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The American University in Cairo
The School of Global Affairs and Public Policy

Government and Community Efforts in Upgrading Infrastructure in Informal Areas- The Case of Izbit ElHaggana

A Thesis Submitted to the Public Policy and Administration Department in partial fulfillment of the
requirements of the degree of Master of Arts

By

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Spring 2013

Acknowledgement

I would like to take this opportunity to express my gratitude to the multitude of people and experiences that have allowed me to be where I am today.

To begin with, my inspirational professors and faculty at AUC. Dr. Jennifer Bremer for her “sabr” and opening my eyes to Cairo incognito; Dr. Khaled Amin Zakaria for his expertise of the Egyptian government; Dr. Khaled Abdelhalim for expert insights on informality; Dr. Shahjahan Bhuiyan for his insights on my proposal; Dr. Robert Maguire of George Washington University for introducing me to “bottom-up development”; my motivational thesis class; the PPAD department; and the great team at the Graduate Fellowship office.

I would also like thank my family, both close and extended, that I am lucky to have as part of my life. From the strong females, especially my aunts and cousins, who taught me how to yell at security forces, face harassers in Tahrir Square and ultimately fight for a cause I believe in. To our men, who understand what it means to leave room for women to grow into their own.

Understanding the real Egypt did not come from reading books, and I am especially thankful to my professional experiences that have helped shape my comprehension. From the invisible Egyptians living in tents in Nekhel, North Sinai to the girls of Akhmim, Sohag that allowed me to peek into their lives and trusted me enough to tell their stories; as well as my mentors from Ashoka, NCCM and CARE Egypt.

In particular, to the residents of Izbit ElHaggana who took me into their homes and recounted their pains and fears; as well as the staff of Nur ElMashreq CDA for the numerous hours of debate, local history and brainstorming solutions for a new Egypt.

To the countless friends scattered over continents that continue to inspire me. For the free people of the squares across the Arab World who broke chains of passivity, believed in a better future, and renewed my hope and faith.

Finally to my sister, the song and dance of my life; for my father (may he rest in peace) for being the eternal voice in my head; and mostly to my mother for her smiles, hugs and being my strength and passion. *Elhamd li Allah subhanu wa taala.*

Abstract

University: The American University in Cairo

Thesis Title: Government and community efforts in Infrastructure Upgrading in Informal Areas:
The Case of Izbit ElHaggana

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Realizing the magnitude of informality as a *façon-de-vie* in Cairo as in other megacities, this research focuses on the urban poor in their attempts to provide a decent standard of living using their own efforts, within the context of the lack of government engagement and limited resources. The purpose was to answer the research question how community organizations and state actors interact in providing key infrastructure in informal areas, taking Izbit ElHaggana as an area of study. The objective was to determine the processes of how community self-help schemes and government efforts to install and upgrade infrastructure in informal areas operate and are maintained. This thus allowed us to recognize quality and sustainability issues, as well as potential for integrated/inclusive upgrading policies; and whether the government can afford to reject informal infrastructure. Qualitative interviews were conducted with community members, government officials and experts on informality to provide holistic perceptions on the upgrading paradigm.

The study findings provided an insight to two case studies of self-help water installations in the two districts of ElHaggana, as well as an insight into electricity and sewerage connections, regarding *gehood zateya* processes- incremental networking, innovation strategies, communal networks and self-sufficiency, sub-optimal quality, and sustainability. The findings also shed light on the themes of informal social structures and interaction with formal systems. The research indicates that local self-help initiatives often override non-functioning formal systems, while local governments stubbornly avoid collaboration as back participation in initiatives. In addition, community interviews presented citizens caught in a trap between the need to regularize and mistrust of formalization given the unstable official recognition.

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Chapter 1- Background and Problem Statement

Introduction

The global community reached a population of 7 billion in 2011, which has since been exceeded and projections for 2050 exceed 9 billion easily (UNDESA, 2013). As the global village grows, so do its cities, some of which are now labeled “megacities” such as Mumbai, Dhaka, Karachi, Sao Paulo, Mexico City, Cairo and many others. With this expansion comes the great responsibility of urban planning and reform to keep up with the increasing numbers. It has been indicated that currently the urban population has reached 3 billion people and of this population, those living in informal areas constitute about a third and will witness a sharp growth trajectory (Belsky, 2012, p.40). As such it will be vital to look into the different issues relating to these areas and specifically how local governments are reacting to an unplanned expansion that they seem to have little control over.

Interest in informal areas has been alive for some time, although it focused mostly on "slum literature and reporting", documenting the lives of citizens living outside of their cities' norms and ideals. From the favelas in Brazil to the newest Dharvair-s of Mumbai, to the mysteries of Kibera and the "*ashwaayat*" in Cairo; slums and their residents have been the topic of debate mostly on urban violence, resettlement policies, and finding solutions to the slum "problem" suffocating their host cities. It is debated that mostly due to donor interest have the urban poor been transformed into targets for questions on social justice, urban planning and citizenship rights. International recognition for the rights of the urban poor has started to emerge both in literature and in development programs advocating for accessibility to services, local governance

and accountability, and integrated/inclusive national policies. The move to recognizing the informal has begun on paper, but has barely materialized in developing countries such as Egypt.

Yet, in light of the lack of rule of law, local formal systems and enforcement of regulations, in Egypt the informal areas and systems seem to becoming the norm of the city. Today about 63% of Cairo's population lives in informal areas, this constitutes over 11 million of the city's population (Sims, 2009, p.91). Although the government has spent at least the last two decades attempting to ignore or resist the expansion of these areas, what is certain is that apart from the growth of desert communities that now house a small fraction of the population added to informal areas, the formal expansion of the city has all but stopped; whereas informal areas will continue to grow at a sustained rate for years to come, especially the peri-urban areas (Sims, 2009, p.85). However, Egyptians outside these areas as well as the authorities continue to misunderstand informality, not realizing their potential or that this may be an opportune moment to invest in these areas rather than most certainly losing the battle of eliminating them.

However, in order to realize this potential, one must look at how informal area residents make their lives and livelihoods. This means recognizing where illegality lies, the grey areas and faulty local enforcement, and informal systems of services that thrive under governmental absence. Very little research is dedicated to learning how communities in informal areas come together for self-sufficiency in the wake of government inefficiency and contempt.

As such, there have been moves on behalf of the community to make their own systems by adapting formal systems to their needs without 'legalization'. They types of initiatives have been named "self-help projects", where the community uses its own resources, both human and financial; to improve their living conditions (GTZ, 2010, p.19) usually in the absence of

government intervention. Local self-help initiatives come in many different forms such as local Rotating Savings and Credit Associations (ROSCAs) providing financial liquidity; revolutionary local defense committees for community protection; and local ad-hoc projects to provide essential services and even key infrastructure in many areas.

This research focuses on documenting local self-help initiatives that have installed or upgraded utilities built to close the gap in government service provision. The study will mainly focus on how water piping projects operate and are maintained, using a specific area as a case study; and provide an insight to electricity and sewage connections, as well as recount community-government interactions.

Self-evidently, informal areas are not all alike, though they share commonalities. According to the Ministry of Local Development, there were over 1,105 informal areas in Cairo alone in 2001 (Cities Alliance, 2008, p.7). After the collapse of Duwayqa, much attention was given to the squatter area of Manshiet Nasr in the Cairo governorate; while in Gizah Boulak elDakrour is better known to donors. Other areas may be mentioned in the news, usually detailing urban violence, like Izbit ElHaggana and Mit Okba; while others may be disregarded until a phenomenon too big to be ignored emerges. This is the case for the peri-urban areas in Gizah, which have recently been made famous by the sectarian violence in the village of el-Khesoos, one of the fastest growing informal areas in Cairo.

This research will focus on another squatter area that has been largely understudied- Izbit ElHaggana. Its proximity to the AUC provides reason for student responsibility towards its issues, and the author has previous research experience in the area, thus facilitating accessibility.

Also since most stories coming out of ElHaggana are about hired thugs or vote-selling, the self-sufficiency story of a low-income group remains untold.

Hence, this paper is divided into several sections that trace the current literature on urban upgrading and community participation, and detail the research done in Izbit ElHaggana. The background, statement of the problem and literature review will set the scene describing the progression of informality in Egypt, history of ElHaggana, interactions of residents with the authorities and the infrastructure dilemma; while placing the case within the wider sphere of literature on informality and community-led upgrading in other megacities. The next part will detail the data collection methodology which will lead on to the presentation of specific case studies, and analysis and discussion of the main themes. The paper will conclude with the implications these types of initiatives may have for urban policy-making and recommendations for future research opportunities.

Statement of the Problem

Previous research on the urban poor in Egypt has focused on the key issues of informal workers, urban violence, housing policies, social security, and role of NGOs supporting the urban poor. Little attention has been paid to the issue of infrastructure in informal areas, unless related to housing issues. There is also a lack of narrative concerning the role of the community in shouldering the burden of installing infrastructure through self-help schemes. Some research has been completed on local government and its many complexities, yet there is few discussions on the dynamic relationship between frontline public officials and the community, whether in supporting or blocking the efforts of self-help projects.

The main research question for this study is, **"how do community organizations and state actors interact in providing key infrastructure in informal areas?"** Answering this question will lead to recognizing issues related to the quality and sustainability of self-help infrastructure in informal areas; as well as the potential prospects for integrated and inclusive infrastructure upgrading policies.

The specific case study chosen for this study is Izbit ElHaggana, which has rarely been the topic of academic research and interventions by the government or formal civil society. There are numerous studies looking at informal areas that have gained popular attention such as Manshiet Nasr, Stabl Antar, Duwayqa, Zabaleen areas, Telal Zeinhom etc. mostly due to interventions by donors or government programs. Thus, looking at Izbit ElHaggana, one of the largest informal areas as well as one of the oldest places for communities to set up their livelihoods, will add a complementary perspective to these areas.

This study will focus on analyzing two projects implemented in Izbit ElHaggana related to installing key infrastructure, namely water piping installations. The main investigative questions that the research tackles in each of these projects are as follows:

- What and how are community-led efforts implemented in Izbit ElHaggana?
- Where and how do local governments and utility services react and complement/upgrade these initiatives?
- To what extent and how are informal efforts integrated into the formal system?

The answers found to address each of these questions will provide insight into the project lifecycle of community intervention and the role of the state, qualifying their dynamic relationship. In addition, insights will be provided on the electric and sewage connections adopted by the community in the same area.

As a means to map out the current situation regarding interventions in informality in general, **Figure 1** illustrates both the factors and actors involved in local paradigms. The inner circle depicts three main actors- the government, donors and the community. While the larger encompassing box details some of the deciding factors that influence these actors' interventions, such as the legal and institutional set up on the government side; as well as topography, resources and culture influencing the community. The investigation of this study will focus on the shaded boxes of community and governmental efforts. These are detailed in the conceptual framework of the infrastructure upgrading processes in **Figure 2** which traces the main interventions of the governmental and community interventions; as well as the duality in the government's stance. The study's case studies will be able to validate this framework and its interpretation of reality.

