering building a stadium or a hospital, were also invaded. The industrial park has been invaded 7 times, but people told them “no, leave it” and in the end the invaders agreed, even so the location was the best to invade, since their other option was to go to more distant areas. But thanks to the community we kept the plan.

HF: **Now speaking of them, the CUAVES still exist?**

MA: The CUAVES, the Fujimori and Sendero years (1990s) weakened considerably, but it still exists and meetings are held with the leaders of each residential group. But overall, the political issues and the internal war stage, which was terrifying for the district, where threats to leaders, killings and blackouts occurred. A town that lived off community meetings, this weakened the CUAVES a lot, nobody wanted to be a leader anymore because of the threats. Now there are many people, residents of the district, who do not know what the CUAVES was.

HF: **So the CUAVES now has a more local involvement, not so much with the municipality as before**

MA: If, apart the next mayors, they don't understand it like that. The luck I had in governing with 8 organizations. The CUAVES in the first place, the FEPOMUVES with María Elena Moyano (killed in the internal war), the FUCOMIVES (market organization in VES), APEMIVES (industrial park organization), youth brigades, the Catholic Church and some others. With this last one there is a very beautiful experience, since by means of agreements only 1 parish was made in Villa el Salvador (at present there are 10), making it for some years 1 community, 1 district, 1 parish, this gave a lot of strength to Villa el Salvador.

HF: **In your second term, informality began to grow throughout Lima, now there are many *mototaxis* that saturate the metro station, how do you see this problem today?**

MA: Well, the mayors facing this now don't care. With me it was restricted when the *mototaxis* began, so that they would not circulate on the big avenues. This was accepted by the drivers, but now it has been disbanded. And street vendors are now a national reality. There have been plans for this, as with former mayor of Lima, Andrade (in 1990), where the street vendors were eradicated from the main square, without police or presidential government support.

HF: **Remembering the cholera pandemic (February 1992) where a unique health plan was made in the district, how is this new problem now being addressed?**

MA: Villa El Salvador was the district that suffered the least (in the cholera pandemic), but now it is the other way around. In March, when the pandemic began, I was called by the PCM (Presidency of the Council of Ministers of Peru) and I told them “this can be settled with the people, with the people”. Only three weeks ago, four months after the beginning, the Presidency focused the strategy on the people. At the end of March, we formed the “communal COVID command”, every Saturday we have a virtual meeting with health representatives, leaders and general secretaries, and it is being achieved. It is important the effort since the beginning of the COVID, because now we have achieved to have 1 hospital or health centre operating by sector, which is a great help to face the current pandemic.

HF: **And what do you think is preventing the district from responding in the same way to this pandemic now?**

MA: Firstly, it cannot be the same result since Villa El Salvador is much larger, the district is the fifth in population at the country level and first at the South Lima level. Now we are in a very bad way, there are very good ideas from the groups, shows of support of solidarity, the command has been formed, without help from the municipality. We are still continuing a communal activity, but not like before. We have also been able to get the vice-minister of health, the director of health of southern Lima, and the director of work to attend these

HF: meetings to discuss these market issues. Also, the issue of crime has been discussed with the commander general and the three commissioners.

MA: **That's very important, according to the people I've talked to, most indicate that insecurity is the biggest problem in the district.**

Yes, this is a scandal. Villa El Salvador has been given 28 million (\$7 million dollars) to the municipality for security. But we are the district that has not put up a camera or bought a patrol van. The district does have neighborhood security committees, which don't work with the municipality but with the police.

HF: **Another topic discussed in the interviews was the importance of history in the district.**

MA: I am creating the documentation centre of Villa el Salvador, without the municipality and I would love to inaugurate it next year in May with the golden anniversary of the district (50 years of creation). This is a joint effort, with volunteers bringing me old documents or photos. Since it is worth recovering for its 50 years, the history of Villa el Salvador. Young residents of the district help me to order and recover at least a part of its history.

HF: **Currently, people feel that the history of the district is no longer shared and many told me that they need it.**

MA: I suffer a lot because there is a lot of hypocrisy, recently at a meeting of the IDB that I attended I was asked by a Colombian where you are from, I told him that I am Peruvian and he said “ah Machupichu and cebiche”. That’s the real summary of Peru out there, now the country has no historical weight, something that was being achieved has been lost. And if we do not change, it will not recover.

HF: **A final reflection on the current uncertainty in the country**

MA: There have been many failures, very difficult times in the district. The problems that most affected the district was the internal war, where I had to defend people who were being accused of terrorism by the military forces. And to see now that President Vizcarra relies on the military is something very dangerous for the country, they were already minimized after the Fujimori government and all the corruption scandals with the state, but now they are growing again. The only country where there can be a coup d’état is Peru, remember me.

إقرار

هذه الرسالة مقدمة في جامعة عين شمس وجامعة شوتجارت للحصول على درجة العمران المتكامل والتصميم المستدام. إن العمل الذي تحويه هذه الرسالة قد تم إنجازه بمعرفة الباحث سنة ...

هذا ويقر الباحث أن العمل المقدم هو خلاصة بحثه الشخصي وأنه قد اتبع الأسلوب العلمي السليم في الإشارة إلى المواد المؤخذه من المراجع العلمية كل في مكانه في مختلف أجزاء الرسالة..

وهذا إقرار مني بذلك،،،

التوقيع:

الباحث: هكتور فلوريس

التاريخ: أغسطس 2020

فهم تأثير البنية التحتية لمترو الأنفاق المطلوبة في مدينة جزاة

حالة فيلا السلفادور ومحطة المترو الخاصة بها

مقدمة للحصول على درجة الماجستير في العمران المتكامل والتصميم المستدام

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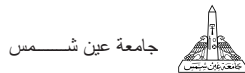
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