Conceptual Framework

Figure 1 Stakeholders' Paradigm

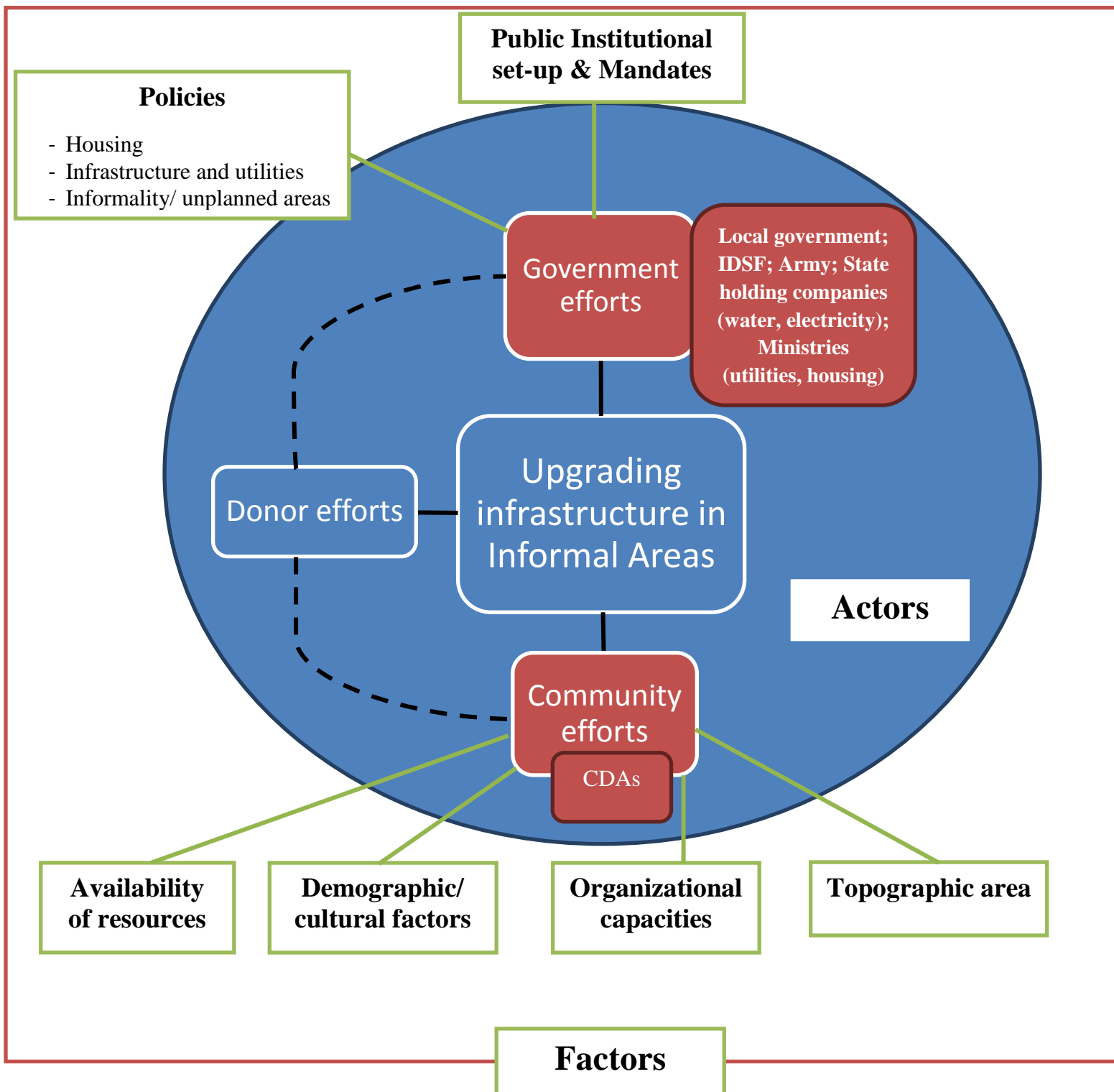
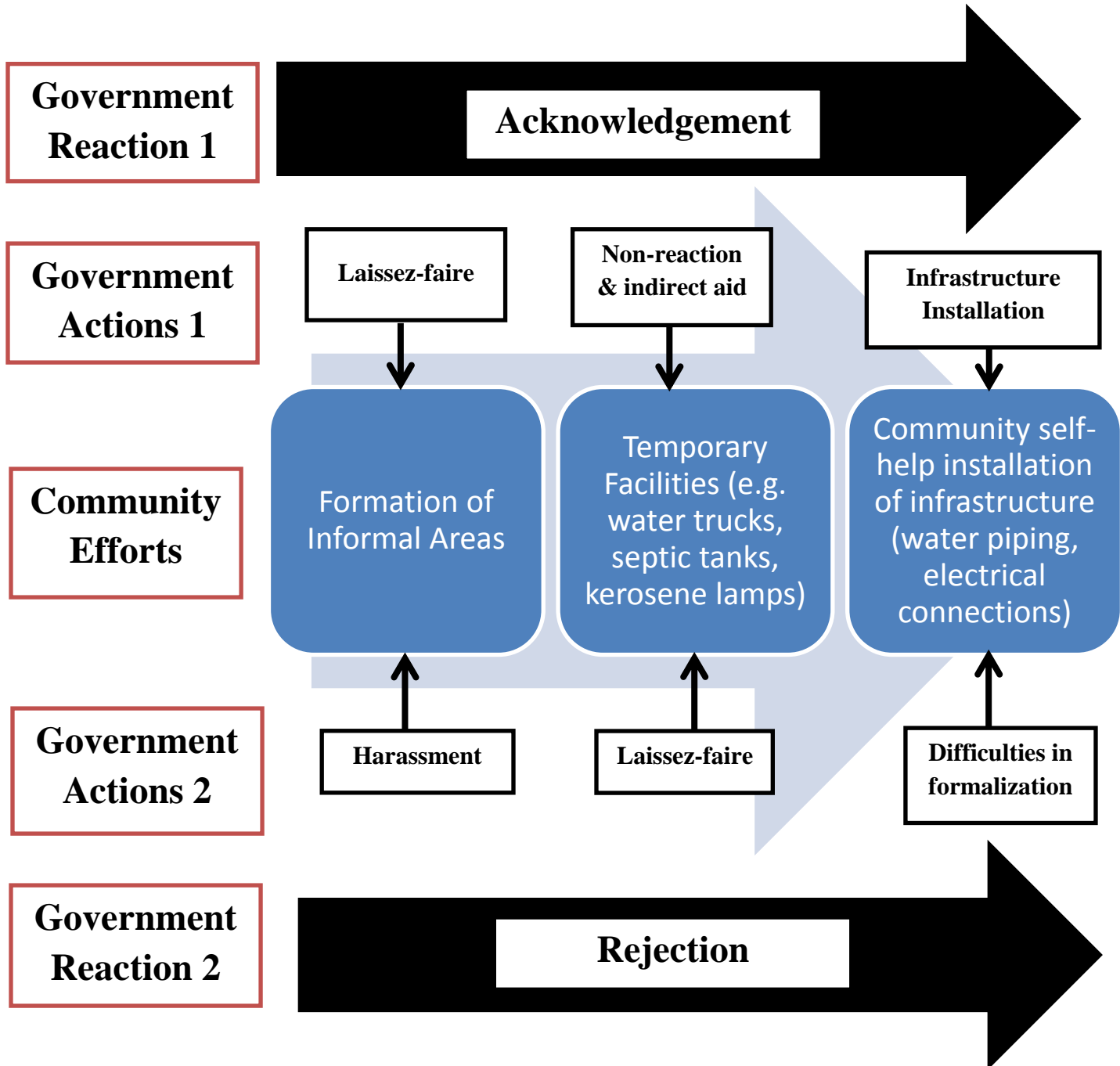


Figure 2 Infrastructure Processes and Government Duality

Study Framework



Background

This section will provide the setting of the research with regards to informality in Egypt, the legal and institutional context, and an in-depth look at the target study area- Izbit ElHaggana.

Cairene Informality: the Norm?

Historically, in 1950 the whole of Cairo could be considered as formal, i.e. the modes of growth were mainly legal (Sims, 2012, p.46). The poor lived in state housing or deteriorated traditional areas, and then began the expansion to what were then villages of Mit Okba, Imbaba etc. (Sims, 2012, p.49). The state continued to build public housing projects that provided affordable living conditions for the workers coming into the newly built factories of Helwan and other centers (Sims, 2012, pp.49-50). As the city grew in the 1970s, informal urban growth on agricultural land increased although the government did not offer any kind of resistance (GTZ, 2010, p.3), and two urban areas- Manshiet Nasr and Izbit ElHaggana, became locations for squatters. The 90s marked the era where the government began to take action in informal areas, first by considering them a security threat with the spread of extremism, then a presidential decree enforcing the “right to infrastructure” (GTZ, 2010, p.3). This marked the beginnings of Cairo’s informality which would expand to ultimately dominate the formal city today. [See Annex 1 and Annex 2].

Different studies have taken place to research and quantify the informality phenomenon in Cairo. The French Center for Economic, Legal and Social Studies (Centre d’Études et de Documentation Économiques, Juridiques et Sociales) (CEDEJ) estimated the annual increase at 3.4 per cent in informal areas' extent, and a 3.2 per cent rate of population growth (Sims, 2012, p.69). [See Annex 3] Recently, a study was carried out in which residents were asked to identify whether they considered their neighborhood to be an informal area *ashwaye'ya* or not (Sims,

2012, p.33). The resultant personalized responses showed that 41% of residents believed they live in informality, with Cairo scoring a higher rank of 44% (Sims, 2012, p.33). This is a qualitative indication of how Cairenes' feel they live in circumstances that they consider informal. Ultimately today there are more than 11 million inhabitants living in informal areas, and they only occupy 17% of the land designated as Greater Cairo (Sims, 2012, pp.91-96).

It is important to note that not all those who live in informal areas are poor. Due to the local housing costs these areas are also attractive to “young middle class, educated families, university students and public-sector employees” (Piferro, 2010, p.5). Although the usual informal area problems of “overcrowding, lack of infrastructure, and violence” prevail, these areas are characterized by being vibrant and having the social cohesion and networks that are lacking in many of the city's formal areas (Amnesty, 2011, p.12).

Legal and Institutional Setting

Laws relating to housing and informality date back to 1951 when Law 206 governing “state-aided social housing” was promulgated (Sims, 2012, p.50). Most laws are connected to prohibition of residents to infringe on state control land (Article 372bis of the Penal Code) (Amnesty, 2011, p.30) or agricultural areas. For example, Construction on agricultural land was prohibited by the Law on Agriculture of 1966 (Amnesty, 2011, p.12) and in 1996, two decrees were issued that stipulated that “any new building on agriculture land and any urban construction without permit would be severely punished by military courts” (Sims, 2012, p.68). This ultimately resulted in more local corruption with local officials who exacted more money to turn a blind eye. Yet administrative courts have generally ruled in favor of the residents when it comes to forced evictions and resettlement (Amnesty, 2011, p.30).

The main program of the government that encompasses the vision for the urban future of the country is the National Housing Program (NHP), which was initiated as part of ex-President Mubarak's 2005 electoral campaign. There is also the envisioned plan of Cairo 2050 that has been met with sharp criticism from a multitude of experts as being completely unreasonable as the plans in reality would mean the removal of millions of inhabitants to remake a Dubai-an Cairo (Sims, 2012, p.279).

A multitude of organizations are currently involved in the urban planning of the country, and these have been restructured after the Revolution. These include the Ministry of Housing, and Urban Communities, the newly formed Ministry of Water and Wastewater Utilities the General Organization for Physical Planning (GOPP); the relevant Governorate office; the urban upgrading units as part of the local administration/municipality; the utilities' Holding Companies- Water, Electricity and Sewage (including their local affiliates); and most recently the establishment of the Informal Settlements Development Facility, as a response to the Duwayqa tragedy in 2008 with a mandate to identify and categorize 'unsafe areas' as well as carrying out projects to ameliorate their situation. Of course, due to the overlap of governmental mandates, the Ministries of Local Development, Local Administration and Planning may also have roles in these processes. Taking Sims's analogy, the government seems to be running on auto-pilot when it comes to urban management, yet its underlying "minimalist" systems continue to function allowing the city to grow (Sims, 2012, p.257).

Policy Change

In the 1970s, when the government finally began to realize the extent of informality in Cairo, a series of decrees and orders made it illegal to build on agriculture land (Sims, 2012, p.66). However, this resulted in the state, which was incapable of enforcement, being pushed into the

area of “petty bribes” and the grey overlap of formal and informal (Sims, 2012, p.66). Yet as these areas grew the government began to indirectly recognize these areas by giving in to provide basic services, complementing the self-help structures *gehood zateya* (literally personal efforts/investment) already in place (Sims, 2012, p.68). The government continued to veer between the two extremes of recognizing and discouraging informality. For example in 2006, the Governor of Cairo announced that utilities will be connected to any buildings that are in violation as a “temporary measure” (Sims, 2012, p.130); but the government was still stuck in its “containment” policies to try to limit informal growth on the peripheries (GTZ, 2010, p.4). The 2008 Duwayqa rock slide may have brought about the IDSF and upgrading policies, yet projects like Cairo 2050 envision their complete replacement (GTZ, 2010, p.4). As such both general policies towards informality and infrastructure have been inherently intertwined by both the national and local government.

Izbit ElHaggana

Formation

As early as 1887, scattered residences started to appear in what is now Izbit ElHaggana (area resident, personal communication), and the core of the informal area started in the 1930s with the settlement of the families of the border-patrol. The area really began to take off in the 1970s, however (Sims, 2012, p.64). Its named translates literally to the “village of ElHaggana”, who were the troops taken from “Nubian and Sudanese (Camel Corps) and living on Egypt’s southern border”, but whose presence in the area is now very minimal (Bremer, 2013, p.14). The area’s growth corresponded to the development of informality across Cairo, which accelerated with the upsurge of migration from rural areas (in particular Minya in ElHaggana’s case), but many residents in ElHaggana are Cairenes themselves who were attracted to the concept of having their own land and building their own houses (interviews with residents’ interviews). Some of

these areas include ElZawya ElHamra, ElWayli and ElSayeda Zainab (residents' interviews). When coming in to ElHaggana, they simply bought land from an informal dealer, set their borders using stones and would be guaranteed land protection by the dealer until they came to permanently settle down (Residents' interviews). This is typical of an informal area that is formed through squatter activity that develops into a housing and later on a rental market, Manshiet Nasr is another example. Today the area is almost all completely constructed with towers in some areas that can go up to 15 stories; informal businesses are thriving in the main ElWorsha road and side streets, ranging from furniture shops, motorcycle repair shops, kiosks, hairdressers etc., to small workshops such as carpenters, tailors, and the like. Indeed it is as vibrant as any formal area in Cairo.

There has been much controversy about the population of ElHaggana. The area covered is about 11 kilometers squared [Annex 4], and Soliman first indicated in 2002 that it may house at least 1 million residents (p.179). However, more recent estimates have placed it to contain around 300,000 - 500,000 residents (Bremer, 2013, p.17), even though residents claim as many as 1.2 million live there. Surrounding ElHaggana are military lands and the formal area of Madinet Nasr, while the area itself is located on desert land that has been the scene of a tug-of-war among the military, the Cairo governorate, Madinet Nasr Housing and Development (long a public sector company, but now predominantly private) and the residents (Residents' interviews).

Evolution of Services

When the residents first started to move to the area, they were mostly bringing in their own infrastructure with them. Due to a complete lack of services and utilities, residents went through a variety of phases until they had finally established a more or less stable system. Bremer (2013)

divides these into four stages beginning with a pioneer phase where non-permanent residents used ad-hoc systems of bringing in water from Cairo and using kerosene for miscellaneous activities (p.20). Followed by the second stage of rudimentary systems in which the military or innovative small businessmen decided to sell water to the residents, electrical boards connecting to the main frame were set up with a nail per house, and septic tanks were homemade. The third phase marked the beginning of the residents coming together to develop self-help systems such as running water pipes from the main connections to provide private household supply. While the fourth and currently continuing stage, is where the government makes its “official” entry into the area and installs its own electricity connections and meters, water piping, and sewage piping and manholes (Bremer, 2013, p.20).

Although it may seem that the government only becomes involved at a later stage, there are several avenues where the authorities play a role in both acknowledging and resisting community efforts. This will be discussed in further details in the analysis section.

Chapter 2- Literature Review

Having looked briefly at informality in Egypt, across the globe there exists a plethora of literature, research, policies and stories on and from the urban poor, both in the realms of academia and professional practice. This section will attempt to include both types of narratives, with particular focus on examples from the Global South. It is divided into two main parts- the first will look at the broader context discussing informality and infrastructure upgrading, as well as looking at participatory approaches and inclusive upgrading systems. The second part will look at the regional and local contexts while focusing on the interactions of formal and informal systems, and the relevance to the case in Cairo.

Megacities and Informal Urbanization

Megacities are defined as cities with over 10 million in population. In 2010, there were 21 such cities, doubling from 10 in 1990; and 7 percent of the world' population reside in them (Belsky, 2012, p.40). Yet about 3 billion people reside in all urban cities across the globe, and as per UNHABITAT about 828 million (863 as per the MDG website) people live in what it defined as slums, housing a third of the urban population (Belsky, 2012, p.40). As such urbanization is expanding along a different trajectory of which informal urban development is dominating, and "one of which governments are ill-prepared for" (Sims, 2009, p.269). It is also predicted that in the next 30 years there will be around 2 billion slum dwellers (UNHABITAT, 2003, p.xxv).

Much controversy has plagued the term "slum" and how it has been used. There has been a noted shift from the negative connotation to inclusiveness which has also been reflected in the transformation of negative approaches of attempting to erase slums, to upgrading of informal areas. In the Egyptian context itself, the state differentiates between unsafe areas, slums,

unplanned/informal areas and each has an associated policy and strategy, whether upgrading evictions, or resettlements (ISDF website, 2012). Law 119 for 2008 on the other hand, makes two classifications of unplanned areas and areas of redevelopment (inner-city slums, shanty town) which also includes unsafe areas (GTZ, 2010, p.4).

Putting aside terminologies, ultimately as Mike Davis puts in his controversial book “Planet of Slums”- “slums warehouse surplus humanity” across the globe and the ensuing conditions are the main issue (Satterthwaite, 2006, p.27). The urban poor live in areas that are considered below standard city conditions including high crime, continued housing insecurity, crowded living areas, lack of access or poor quality of water, sanitation, healthcare and education etc. (Belsky, 2012, p.41). These conditions have caused an avalanche of programs and initiatives directed to improve standards of living as well as develop governance paradigms with local governments. The main themes for which most of these initiatives are related to are either urban policies or environmental sustainability. For instance, goal seven of the MDGs, the most high-profile global collaboration which targets social and environmental sustainability, has the specific target (7.D) of "By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers" (MDG website, 2013). The organization believes it has met this target as the share of urban slum residents in the South decreased from 39% in 2000 to 33% in 2012, and over 200 million have better access to services (MDG website, 2013). Also, UN-HABITAT, a main organization in the field, created the Sustainable cities Program as early as the 1990s to address growth and equity in cities (Belsky, 2012, p.41). Other such programs include the Cities Alliance, UNHABITAT's Urban Management Programme, different types of Municipal Development Programs such as those by CARE and the Canadian International Development Agency, the World Bank's range of infrastructure programs and others.

These programs have diversified aims and sectors that range from directly installing services in slums, to developing policies and training local municipalities on urban management and decentralization. They all fall under the growing mindset that "the urban poor are important elements of the urban economy and society; thus aiming to harness their potential to contribute to economic growth" (Belsky, 2012, p.39). This comes a long way from the traditional negative policies that were advocated for by donors and adopted by national countries such as forced eviction and involuntary resettlement (UNHABITAT, 2003, p.xxvi). As this research focuses on infrastructure, the following section will look at how infrastructures issues have been tackled in the literature and in development programs.

Infrastructure in Informal Areas

Infrastructure is generally qualified as being the building blocks that constitute people's daily lives which includes- roads, bridges, electrical structures, water and sanitation installations, telephone connections etc. In developed countries, cities spend 32 times per person on infrastructure than those in the developing world (UNHABITAT, 2003, p.113). As part of the efforts to address infrastructure, another MDG target under its seventh goal of environmental sustainability focuses in particular on water as it targets to "Halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation" (MDG website). According to its indicators, there continues to be 2.5 billion people in developing countries that lack access to improved sanitation (MDG website). There have also been claims from various governments and international agencies that access to water and sanitation has almost been achieved in most of its cities, and lack of accessibility lies in the rural areas. However, according to Satterthwaite (2003), literature seems "to underestimate the scale and

depth of urban poverty”, as these statistics fit with their belief that rural poverty is in fact more important than urban issues (p.184). At the same time, statistics may not shed light on issues inherent to the usage of these infrastructures such as quality of the structures, ease of access, quality of water, regularity of supply and cost. (Satterthwaite, 2003, p.186). As such it is important to understand how infrastructure systems are planned and operate in informal areas, as well as recognize accompanying issues to accessibility.

To begin with, infrastructure projects are mostly planned at the regional level, usually bypassing local communities and CDAs working in slum areas (Belsky, p.42). These can include water and sanitation systems, electricity, and transportation systems. There has been great investment in the 1990s in clean water, but accessibility has not kept up (UNHABITAT, 2003, p.114). A potential hindrance for this dilemma is the lack of enabling policies and coordination between governmental institutions and accountability, which are all part of ineffective good governance principles, especially at the local level (UNHABITAT, 2003, p.131). In addition, local government’s capacities to coordinate and effectively implement upgrading policies are also weak (UNHABITAT, 2003, p.136). They are mostly concerned with installing new facilities, but often fail to uphold their maintenance, and thus give leeway for international donors and NGOs to take the lead in many of these cases (Belsky, 2012, p.43). Although most efforts focus on improved housing, there are certain donors that are especially interested in infrastructure such as the USAID, the World Bank’s Water and Sanitation program and the GIZ Participatory Development Program in Egypt. Also, the UK’s DFID has been involved with the Indian government to provide city-wide water supplies; and the Swiss International Development Agency has tackled the vacuum of social services in these areas (UNHABITAT, 2003, p.143). Hence, there is a key need for a “new paradigm for the role of government in managing,

directing and facilitating private investment” in order to be a part of the ongoing process of infrastructure upgrading and a key partner (Belsky, 2012, -.43).

Among the different literature on infrastructure, the World Bank’s diverse series, such as Gridlines, and reports dominate. These include a study done to evaluate the infrastructure projects of the bank after 20 years of working in the field (World Bank, 2006a). What is interesting to note is that only a few pages are dedicated to the social impact of these projects and local public engagement, while financial sustainability and outcomes at the national level dominate. In addition, the institution also releases various toolkits and benchmarking guides that aim to set standards for infrastructure interventions, and disseminate experiences on private-public partnerships (PPP) (World Bank, 2011; World Bank, 2008; World Bank 2006b).

However, criticisms ensue about the effectiveness of how these different programs aim to upgrade or install infrastructure. The various approaches adopted by different stakeholders are discussed as follows.

Approaches to Infrastructure Upgrading

Throughout the literature there is reference to different types of tactics used to tackle infrastructure in slums. Some of the main types identified include “Servicing informal areas” by installing different types of systems such as paving and lighting and sanitation infrastructure; “Sectorial upgrading” focusing on just one type of service; “planning and partial adjustment” to widen main streets and create public areas; “on-site redevelopment of informal areas” through demolition and re-settlement within the area itself; “redevelopment and relocation” which is mostly identified with eviction and resettlement policies (GTZ, 2010, pp.6-8). The following

sub-sections will provide a summary of these interventions according to the actor leading the initiative.

Government-led Interventions

The perceived notion is that governments should provide basic services and structures that would allow its citizens to live a dignified life. However, in this lie several questions such as which government- local or national, prioritization of target areas, availability of resources, implementation contracts and local engagement. These are especially significant when dealing with slum intervention since authorities will be particularly wary to put resources in areas where “land ownership rights have yet to be firmly established” (Belsky, 2012, p.38). Most of the earlier approaches were thus based on the concept of force eviction, direct confrontation with “settlers” and resettlement into areas that eventually turn into slum remakes. Many developing countries have now turned to upgrading informal areas as they have come to realize that acceptance of the status quo is in many cases less costly and reduces social upheavals.

Governments also have an added layer of internal dilemmas where coordination and decision-making between agencies at the national and municipal levels comes into play (Belsky, 2012, p.42). This is highlighted in countries that have a multitude of agencies involved in the urban process, as well as the degree of centralization. For example Egypt alone has several state holding companies, a ministry of housing and another for utilities, and special agencies such as the Informal Settlements Development Facility; all tackling issues in informal areas. Yet, while this type of interaction takes place, there is complete marginalization of slum communities even though the poor may have the best knowledge of at least where new infrastructure should be placed (Belsky, 2012, p.42). Thus they frequently disregard smaller-scale infrastructure investments that may support inclusive and sustainable urban development (Belsky, 2012, p.42)

and simply go about doing what they have traditionally done without consultation and regardless of consequences. Interestingly, a common connotation used to sum up government interventions that has been repeated both in the literature and by urban experts such as David Sims in Egypt is “muddling through”. UNHABITAT has identified the failure of the state on two levels- governance due to a lack of political will to effectively tackle the issue at hand; as well as legal and institutional failure, where governments have not kept up with all of citizens’ needs and is not flexible enough to change both policies and implementation mandates (UNHABITAT, 2003, pp.5-7). This has thus made space for donor-led interventions to come in as discussed below.

Donor-led Interventions

In the wake of the vacuum created by governments in dealing with informal areas, many initiatives are being led by donor or NGO based efforts that focus on improving living conditions of the poor, through housing and community infrastructure (Belsky, 2012, p.43). One of the most highlighted programs is the World Bank’s Water and Sanitation Program that is implemented particularly in Asia for infrastructure upgrading (WSP, 2008). Since many international organizations and governments have committed to the achievement of the MDGs, this means that they are bound to outcome-based initiatives that have to be implemented with the aim of quantity results. At the same time, institutional reforms are already occurring in both governments and these organizations in order to implement these practices, however most ignore local processes and what the poor may actually need, apart from the occasional public participation method. It is said that these top-down approaches are merely “putting a shelter over poverty” (Satterthwaite, 2003, p.183). This will be further discussed in the next section.

However, the dilemma many bilateral organizations and international institutions face is that if they do invest in mobilizing local resources, this would eventually cut costs of their

projects and thus reduce the loans and funding allocations to these donors (Satterthwaite, 2003, p.183).). At the same time, according to Wateraid (2008), the investments donors have made in sanitation schemes seem to miss reaching urban slums altogether as only 1% of urban development aid budgets focus on the urban poor (p.4).

Privatization Efforts

A different approach to provide basic services that has organically emerged is small-scale private service providers. These providers constitute part of the public-private partnership (PPP) methodologies that have become commonplace. These usually take place when a private firm is involved in “management contracts, leases, affermages, concessions, and divestitures” (World Bank, (2006b, xiii). The Water and Sanitation Program by the World Bank is particularly active in this as it has started a Small Water Utilities Improvement and Financing Project (SWIF) in both Asia and Africa, as well as established a Public-Private Infrastructure Advisory Facility (PPIAF) to support these efforts (WSP, 2010; PPIAF, 2006).The long term vision is to allow these providers to become the “local operators of existing public networks in small towns” and begin the process of “leveraging private investment in infrastructure” (PPIAF, 2006, p.4). Yet, the underlying dilemma of this approach is that these local operators can be in the profiteering business of upholding informality, and are obstacles to local governance systems. Yet this is one of the facets of participatory methods in urban management, which is further explored below.

Shift to Participation

As such there seems to be at face value concerted efforts to achieve the MDG goals and begin to address the real issues facing the urban poor, however the missing link seems to be the involvement of local organizations and stakeholder engagement. As Satterthwaite puts in, there should be a move to “meet [...] the MDGs from the Bottom up” (p.112), which means that there

should be more emphasis on getting resources to those doing the work locally (2005). This means that instead of bilateral organizations paying donor funds to national governments that have committed to more than a decade of “good governance” and decentralization, it is crucial to include local organizations that can range from community development associations (CDAs) to local government agencies and urban poor groups (Satterthwaite, 2005, pp.102-105). By developing a participatory approach that engages the affected local stakeholders, the chances of upgrading and improving informal areas is much higher (GTZ, 2010, p.8). Hence the types of inclusive strategies exploited for upgrading informal areas are discussed in the following section.

Inclusive upgrading systems- the way forward?

Practitioners adopting previous top-bottom approaches slowly realized that the lack of comprehensive planning and implementation with engagement by the poor limited any development in realistically addressing their needs (Belsky, 2012, p.44). As such inclusive development and policies in the realm of infrastructure upgrading are today the center of focus in most targeted programs, specifically on how they contribute to the economic engines of national growth as well as improving institutional arrangements (Belsky, 2012, p.41). Different faces of participation have thus appeared and are discussed as follows.

Participatory Approaches

The concept of participation has evolved in recent history taking on different forms and nomenclature. In the 1950s to the 60s, the concept of community development began, but the real inception of “people’s participation” in development was readdressed in the 70s as a response for growing awareness in rural development (De Campos Guimaraes, 2009, pp.4-5). The World Conference on Agrarian Reform and Rural Development (WCARRD), in Rome 1979, declared it a ‘basic human right’ that rural people should participate in the governing of

their lives and thus since then participation has been described as the “new orthodoxy of development” (De Campos Guimaraes, 2009, p.5). As such governments, donors and international organizations have adopted different shades of participation including “bottom-up planning, acknowledging indigenous knowledge, and claiming to empower local people” (De Campos Guimaraes, 2009, p.5). However, in urban management as with other fields, how this has been implemented leaves much to be desired at the local level as the following will explore.

One of the main problems with using experts to implement “solutions” for local development is that they “lack knowledge of the specificities of each city or neighborhood, and lack engagement with the local population” (Satterthwaite, 2003, p.183). This thus poses an obstacle as they cannot recommend policies that would benefit those affected and with the least resources, including those that are “designed and implemented by the poor themselves” (Satterthwaite, 2003, p.183). Hence practitioners have turned to “participation in housing and urban service management” where voluntary contributions by different stakeholders including the consumers are part of the decision-making processes and defining the quality of services provided (Nour, 2011, p.80). This includes methodologies such as participatory planning techniques, stakeholder focus groups, community monitoring and evaluation etc.

As mentioned previously, Private-Public Partnerships (PPP) seem to make up the bulk of literature on participation in infrastructure upgrading, although it seems that just including more than one stakeholder in an aid-led intervention constitutes as participation. To look at this, a large study by the World Bank evaluated its different PPP water projects in Asia and Africa that have been implemented as early as the 1990s (Marin, 2009). An interesting recommendation that was indicated in the reports was that the projects “need to be made more pro-poor” (Marin, 2009, p.134); which thus reduces their credibility as being real local partnerships. Another program

that may have taken partnerships to a better level is the Slum Sanitation Program (SSP), part of the Bombay Sewage Disposal Project, implemented as part of a World Bank loan. This program actually included “demand-led participation” and proceeded to link municipalities, communities and the local private sector (World Bank, 2006c, p.1). In addition, the concept of self-help systems within upgrading policies has been identified, but is rarely sustained after the withdrawal of donors (UNHABITAT, 2003). Thus is participation the answer?

Failed silver bullet?

Nonetheless, there is a growing area in literature that critiques these so-called participatory approaches and questions the depth of their engagement with the community. As scholars begin to study how these so-called participatory programs operate, it seems that they have been mostly “consultative rather than actually participatory” (Gasparre, 2011, p.785). They qualify “real participation” as projects where informal area residents are involved in both negotiation and compromise processes with local governments (Gasparre, 2011, p.785). An example of this the Sri Lankan program “1.5 Million Houses Programme” (1990-1994) where the state assisted families to build their own houses through loan-finance and local collaborations in “decision-making, planning, design, construction, capacity-building etc.” (Gasparre, 2011, p.785). At the same time, there are already intrinsic obstacles to inclusive urban development that have to be recognized including “the dearth of public resources and ability to mobilize private investment; profiteers from the status quo clashing with slum upgrading and improvement strategies; lack of municipal capacity to make and implement comprehensive plans to alleviate poverty” etc. (Belsky, 2012, pp.48-49). This hence brings us to the idea of community-based initiatives, which take bottom-up development to a different level.

Community-based Initiatives

Having seen the problems with the participatory labeled programs, Satterthwaite has pointed out in most of his writings as early as 1996 that what has been ignored is the efforts the poor people themselves exert regardless of any intervention (The Guardian). As Belsky indicates- "From mega-projects to micro-finance and the investments the poor themselves make in housing and microenterprises, private investment shapes the city" (Belsky, 2012, p.44). UNHABITAT reported that in almost every partnership in informal areas, there are initiatives that are self-managed (2003, p.186). As such why have programs not recognized the potential of this investment and included it within their programs? Indeed, the concept is not new as John FC Turner has been advocating for support indigenous initiatives since the first Habitat conference in 1976 (Satterthwaite, 1996).

The strategy basically entails of supporting the capacities of local community groups to manage their own urban service development, recognize their rights to housing and urban improvements, and build on their self-organization potential (Nour, 2011, p.80). This will include mobilization of local resources, participation in "demand analysis" and selection of solutions, as well as organizational efforts for implementation, operation and maintenance (Nour, 2011, p.81). It is clear for example in the case of Mumbai that if the city moves to establish partnerships with urban poor organizations to collaborate and find solutions to improving conditions instead of the multitude of forced evictions that backfire, this will definitely better contribute to the city's success (Satterthwaite, 2005, pp.104-105). One of the better known models is also described in the next section.

Different actors have become involved in providing support of community-based initiatives led by residents of informal areas in varying degrees; including CDAs, NGOs,

bilateral organizations and donors (Gasparre, 2011, p.782). In the government's case, the need to be involved in these initiatives gives light to a "back/reverse participation" approach where it is the state that tries to find entry points into informal processes. This is particularly interesting as it implicitly touched upon in the study case studies. On the donor side, however; one such example is the Community-Driven Development program by the World Bank, which seems to be a step in this direction even though its experiences dates back as early as the 1970s (Gasparre, 2011, p.787; Nitti & Dahiya, 2004). Yet what is interesting about the philosophy behind this program is that the Bank identifies an "appropriate level of participation" and does not assume that increased participation is necessarily "better" (Gasparre, 2011, p.787). At the same time it continues to assume that there will be an "external party that mobilizes the community" (Gasparre, 2011, p.788) and the community itself is incapable of that on its own.

Nonetheless, it is also important not to romanticize the potential of such initiatives since they also face inherent challenges such as the mobilization of modest resources, difficulties in linking to the municipal formal systems etc. (Nour, 2011, P.80). In addition, in informal areas such as those in Cairo that are characterized by high density and low social cohesion, community participation will be particularly limited (Nour, 2011, p.85). This is why GTZ in Egypt has weaved community-based development as part of a more integrated participatory approach. This is where they include decentralization, institutionalization, and capacity development as prerequisites of participatory upgrading, which has a diversity of mechanisms with stakeholder engagement (GTZ, 2010, pp.12-14). A critique of this program will be looked at later on, whereas an initiative that has become popular among community-based approaches advocates is detailed as follows.

Best practices- The Orangi Pilot Project

One of the most successful models that have been referred to in the literature is the case of the Orangi Pilot Project (OPP) in Karachi Pakistan. Established in the 1980s, a Pakistani NGO worked to provide a solution to sewage and drainage in an informal area called Orangi. This model is thus an example of a type of participatory strategy that is “area-based” whereby a defined area is the “frame of reference for the development efforts” (Nour, 2011, p.80). What is significant about this project is that a local model of drain construction was developed which is affordable to low-income households (Satterthwaite, 2005, p.116). The model has since spread to other informal areas in Karachi and other urban cities in the country and has deeply impacted how official provision of services worked (Satterthwaite, 2005, p.116). The project has allowed for the creation of local CDAs that work on operating and maintaining the implemented drainage systems, and the original NGO has even evolved to being a Research and Training Institute and a local trust fund has been created for the community (Hasan, 2008). It is also important to note that it was the financing of the local communities that helped develop this affordable model, which has helped local governments develop and adopt these lower-cost methodologies (Hasan, 2008, p.109), and talks of devolution policies to municipalities are also in the making. The project has also attracted international donors’ support and been a target for their collaboration and praise.

A recent development that also shows how interventions are intrinsically related to fate of local workers is the murder of the head of OPP Parveen Rehman (BBC, 14 March 2013). She had served at the head of OPP from 1999, and was shot in Orangi itself as she was in her car while investigating land use around Karachi, which has always been deadly in the urban realm.

Having set the scene of global programs and defining literature, the second part of this chapter will look at the regional context of infrastructure upgrading, the case of Cairo and how informal systems can override official systems. In addition to a discussion of how the literature relates to the case studies at hand and the identified research gap.

MENA context

Social development in the Middle East has always been qualified as being a step behind progress in Latin America and Asia, usually being linked to the lack of democratic transformation. However, urban management has long been a focus in the region, especially in countries with larger populations such as Egypt. Various studies and programs being implemented mostly tackle land issues and housing. For example in the recent book by Ababsa et al., urban land tenure in different contexts are looked at across the region including Egypt, Syria, Jordan, Lebanon and Turkey (2012). The World Bank programs are especially active in the region and thus there has been a slight shift from housing to infrastructure issues such as in Yemen (Asia News Monitor, 2010); and Morocco (World Bank website, 2013). There are also a multitude of UN agencies helping the region to achieve Target 10 of the MDGs relating to water and sanitation including UNICEF and WHO. Yet they are being criticized to have over-inflated coverage rates in the region as a study indicates that they undermine problems relating to accessibility, quality, affordability etc. (Zawahri et al., 2011, p.1153). Additionally, there is a patch of literature from the region that focuses on the intertwining realm of identity and urban informality, such as in Israeli cities with large Palestinian communities, and the case of Beirut where ethnicity politics figures strongly (Soliman, 2008, p.15). Cairo being a megacity also features heavily in the literature as detailed below.

Informality in Cairo

The literature on informality and slums in Cairo is particularly vast. Classified as one of the globe's megacities Cairo houses all types of issues that both scholarly articles and programs are developed to address. The field was originally dominated by urban planners and architects which resulted in large body of literature on housing, land tenure, urban designs and descriptions of the formation of the informal areas in the metropolis (Sims in UNHABITAT, 2003; Cities Alliance, 2008; Soliman, 2002; Soliman, 2012). There is also a category of literature on dwellers' rights in light of the government's forced eviction practices and urban violence (Amnesty International, 2009&2011; Shaw et al., 2011). However, recently more light has been shed on other interdisciplinary fields within the Cairene urban management field. This is where issues of inequality, local governance and government set-up, decentralization, and corruption etc. all come together to complement the housing story (Khadr et al., 2010; Sabry, 2008&2010). Urban upgrading and community participation have also been tackled but mostly by institutions working in these fields.

Many institutions are involved in Cairo's informal areas and in some cases in slum upgrading. These include the French Cooperation's CEDEJ, UNHABITAT, AUC's Social Research Center, the Japanese Cooperation Agency (JICA), USAID's Helwan New Community which is supported by USAID (Gasparre, 2011, p.786); civil society organizations such as the MAAN cooperative, the Egyptian Initiative for Personal Rights and others; as well as the government's own National Housing policies and organizations. A diversity of publications of these programs are available (PDP, 2009; PDP, 2010) as well as criticisms of the aid-led interventions and the level of community participation involved (Zetter et al., 2013).

Of these one of the most renowned programs in the Egyptian urban sphere is the Participatory Local Development Program (PDP) implemented by the German Aid cooperation in Egypt (GIZ, previously GTZ). This program started as far back as 1999 focusing on the areas of Boulaq ElDakroun and Manshiet Nasr. The interventions planned changed over time according to local priorities identified by the population, yet the overarching goal was to improve the living conditions of residents in the area, which includes environmental improvements, economic development initiatives, and finding land for services (Nour, 2011, pp.82-84). An interesting approach of this program was the fact that it used the local governorates as the implementing agency instead of the usual NGO lane. This was deliberate in order to create “strong municipalities” that advocate for participation and can be flagships for the rest of the country. Yet despite its name, both literature (Piffero, 2010) and experts seem to concur that community participation was limited to public consultations, and greater focus was on strengthening municipalities and being able to navigate the Egyptian bureaucracy. Yet the organization developed a great manual for decision-makers that details effective participatory approaches that could be used in future programs (GTZ, 2010).

Ultimately Egyptian informal areas, as Sims (2012) describes them, have many problems “but they relate mostly to the lack of sufficient state investments in infrastructure and public services to keep up with population growth” (p.270). Thus it seems that informal systems dominate the public space and so recognizing how parallel systems operate is necessary.

Parallel Systems and Community self-help

As seen in the case of Cairo and across the Southern hemisphere, a parallel system of informality exists and dominates despite the authorities’ blind eye. As such there has been a great trend towards community organizations and networks coming together to give “voice” to the residents

of the areas. These organizations can be formed on the basis of a variety of commonalities, such as savings groups coming together, local CDAs forming a national coalition and even international organizations. For example, “in Cambodia, India, Kenya, Malawi, Namibia, the Philippines, South Africa, Sri Lanka, Thailand and Zimbabwe” urban poor federations are made up of hundreds or thousands of savings groups (Satterthwaite, 2005, p.112). A flagship is the Alliance of the National Slum Dwellers- Mahila Milan in India, which has “savings cooperatives formed by women slum and pavement dwellers” (Satterthwaite, 2005, p.112). It is supported by a local NGO that has branches across the nation. All of these networks are characterized by being based on community-managed savings and credit groups, which allows them to work together, and thus helps them develop other initiatives such as infrastructure upgrading, housing etc. (Satterthwaite, 2005, p.115). Thus, the federations help their members carry out projects, and the processes and results can be shared with other urban groups in different areas that may be encouraged to go down the same path (Satterthwaite, 2005, p.115). What makes these organizations effective is the fact that they show the government what the community when it is organized can do and thus open up channels for negotiation in policies and practices (Satterthwaite, 2005, p.115). Essentially they have created parallel systems to the government, proven their success and began the longer process of molding destitute formal systems with their successful informal endeavors- thus “overriding governments”.

At the international level, there are both global and regional networks that have come to provide international solidarity with their local partners and pressure international agencies to recognize the potential at the local levels. The most renowned of these is Slum Dwellers International (SDI), and an example at the regional level is the Asian Coalition for Housing Rights (ACHR).SDI in particular with its vast network of partners “supports inter-federation

learning, [and] development of representative organizations” (Satterthwaite, 2005, p.116). They have even preliminary starts in Egypt where they have established a relationship with CID consulting (a development consultant agency) that has put them in contact with a local CDA in Manshiet Nasr that is formed by youth from the rubbish collector community (Zabaleen) (SDI website, 2013). Hence, the move towards urban poor-led organizations may be beginning to take place in Cairo, yet the sustainable relevance of this international movement to the Egyptian context remains to be seen. The following section briefly discusses these ideas.

Contextual Relevance of Literature

Going through the literature and practical experiences, redundancy of both concepts and examples of programs were very dominating. Global academic literature mostly focused on dissecting or advocating for and against bottom-up development; recounting and critiquing infrastructure upgrading programs, and placing infrastructure within global contexts of megacities, the MDGs and informality trends. While on the other hand, reports from donors and NGOs were mostly detailing their achievements, presenting independent evaluations, or giving worn out recommendations both to solicit future funding and to dictate to government partners. . It was thus obvious that little attention has been given to documenting local self-help initiatives or other viable solutions by the urban poor themselves. This was true for Egypt, where the focus has been mostly on donor interventions, governmental practices, and simply repeating the conditions of these informal areas. Additionally, it was rare to find field research done in areas not targeted by donors, such as Izbit ElHaggana and the peri-urban areas of Gizah.

However, analyzing the literature was a valuable exercise as it helped to give light to different experiences of donors and governments, both successes and failures that can be learned from. Community-based initiatives were harder to find, such as the Orangi project, but they are

in fact of most relevance to the study case studies. This is since they give a closer look at how communities organize, the limits of their capabilities and resources, inherent social structures, interactions with the government, and the future of the project in terms of sustainability.

Another noteworthy case study is that of the Egyptian Canal city of Ismailia. After the 1973 war, a Master Plan was developed for the urban development of the city that included the upgrading of a district called Hai ElSalam, which was a particular success (Khoury, 1996, p.199). Following this experience two informal areas, El Hallous and El Bahtini, were selected by the governor as sites of upgrading and land tenure with aid from donors (Cities Alliance, 2004, p.45). What is interesting about these experiences was that the governorate was the driving force behind this change as it approached donors to support its plans to upgrade the areas, and develop capacities for participatory approaches to be incorporated (Cities Alliance, 2004, p.45). The experience has been deemed a success as it has firstly secured tenure for the residents who had mostly squatted on vacant land; including residents' in planning processes; secured a public budgetary allocation for the project; and influenced national decision-making processes (Cities Alliance, 2004, p.45; Davidson, 2006, pp.7-9). It has also been characterized as a "conscious bottom-up process" that although not perfect, integrated the community in "productivity, equity and environmental management" (Khoury, 1996).

As such looking at the lessons learned from government and donor projects, as well as the experiences of community-based projects helped shape the case studies. Hence, the following sections will aim to fill the void of local experiences by giving another insight into community urban management through the case studies of Izbit ElHaggana and the government's "back participation" in these initiatives.

Chapter 3- Methodology

This section will look at the methods employed to carry out a qualitative study in Izbit ElHaggana by looking at the basic aim of the research, the design of the case studies, and the data collection plan.

Basic Aim of the Research

This aim of this study is two-fold. First, the research looks at how local communities take the initiative to provide and upgrade local infrastructure in the absence of government services. Through two in-depth case studies of self-help schemes in Izbit ElHaggana, the research focused on tracing the phases and developing a timeline of how infrastructure is installed and/or upgraded in the area. This was done through looking at informal systems and community actors; government actors and interventions; and integration into formal systems. The two case studies focus on water initiatives. The first is the installation and maintenance of the water piping in the last section of ElHaggana where the government has not yet installed piping; and secondly, the installation of piping to a Mosque in the third part of ElHaggana as well as 10 homes that occurred before government intervention.

The second objective of the research is to identify through interviews with local government officials and national experts in informal areas, policies and perceptions regarding upgrading infrastructure in informal areas around Egypt. These interviews highlight the attitudes of the government regarding grassroots participation, effectiveness of legislation and potential changes, government orientations and challenges on the ground in tackling structural problems in informal areas.

The site selected for the area of study in Izbit ElHaggana, as one of the oldest informal areas in Cairo, one of the most populous and also an understudied area in literature.

Research Design

Based on an ethnographic approach, in-depth interviews were conducted with three categories of stakeholders in the infrastructure paradigm that were part of a purposive sample.

Community interviews

The first group of interviews was with different members of the community in Izbit ElHaggana. The interviewees were determined in conjunction with the local community development association (CDA) “Nur elMashreq”, and the only criterion for selection was that they were involved in the planning, implementation and operation of the specific service, or are direct beneficiaries of the service. There were 11 interviews done across the two case studies, and conscious attempts were made to have a diversified group representing different actors in the upgrading process. These include NGO staff responsible for the initiative, community leaders, fundraisers, beneficiary families etc. The group that was inaccessible was the labor workers and technicians that worked on the piping such as plumbers. There was also an anticipated gender bias due to access issues, but in reality the author was given access to four different households, and women from the beneficiary families were extremely approachable. The interview guide for this category of interviewees was based on the following themes:

- What and how are community-led efforts implemented in Izbit ElHaggana?
- How is fundraising handled?
- Did these self-help schemes push communities to go further develop their conditions?
- Dynamics of the relationship with local authorities

Local government interviews

The second category of interviews targeted government officials. Two interviews took place with an anticipated third that did not come through at the last moment. One of these is a mid-level government employee in the utilities sector in the Gizah governorate. The second interview was with a senior level government employee in the Cairo governorate, who is also an independent urban consultant. Interview guides were loosely-structure and based on the following themes:

- What are the current government efforts in installing/upgrading infrastructure in informal areas in general, and Izbit ElHaggana in particular?
- How do local governments and utility services react and complement/upgrade community-led initiatives?
- Perspectives on informal systems and participatory upgrading
- Are joint efforts for future upgrading a policy option?

Experts in Informality and housing

The final category of interviews conducted was experts with professional experience in informal areas. Two interviews were carried out where the first was an urban planner with over ten years' experience in Gizah governorate in donor-led interventions. The second was with the independent expert David Sims who has worked for over 20 years in Egypt both in donor and government-led interventions and independently. The main overriding themes covered including the following:

- The dichotomy between community and government efforts in upgrading infrastructure
- The future of integrated infrastructure upgrading and participatory local governance

All these interviews were loosely structured and based on gauging interviewees' personal experiences, expertise on the topic and attitudes towards participatory upgrading schemes. The

interviews were all conducted in Cairo with an average time of 30-40 minutes each with some interviews reaching two hours. The questions touched upon various themes including lack of infrastructure and services in informal areas, informal community systems, performance of the local officials, know-how of the local communities, and feasibility of joint efforts. There was no particular order for conducting the interviews, and all three categories were interwoven together based on the availability of informants. The process began with community informants, and government and expert interviews were carried out alternately while the author was conducting case study interviews. This meant that both sides were able to comment on the others' performance and activities, which aided in triangulation. It is necessary to note that community leaders had experience in dealing with the government in some cases with over 10 years and so have clear insights into its workings and local relationships, some being current or previous civil servants themselves. As such, these interviews, coupled with the relevant literature on global experiences in self-help community building, support the framing and construct of the case studies section as follows.

Construct of the Case Studies

The two case studies constitute the main source of primary information. Each case study will incorporate four main sections as detailed below.

1. Context Pre-Upgrading Initiatives

This part will firstly include the temporary facilities used earlier and any neighboring upgrading processes; the services in place (government and community) and those lacking; and the preliminary steps leading up to the planning of the initiative.

2. Planning and organization

This section will focus on analyzing how the inception of the project came about, by whom, and the preliminary steps; initial government reactions; types of planning; levels of community participation; fundraising efforts and resources used etc.

3. Implementation

The main part of the case study will document the processes of how the community/government efforts were carried out; deviations from the original planning; main challenges and methods of overcoming them; opponents and supporters; beneficiary inclusion and fees; inclusion and exclusion of different community actors; basic accountability and governance mechanisms; etc.

4. Initiative operation and maintenance

In addition to the case studies looking at the already exerted efforts, this section will also look at the current efforts going towards maintaining the structures and their impact. This will include whether these installments have in fact been maintained and recognizing those responsible; sustainability of community payments and emergence of free riders; replications in other areas; inception of new projects; current ownership of the structures; repercussions from the government and faces of formalization; complimentary/supplementary government interventions; etc.

Data collection plan

Other than the available literature on the topics related to informal areas, community-led initiatives and water accessibility; a main secondary source that will be consulted is a research carried out previously by Dr. Jennifer Bremer and the author in Izbit ElHaggana. This particular

research looked at tracing the history of infrastructure interventions and initiatives by the community and government in other areas in ElHaggana. A variety of different interviews were conducted that included members of the community, CDA employees and government officials.

Having prior research experience in the area, the validity of these results will be confirmed since all field work will be carried out solely by the author without need of a translator. There will however, be some reliability concerns that are further outlined in the following “Limitations” section.

Limitations

As with any qualitative field work with communities, certain limitations were anticipated to occur and were met through recognizing their potential influence on the results of the study.

To begin with, the research used the sole tool of in-depth interviews with different societal actors involved in infrastructure interventions in informal areas. This means that there was the constant constraint of receiving subjective information from this qualitative method. This is since informants would respond as per their interpretation and views concerning the issue at hand, and their strong feelings on matters regarding living conditions would cloud any objective observations. At the same time, there was also the influence of the great Egyptian pastime of informants telling interviewers what they want to hear. This means that there may be exaggerated or enhanced expressions of dissatisfaction of government interventions, informants giving themselves credit in fighting for a cause, and hiding stories that may differ from the adopted scenario a community wishes to correspond to strangers from other areas in Cairo. This poses a threat to the reliability of the data; however given AUC’s long-term relationship in the area the consistency of the community experience has been the same.

These biases in data gathered from the interviews will also be overcome using triangulation techniques. This includes verifying and cross-referencing any data on intervention dates and magnitudes with different societal actors that may be providing different stories. For example where government officials insisted on the existence of the provision of services, realities from the community on the receiving end shed light on the delivery, quality and existence of such services. Interviews with the experts also helped in analyzing whether the interactions taking place in Izbit ElHaggana correspond to trends in other informal areas of Cairo, or have differentiating features.

It must be acknowledged however that this study has a limited sample size of respondents in the three main categories interviewed. There may also be limits to the diversity of the sample due to accessibility issues, as the contact in the local CDA may only be providing access to a certain selection of individuals they approve of. Inherent gender and power biases in the community may also be reflected in the sample interviewed. As such the research aimed to look at perceptions of those taking part in the study, without aiming for a high number of respondents, but rather a diversity of experiences.

Ultimately, it remains to be seen how results of this study can be extrapolated to generalize beliefs about informal areas as a whole. On the one hand it is important to note that this is only one type of experience and the case studies give a snapshot of one phase of self-help project cycles that has a certain form of relationship with the government. Other phases of these initiatives could have different approaches in dealing with the government. Also ElHaggana has been expressed by many to be a different type of informal area, closer to Manshiet Nasr, as they are both squatter areas by creation. In addition, the study is also limited in scope to the eastern areas of ElHaggana, whereas the northern areas closer to Suez road may have undoubtedly some

commonalities, but may also have unique differing experiences in infrastructure that will need to be studied separately. On the other hand, these results can be generalizable to other self-help experiences across Cairo, which seem to follow the same logic and networked systems as per both government experts' testimonies. As such the study does not aim to generalize the interactions taking place in Izbit ElHaggana as being the norm to other informal areas in Cairo. Rather, it aims to complement existing literature by taking this area as a case study and illustrating how informal formation, demographics, community initiatives can influence the dynamics on the ground. The same can be documented in other areas as well as different sectors.

Chapter 4- Description of Data

This section will look at the research done in Izbit ElHaggana and summarize the experiences of the community members. A description of the current status quo of infrastructure is given, a brief look at the partner CDA, two case studies of self-help water installations, as well as an insight into the electricity and sewage connections of the area. The research used interview guides, interviews were mostly taped, and pictures were taken to document the installed structures.

ElHaggana Today

Today ElHaggana still lies in the regularization stage but has an uneven distribution of services as the government intervention having started around 2003/2004 has not covered all of the districts in the area yet (Board of Directors' (BOD) interviews). As the authorities began their engagement in ElHaggana, they began in the Northern area close to the Suez Road, or the *kilo 4.5* as it is commonly known as (Bremer, 2013, p.22). The next closest district was the second area of intervention, followed by the third middle district, and the final completely void area that juts up right next to the Military sports complex. The first two phases took about 3 to 4 years each to complete and the third stage was just started in late 2012 (community leader interview). As a result, many residents decided they would not wait for the formal connection, took matters in their own hands and developed their own personal connections by tapping into the newly install piping (community leader interview).

As for other types of services, ElHaggana boasts of just two public schools with conditions that are reminiscent of most governmental schools in Egypt, with 60-70 students per class, a dependency on private lessons, and inaccessible to residents at the end of the Izba (residents' interviews). Roads within the Izba, even the main Worsha road, are not paved and

transportation systems are mostly made up of the intricate network of *Tuk Tuks*, minibuses, pickups and trucks. There are no security forces or police presence within ElHaggana, nor any type of governmental institution such as a post office. There is one public health clinic that has been reported by residents to simply act as registry for births and deaths, and there are continuous medication shortages (residents' interviews).

As for the relationship between civil society and informal areas including ElHaggana, usually NGOs that are involved in informal areas are charity associations that collect donations for clothes, Ramadan bags, and in some cases help residents re-build parts of their houses in these areas. However, there is an under-researched area of local Community Development Associations that have not been properly documented in many cases. For example in ElHaggana alone, the partner CDA claims that there are over 35 local organizations serving the community (Residents' interviews). These also continue most faith-based charity activities, but some are also involved in traditional economic women's empowerment, refugee support and literacy programs.

The partner CDA for this research, Nur ElMashreq, along with a coalition of other CDAs in the area have now realized the potential for their impact on their community and have been making progress towards securing land from the military to establish a social services facility (BOD interviews). As this research was taking place, the CDA was in continued negotiations with the local municipality, the Cairo governorate, the utility companies and the military all at once (BOD interviews).

Nur ElMashreq CDA

As previously mentioned, the Nur ElMashreq CDA was the point of reference in ElHaggana to study community projects and understand their social workings. AUC had previously collaborated with the CDA in charitable activities and in supporting its endeavors to set up a social services complex (Bremer, 2013, p.12). The CDA (established in 2008) is based in the eastern areas of ElHaggana and has access to a large area of residents (Annex 4). It is also a typical Islamic cooperative that is registered with the Ministry of Social Solidarity, and whose board members have lived in ElHaggana from its early beginnings (Bremer, 2013).

Nur ElMashreq was also a desirable selection as it had conducted several community water projects, and its staff was involved in previous projects with other CDAs as well. The first case study describes the installation of self-help piping in an area where topography reduces access to services; and the second looks at how a small self-help installation was complemented by the formal connection. This selection was based on the availability of information, and choosing to select two inherently different projects. Another case study of a larger water project that reached 5000 families was documented in Bremer, 2013.

Case Study 1- Defying Nature

In 2008, the USAID Housing Study for Greater Cairo stated that “only 1.3 per cent of households had no access to running water” (Sims, 2012, p.325). Although this is an estimate, however it seems as though ElHaggana provides an exception to the general rule of service provision in informal areas. This particular case study will look at the fourth district in the government’s plan to connect to water supplies. Nine interviews were held, two with board members of Nur ElMashreq one of which lives in this area, one male and four female

beneficiaries of the *gehood zateya* project, and two male youth¹. Also the author was able to visit four households that are connected to this water piping.

Pre-Connection Description

As the government began to install infrastructure in ElHaggana, the informal area itself was still growing. The authorities divided their task into four districts, with the last district being of the largest area whose topology is the most rugged. The area has both very high and low points and the authorities had advised residents not to settle there. However, land was still being sold and people looking for affordable housing would not question the suitability of the land. As with most people in ElHaggana, they would settle first and then figure out later how to service their needs. This is reflected in the study conceptual framework **Figure 2** illustrating the processes of how community efforts form informal areas first then bring in services later on. On the government side, as such infrastructure was being installed throughout the Izba, no matter how slowly, electricity and sewerage were the first to arrive in district 4. However, some areas were rejected as being too low to install sewage systems and were disregarded in the plans. As for the water company, district 4 was supposed to start right after the third district, which got its share late in 2012. However, again the authorities when brought it insisted that they would not be able to navigate the system throughout the hilly terrain, and so left the residents to fend for themselves. This included buying water from water trucks and using a public standpipe installed in one of the lower areas of the district (community leader interview).

At the same time, residents were aware of the neighboring districts' efforts in installing self-help structures. The experience of the “Faddiya (Silver) Cooperative” (FC) was particularly relevant. As outlined in Bremer (2013), the FC installed a network of self-help piping in one part

¹ Names have been changed for anonymity and confidentiality.

of the second and third districts of ElHaggana, connecting from a water source designated for formal areas but left open for residents to tap into (p.25). The project served 500-600 houses until official water systems came in to complement the water supply (Bremer, 2013, p.25). Hence, one of the residents of the fourth district and a Board of Directors (BOD) member in Nur ElMashreq saw the opportunity to tap into this pipe line for his street as well. Receiving the permission from the “owners,” he began plans to tap into this piping.

Planning and Organization

Having previously been part of other *gehood zateya* initiatives, the main community organizer in contact with the FC “owners” held a meeting with trusted community members for each street in the proximity of his street. A brief profile of the community is given in **Figure 3**. They decided that each street would collect money for themselves to install the piping and the individual household connections. The pipes themselves were “left behind” by the local contractors who were meant to install the official systems in the district. These were “taken over” by the CDA and given to the fourth district residents to use as they see fit. This again is a reflection of the government’s “indirect aid” actions as presented in **Figure 2** that support their ambiguous acknowledgement. Hence, the community organizer began the task of mobilizing his own street to figure out who wanted to be included in the initiative, and it is of no surprise that everyone wanted to pay a one-time fee instead of having to continuously buy water from trucks (community organizer interview). The total amount needed for each street was about 1050LE, but residents who could not pay the service fee of about 20LE would be covered by other residents willing to chip in (Bremer, 2013, p.27; community organizer interview). The amount collected was then given to a middleman responsible for contracting the laborers involved in the

process. This was usually a local contractor involved in other self-help structures, and he usually hired people from the Izba itself (community organizer interview).

Initiative Implementation

Due to the hilly nature of the area, including and the community organizer's personal street, the self-help structure took approximately a month to be installed. The sub-main piping going through the street was a 4-inch asbestos pipe, and each individual household connection was a ½ inch pipe. The laborers involved in this process included the diggers (who charged 5LE per meter dug), the plumbers (usual daily rate is 50/60LE), others who had the task of backfilling the trench and others. These were all paid from the 1050LE collected per street. The “middleman” would usually reach some sort of agreement with the laborers so that they would work on most of the streets requiring the self-help structures (beneficiaries' interviews).

Individual household connections were bought by each house separately, and usually cost from 20-30LE or more, depending on the distance from the sub-main and the laborers involved (beneficiary interview). One can juxtapose this figure with numbers from government implemented connections that can range in thousands of pounds.

In addition, as streets began to get water, other streets also became interested in tapping into the line. As such, having seen the experience of the first few streets, more residents began to bring their own pipes and connect to the line. The community organizer estimated that about 500 additional families were benefiting from the FC connection in the fourth district, where 6 families live in each building (community organizer interview).

Initiative Operation and Maintenance

Having installed the structures, the community's role is minimized. In order to guarantee maintenance, the community appoints a local "faucet controller" (Bremer, 2013, p.28). He is responsible for both controlling the flow of water, deciding which street will get higher pressure, as well as maintenance of the line. He is paid by each household 10LE per month for his services. In case of any damages or repairs, he can also collect money from the households to pay for the spare parts and to contract laborers to do the work.

Nonetheless, it is unfortunate for this area that they are at "the end of the line" and so their water pressure is generally very low. They are usually able to get water during winter, however it barely exists during the summer, and so they resort back to buying water from local truck providers. With the advances in technology, now housewives can simply call up the truck driver and have him deliver water right up to her front door (beneficiary interview). In the case of the community organizer, he installed a water tank (equal to about four barrels) costing 50LE in order to continue to store water.

In both cases, whether water is used from the self-help piping or barrels, the quality of water is appalling. The tendency to install water filters has appeared to be a given in the area, due to the frequency of leakages and breaks in the piping. Since most of the area also has sewage systems that are unlikely to be maintained by the authorities, the chances of contamination are very high.

What is noteworthy about this district is that they are actively engaging with the government through various means. This includes writing complaints to the municipalities, paying bribes for municipal engineers to come and inspect the areas contested, and even staging a road sit-in. In the summer of 2012, the mosques of the area called for people to go to a nearby

main road and stay there until the authorities took notice. According to the community organizer there may have been thousands of residents showing up. The Chief of municipality came to the sit-in and promised to solve both the sewage and water problem; however, he only sent water trucks the following week as a temporary measure and did not follow up afterwards. Thus they employ “sedatives” on the residents (community organizer interview).

Figure 3 Community Organizer Profile

Wael came to ElHaggana from Beheyra in the 1990s where he first rented an apartment, then sold his family’s gold and bought land here. He witnessed the beginnings of services where electricity came from a nail on a wooden plaque operated by a local provider, and water was sold by the military. Today Wael lives in the fourth district where the formal water systems have not yet been installed. He was the point of reference for his street when installing the self-help piping connecting to an informal network. He claims they are able to get water in winter, but in summer they still have to buy barrels and store it in water tanks. He was also forced to install a water filter as the quality of water is contestable due to leakages. He took part in a road sit-in in 2012, and when the authorities responded they simply sent them more water trucks. He notices water is available at the borders of the Izba but not inside it. For instance the military sports complex, a few meters close by,

***“gaboolo maya li had ando” (they brought water right to the complex’s doors
(but not for us)).***

Case study 2- The Mosque that saved us

This case study looks at water piping serving a Mosque and 10 other houses in the vicinity. Interviews with a member of the CDA's BOD were completed, as well as interviews with two beneficiaries from the 10 houses connected to the piping (one male, one female). Attempts were made to contact the plumber and "faucet controller" but they were unavailable.

Pre-Connection Description

After the establishment of the Nur ElMashreq CDA, one of the founding members also established the Ali Ibn Abi Taleb Mosque in part of the building. He was given a decree by the governor that water should be connected to the Mosque and in turn the CDA, however this did not materialize (BOD interview). As seen in Annex 3, both the CDA and the Mosque lie in the eastern edge of ElHaggana and are located in the third area designated by the water authorities to have piping installed. However, the CDA member, having already had the experience of the previous water project, decided to install his own piping to the Mosque in the end months of 2011. He began to dig from the location of the Mosque in the neighboring street (to the South) to see if he could tap into the already installed FC piping. However, the neighbors actually stopped him and would not allow him to tap into the piping as they feared it would decrease their water pressure and reduce the amount of water they received. He repeated the same process in the street on the northern side, and once again he was shunned by the neighbors. As this began to be costly for him, twice paying for digging, he began to solicit the help of others in the street and finally reached 10 other households that lacked water and could not wait for the government piping to come in. As such they agreed to collaborate and pay to bring in self-help piping to fulfill their water needs (BOD interview, beneficiary interview).

Planning and Organization

Having previously been part of other *gehood zateya* initiatives, the BOD member assumed the lead role in organization. He worked first to mobilize those that were interested in being part of the self-help system. Some families rejected to join the collaboration and finally 10 households in the same street participated. Two beneficiary profiles are given in **Figure 5** and **Figure 4**. A collaborative planning process ensued where the male heads of households came together to figure out the cost of the project. They figured in the costs of the piping, the labor, bribes, and maintenance. As such the set user fee was 300LE, payable one time and included the sub-main piping, worker fees, digging, plumbing etc. It would not include household connections as these will be relative depending on the location of the sub-main pipe. The planners took about a month to get the materials prepared, contract the laborers and collect the required funding. Four main organizers were involved in the planning, but the CDA BOD member assumed the role of collecting the funds.

Initiative Implementation

The duration of the initiative was one week to install the piping and tap into the government supply from the second phase that has already been installed. The sub-main piping was about 150 meters long from the water source to the street of the Mosque, and the 10 houses were along this route. However, the organizers maintained in front of the surrounding community that the piping was aimed for the Mosque, which allowed others to be more sympathetic to allowing the piping to go through their streets (beneficiary interview).

Two types of piping were used- 4 inch asbestos pipe for the sub-main piping and half an inch for the individual pipes. The pipes were installed one meter into the ground and the organizer admits they are of medium quality. They could have picked the pipes that were similar

to the government official systems (having asked local contractors) however; it would result in increased costs they could not afford. There were a total of 8 laborers taking part in the digging, three plumbers and a diversity of assistants (BOD interview). Although, those mostly involved were the workers, but the household owners also alternatively supervised the processes and “got their hands dirty” as well. One of the beneficiaries mentioned that he and three others took turns supervising (beneficiary interview). The individual connections were paid for by each household and usually ranged between 20-30LE depending on the distance.

Also as the project was taking place, some neighbors that had originally rejected being part of the project changed their minds and wanted to be part of the collaboration. However, the planners decided against including them since they believed that this would distort the financial calculations they had already done, they only bought piping for the original capacity of ten households, and the additional users would reduce their water supply (BOD interview).

In addition, the main community organizer held on to the receipts of the project and made them available for any beneficiaries to look at (BOD interview).

Initiative Operation and Maintenance

Concerning maintenance, the ten households came together to employ a man that would have the job of controlling the water supply to the self-help piping from the tapped-into water source. Each household pays him a salary of 3-5LE per month and he is responsible for the maintenance and any damages to the piping. Usually he pays for any repairs from the money he receives, but if the damage is great he will go around and collect money to fund the repairs that he himself decides on (BOD and beneficiary interviews). There is no method of supervising his efforts, but the users can call him if they face any difficulties.

After the installation of this system, the government finally brought in the official water systems last Ramadan (August 2012) and installed 6 inch piping (beneficiary interview). Residents were required to install their own personal connections to these pipes, which cost about 20-30LE each (beneficiary interview). As the governmental contractor was busy installing the official piping, the residents of the street would point out to the laborers where their self-help piping is so that they could avoid it, and when they dug they would simply install theirs next to what was already in place (BOD interview). Both the residents and the government did not want to remove the self-help piping, as for the latter as it will be too costly; and for the former it provides extra water security as an alternative if water shortages occur (BOD interview). The interviewees all referred to the self-help piping as “our line”. Hence there seems to be a sense of co-ownership of the structure, although they all gave credit to the Mosque for giving them the opportunity to connect to water (beneficiary interview).

Nonetheless, even with the officially installed structures and the residents putting in their own personal connections, they still do not want to take the step towards regularization. This is since they learned from others’ horror stories in the area of the water company charging fees for previous years, for water supply to stories that were built at a later time, and for water that may not even come regularly (beneficiary interview). This is reflected in the conceptual framework’s **Figure 2** governmental action in rejecting informal areas through creating difficulties in formalization. As such, for the time being living on water coming in from both pipes satisfies the needs of these households as they feel they have paid their dues in installing their own connections and self-help structures; while continuing to pay for low water quality and shortages.

Figure 5 Beneficiary Profile A

Moving to ElHaggana in 2004, Gerges* had hopes to build a house that would bring his whole family together and provide apartments for his children as they grow older. Coming from Minya, Gerges bought the house as one floor “*beit suezi*” and has added floors whenever he could finance them. He works as a stonemason and contracts others to work for him. He even worked for a time at AUC on the new campus facilities. He has five children, whom he did not bring with him to ElHaggana until he connected water to his house. He took part in the Mosque piping and exerted personal effort with the workers to make sure the connections were properly installed. He hopes to regularize and install a water meter; however, he is afraid he would be billed for the consumption of the previous owner.

He believes “*elhekooma rahet aleiha wa amalna fi Rabena*” (the government is irrelevant and our faith is in God)

Figure 4 Beneficiary Profile B

Om Shady* has been living in ElHaggana for over 20 years, having moved from Ain Shams when she married. She remembers the early days when they would buy water from the trucks for 3/4LE a barrel, and would have to run after them in summer to beg for a share. Today she is glad she paid the one payment of 300LE to be able to tap into the Mosque’s piping, although the water still continues to cut off at times. **She does want to “*nemshi osool*” (go by the book)** and applied for the electric meter that was installed, whereas for her the cost of a water meter is too high (1100LE). She is a working mother, carrying two jobs in a public hospital and a clinic in order to put her children through school. One of her daughters is the first to enter a higher education institute, but she forced her younger son to drop out of school to pay the bills. She repeats that she feels that she has wronged him “*zalamtoh*”. Her husband does not contribute to the household.

Further Infrastructure Insights

Electricity Connections

It is very rare to hear residents actually praising government services, and it is near impossible to hear it from residents in informal areas. Surprisingly however, all the community residents in the areas studied spoke highly of the Electric Company and its operations. For example all the residents interviewed had electrical connections, meters and were receiving acceptable bills. They themselves know the electric inspector quite well as he has been serving them for at least five years, and he has no problems entering the area; whereas a water inspector is fearful of coming into ElHaggana because of the community backlash (residents' interviews).

Electricity initially came into the Izba around 2000, give or take a couple of years (Bremer, 2013, p.21), and as Sims (2012) describes residents can immediately apply for a connection and the distribution company comes in to install it 10 days later (p.262). Any increased number of floors and higher voltage is also fairly easy to update. However, residents did mention that in the new system of installation, they basically have to pay for everything including the meter, cables, internal wiring, and the junction boxes (residents' interviews). They however have no issues with this investment as they view it as a step to formalization.

Nevertheless, two areas in ElHaggana continue to lack electric connections. The first of these is an area within the second district designated by the water authorities (north-western). This area is paradoxically “the zone below the major high tension lines that pass through the Izba, carrying power to New Cairo” (Bremer, 2013, p.21). Since it is illegal to build under these lines and given that it is in an informal area, the electricity company refused to connect them to the lines, and subsequently residents in the area use the mosque as a “local distribution point”

(Bremer, 2013, p.22). Again the residents used the mosque as a shield to get services from the authorities, but obviously illegally.

The second area is within the fourth designated area that is the furthest south of the Izba and closest to the military sports complex. Since some of the houses in this area are fairly new, they were not around during the first coverage of the electricity companies. Although they have applied for installation, in the meantime they tap into the sports complex's wiring and run lines between houses to light a couple of hours in the evening (residents' interviews). The interplay of all these entities has been mapped out in the stakeholders' paradigm in **Figure 1**.

Sewage Systems- Future Predicament

Concerning sewage systems in the Izba, this poses the greatest problem today in particular in the fourth district that is closest to the military sports complex. As previously mentioned, in the early days residents installed their own septic tanks that served as their personal waste management systems. Formal sewage systems were installed (by the Greater Cairo Sanitary Drainage Company) in the Izba nearly at the same time as the water systems, yet they were only installed as main and sub-main piping in the main side roads of the different areas (residents' interviews). This meant that residents had to buy their own house connections and hire a plumber to connect this to the main sewage system (residents' interviews). This coincides with Sims (2012) own experiences where he documented neighbors coming together to install "their own local sewage collectors, inspection chambers and house connections" (p.308). Yet this directly resulted in many blockages and severe sewage overflows that could contaminate water sources as well (Sims, 2012, p.308; interview).

Yet in the fourth area of ElHaggana, residents do not even have the option to tap into a sewage line, since the company refused to install piping because of the hilly nature of the area

(residents' interviews). As such the residents continue to use septic tanks that they keep in jammed corners under their building's stairs, and are constantly harassed by neighbors when they need to get rid of the waste (household visits, residents' interviews).

Further researching how residents install sewage systems through *gehood zateya* could be especially interesting, as these systems may have an even higher level of community investment than water projects.

Chapter 5- Analysis and Discussion

Based on the previous case studies of on the ground experiences from an informal area, this section will tackle the different themes that emerged from the residents' interviews and household visits. Apart from the local community, four governmental and expert interviews were done and their relevant perspectives will be included in this section as well. Three main categories have been recognized- dissecting self-help initiatives, insights into the social structures of informal areas, and interactions with the government. *Gehood Zateya* in informal areas across Cairo will also be tackled in a final section.

Gehood zateya Processes

It has been recognized all across the literature that informal communities devise methods for self-provision that are both “ingenious but illegal” (Sims, 2012, p.94). This sub-section will look at the characteristics of *gehood zateya* processes as seen in the case studies and how self-help initiatives were actually implemented in this particular informal area. The main characteristics to be discussed are incremental networking build-up, innovation, self-sufficiency, sub-optimal quality and sustainability.

Incremental Networking Build-Up

Just walking through the unpaved streets of ElHaggana with a member of the CDA pointing out the different self-help water systems is enough to make one realize how much has been achieved over time. Although it is difficult to date back the first actual self-help structure, yet what is clear is that once a certain number of streets have been connected, there is a domino effect on the rest of the area. As seen with the FC's piping in the second and third districts, there was an immediate follow-up in the fourth district as soon as mobilization occurred. As such, this gradual

build-up of networks is the basis of the service provision in the area, which is substantially faster than government interventions. As indicated by a government official, almost 30-40% of informal areas have no formal networking (interview). As such, although residents may narrowly think they are serving themselves in a time-based initiative, with time they are actually part of a whole system networking process.

Innovation as a Survival Strategy

A remarkable feature of these initiatives is the fact that they take a complete lack of services and overcome it to establish areas that are in one way or another covering their every need. This is a strategy that many of them have ingrained both from their village days and from living in other informal areas. It is noticeable that solutions such as septic tanks are actually taken from village traditions and tactics of survival (Sims interview). Most of these innovations mostly depended on a person first taking initiative to fill the vacuum of services, starting with the informal providers looking to make a profit, to the natural leaders that decide they want their “own” solutions and do not want to be passive consumers. Using the Mosque as a shield to hide behind for bringing in piping or as a local point for running electricity wires is an example.

An interesting debate that came up in both interviews with the community and experts is whether their innovation strategies are not just camouflaged stealing tactics. In fact what is the difference between *gehood zateya initiatives* and stealing public services? The residents usually made the distinction between electricity and water/sewage, where the former is regarded as illegal, but the second as actually providing the government with a service and saving it resources. The reasoning behind this is probably due to the global rationale of water being a right that citizens should have regardless of any other implications. However, citizens do overlook the

fact that this water has to be both treated and pumped to reach urban areas, which is a very costly process that only governments and private contractors can shoulder the burden.

Communal Networks and Self-sufficiency

A common phrase that was repeated throughout the residents' interviews was "we will just do it ourselves". This heightened feeling of self-dependency is particularly rampant in informal areas where residents have either no access to the formal systems, or prefer to avoid the hassle of regularization and the labyrinth of governmental processes. This independence was visible in both the organization of the community as well as the financial resources invested.

One of the main characteristics that have been often repeated about informal areas is the intricate webs of communal networks they thrive on them. With the large population of Upper Egyptians, especially from Minya, coming in and bringing their extended families, they brought with them "established mechanisms for collaboration in communal tasks" (Bremer, 2013, p.17). As such tasks were easily divided, communities felt real kinship in their streets and also co-ownership over any self-help structures established. They rarely required help from outsiders, and even in their everyday language they refer to other parts of Cairo as "down there" *taht fel balad*.

Additionally, the financial investments in *gehood zateya* initiatives have yet to be quantified in the literature of any informal area in Egypt. Merely talking to the residents shows how they figure into their budgets user fees, maintenance costs etc. and make it a routine expenditure. These investments are seen as if they are paying for governmental services, but instead they have actual control over them. Residents on numerous occasions insisted that they have no problem paying for the services regardless of the provider, as long as they are guaranteed quality and supply sustainability; and even without them they would still pay. In

reality, residents are not paying for both water and purchase energy that is subsidized and so may not realize the full price they would have to pay for these services.

“Sub-optimal” Quality

Although accessibility can be solved by simply installing self-help structures, yet the major challenge faced is the quality of the water as well as its supply. Both experts and government officials have condemned these structures as being the sources of the leakages and overflows found today in many informal areas, calling for their removal and replacement (Sims, 2012, p.305). One Gizah government official in an urban forum went as far as saying that citizens should in no way be involved in infrastructure activities and leave it up to the government. Their reasoning stems from the fact that usually the structures “lack both of technical supervision and sufficient funding (Sims, 2012, p.305). In addition, there is a strong government responsibility for public health as dealing with sub-optimal quality results in long-term health issues that will again fall back on to the government’s shoulders at a later point.

Community leaders also admitted to this during the interviews as they could not afford to buy piping that is compatible with the government’s specifications. They were able to talk to technical contractors and plumbers working on governmental projects, and so receive information on what would be the best quality, but they simply cannot afford the costs. This is why they simply ask the same advisors about second best quality and try to get as close as possible every time. In all cases the government actually leaves these secondary lines in the ground when they bring in their formal systems, and their contractors do not even do the individual household connections they are usually contracted to provide as part of their scope of work.

Sustainability

Regarding sustainability, these self-help structures actually endure much longer than one would think. The FC network served two whole districts of ElHaggana until the authorities brought in the official systems in 2012, a period of at least eight years. The fourth district continues to rely on this water source, and the 10 houses next to the Mosque alternate between the official and Mosque line, depending on the water supply. The community residents feel that they need these structures as security in case of the breakdown of governmental services, which they expect.

It is true that the self-help structures in ElHaggana are fairly new compared to areas like Gizah for example, and so it may be still early to clarify their sustainability. However, experts and government officials are already seeing the leakages and breaks in these self-installed structures across informal areas in Cairo, and the ensuing dire consequences of contamination.

Informal Social Structures

Another set of themes that emerged from this research are related to the inherent social structures of informal areas including natural leaders and the individualism-social cohesion dichotomy.

Natural leaders and Community Mobilization

When talking to one of the community organizers for the initiatives and asking why he took on this role, his simple answer was that someone needs to take the initiative to get the ball rolling, if no-one does that then there will be no water and no improvements (community organizer interview). It was obvious during this research that those involved in heading the CDA were the natural leaders of the community, whether because of their knowledge of public institutions, being an Imam of a Mosque, their long-term residence (over 30 years in several cases) or just simply being interested in root development of the area. Three of the board members of the CDA were the street collectors of the funds that would go towards the self-help structures, and they

understood that they had to rally the whole street behind a cause in order for the projects to work. They insisted that their neighbors needed people to trust as they were so used to broken promises by the government and so they worked on achieving tangible results. As such their work over time creates a web of community reliance that would include different sectors of society at different times.

In addition, the concepts of community mobilization and organizing appear to be organically inherent in the social processes in Izbit ElHaggana and possibly in other informal areas. Whether mobilizations occurred during times of political elections, or as pressure tactics used by the locals against the government, leaders boasted of being able to gather hundreds of people at a time, especially when an issue affects their well-being, service provision being high on that list.

Social cohesion vs. Individualism

In spite of the community solidarity that is evident all throughout the self-help processes, evidence was also seen of individualism and personal interests that play a strong role in informal spheres. Sims (2012) points out that there are existing individualist natures, which can be identified in the exploitation of communities' hardships and lack of government interventions. For example residents would tell stories of local monopolies of water services where a local in a different district would be controlling the water trucks that residents in their district buy from. This individual would also try to stop any type of regularization efforts that were exerted by local CDAs to bring in the formal water systems. Since he is profiting from the situation as is, he actually stopped a project of public standpipes to be brought into the Izba so that residents would continue to buy his water. This concept of 'profiteering from the status quo' is rampant in

literature and especially in donor interventions where they face challenges from different sectors as they attempt to install formal systems.

Another form of individualism that was first brought to light by an interviewed government official is the fact that residents do not necessarily get along if their personal interests in their self-help structures are threatened. In many cases in Gizah for example, there would be fights among residents on where to install self-help structures to ensure that it would not impact the supply of another such structure down the road. This was manifested in the Mosque case study where two sets of residents refused to allow the community organizer access to their pipes, for fear of decreased water supply; even though they knew that the area to be served had none.

Government-Community Interactions

Dissecting the interaction between the informal community and the authorities is a major theme of this research. Contrary to many beliefs, it is important to note that government intervention in informal areas is in fact quite high, which means they are not avoiding engagement in informality. The 2006 Census actually recorded near universal water and sewage connections, and as Sims points out there seems to be an “organic development operation [...] through local and national sectorial agencies” (Sims, 2012, p.131). This sub-section will look at this two-way relationship that occurred as mentioned before in only one stage of the self-help project’s life cycle that only constitutes as part of the story. A few years ahead may completely change the following insights into the dynamic government-community relationship.

Governmental Perspectives

As previously illustrated in the conceptual framework **Figure 2**, the government seems to be acting on a dual mindset when it comes to informal areas. Having begun to emerge from denial

of these areas in the late 1970s, the government faced the situation where they had to deal with already built-up communities and accept their existence. However, this did not occur readily but instead manifested in facets of resistance or incomplete and indirect recognition. This could be resultant of the fact that the government was involved in an unknown territory of “back participation” where it is uncharted who participates in whose decisions, and “which” government was involved. The following attempts to link in the government officials’ perspectives on these swinging attitudes.

To begin with, the government continues to display an ambiguous representation of recognition of informal areas. Although the IDSF was established to classify and identify informal areas, its mandate initially was limited to just the unsafe areas that do not constitute the majority of informality. Thus at the national level, institutions seem to be hedging behind official recognition of these areas. On the other hand, local municipalities and governorates all partake in the “murky world of collusion between investors, lawyers, fix-it men and local officials” (Sims, 2012, p.280). They turn a blind eye (and an open hand) to illegal construction, receive bribes to reduce reporting and arrests, and in some areas even help out the local residents by leaving behind material that can be used for infrastructure. This was the case for the piping used in the fourth district that was left behind by the municipality. As such this “laissez-faire” attitude is evident in their interactions with the communities, who insist that the “government sees everything”; and thus have allowed the seeping in of informality to become the norm, replacing the official systems they do not enforce.

Yet while the authorities in many cases do “informally” help the growth of these areas, there are also strident facets of resistance that complicate the lives of the residents. For example, in the case of the water company, they encouraged citizens to regularize their stance and apply

for meters, which the residents were glad to do. However, the billing began even before the formal water systems came in; no meters were installed and very large back bills were issued to long-term residents, as a means for the company to recuperate what was being tapped into by the self-help structures (Bremer, 2013, p.23). Since there is no actual method for calculating consumption, a government official pointed out that the citizens are being asked to pay according to their location and their status quo as informal areas (government official interview).

However, as we trace these different faces of the government, it is also important to look at the powers and resources these entities actually possess. Residents reported that the municipality has no say in whether infrastructure should be installed in these areas or not, and they constantly have to wait for a decree by either the Prime Minister or the governor. Even when this decree exists, it does not necessarily mean that the resources exist for implementation. For example, to install water piping the municipality has to coordinate with the governorate, which goes back to the Ministry of Housing and utilities, which pushes the Executive Organization for Potable Water and Sanitary Drainage Projects (CAPW) to begin the tendering process, which then hands over the project to the Greater Cairo Water Supply Company. The mere number of these institutions complicates the lines of responsibility and accountability that citizens will most certainly not be able to follow.

At the same time, especially with today's state of affairs, the government is in fact strapped for financial resources. The government official interviewed pointed out that the Water Holding companies are in fact losing money and are not even covering operating costs from revenues. As such, the current strategy is to go into areas that are underserved and do not have any types of services, and avoid any upgrading projects that will surely increase the losses of public entities.

Community Perspectives – “What are we?”

Apart from the electricity company, all the residents had similar attitudes towards the government in general. They believed that it simply did not solve anything, and their efforts in self-help structures only provide temporary solutions, but do not tackle root causes. They see the government as accepting their efforts since they do not stop them, and it is a tactic to solve problems that give the government headaches without being involved. However, afterwards they come back to the community and expect them to pay for what they have installed and use from the water sources, which the community sees as “double profiting” from the community’s investment (community organizer interview).

When asked whether the community would consider including the government somehow into their informal systems, assuming the government actually wants to, the residents interjected that they are trying to move as far away as possible from the “bureaucracy of decision-making” they are subject to whenever they deal with the authorities. To them the governmental maze takes time and useful efforts away from the implementation of the project, and so they prefer to wait for the government to interject when it wants to. As such, they prefer not to go through any forms of regularization from the beginning in order to sustain flexibility and rapidity of decision-making.

There is also a large debate going on in the community regarding regularization and moving into formality. The general sentiment is that everyone wants to regularize (community organizer interview). The reasoning for this differs but mostly it is because it will finally give the residents peace of mind from reporting and arrests, and also give them the opportunity to know “who they are”. This is since the community is in a limbo as to how they are qualified by the authorities, as officials continue to go back and forth between their nomenclature, which impacts

their policies towards the area. For example, when residents first complained about the lack of services they were told they were “*ashwaeya*” (random, a negative term for slums) and so had no rights under the law as they were illegally there. After the decree from the Cairo governor to install infrastructure for all buildings, they went back believing they were now on the map, but were told that they have now become a “*mante’et tatweer*” (area for improvement) and only unsafe areas were a priority. Added to this, the unstable political climate caused officials to be wary when making decisions, and personnel changes caused the community to continuously restart lobbying processes even though they just need a signature or two to get things done “*garet alam wa tekhlis*” (a pen’s inscription will end it). Also, when the community turned to new political actors including the Freedom and Justice Party (FJP), they were still stuck in conversations about land theft and tenure that may be irrelevant to their infrastructure concerns.

On the other hand, utilities’ formalization seems to be a completely different issue. Although again residents insisted that they would do anything to receive the service, most of the beneficiaries were resistant to going to the water company. A mixture of mistrust and desire to avoid public bureaucracy back charges were given as some of the reasons for this resistance. This is because residents learned from each other how the government wants to hold them accountable for all the years they have been depending on their self-help structures or “stealing”. Hence, with no transparent method of calculating water consumption, authorities have been issuing residents bills, as part of an installment plan, that go up to thousands of pounds (Bremer, 2013, p.23) and thus discouraging others from applying. This was not the case with the electricity company which developed an affordable installment plan for each resident and they have no problems paying back the amounts that are clear and identified. Hence the residents do understand that there will always be a degree of corruption involved, but if the process is fair and

transparent to a great degree they will have no issues in formalization, apart from anticipated financial constraints.

At the same time, what was interesting to note is the inherent sense of dependency that the community still has for the government despite their self-sufficiency. They continue to expect the government to take responsibility for their well-being, even if they defy their advice on where to build and how. An example of this related to the residents of the fourth district that despite repeated warnings, still built their houses on hilly terrain and now expect the government to provide. Their own sense of responsibility was not brought up by any of them.

As such they continue to hound the government in different forms and as a resident put it “we beg the government for dialogue” (beneficiary interview). Even the youth are engaged in these lobbying efforts writing and submitting complaints, attending any and all public forums, coordinating with local stakeholders such as the military-managed sports complex, to even save the government the trouble of developing solutions. However they are caught in the trap between multiple institutions and overlapping mandates.

Gehood Zateya in Cairo

Consequently, through the analysis of the main themes emerging from the case studies, there are several threads that can be picked up that shed light on how ElHaggana relates to other informal areas in Cairo. To begin with, it is always essential to recognize that this area was formed through the squatter activities of both rural and urban migration to the desert land held by the military. Yet as per the interviews with both the government and expert officials, who brought in stories of experiences in other Cairene informal areas, the self-help strategies employed in ElHaggana seem to bear the same characteristics as these urban areas. Although obviously the

actors are different, with ElHaggana having the added layer of military interactions; yet, they seem to share the same driving forces and take initiative to fill the state vacuum of services. As mentioned by the government official, in some areas in Gizah there are streets that have even 3 to 4 water piping installed through self-help initiatives to strengthen their water supplies. Thus, the prevalence of *gehood zateya* is clearly commonplace, and due to low documentation and detailed case studies, it will be difficult to assess if ElHaggana reflects the usual stereotype of community organization in infrastructure upgrading. With greater documentation, experience exchange can occur and these informal areas can move towards consolidating and formalizing.

As such, it is essential that the opening up of two-way communication channels takes place, through which other areas can learn from ElHaggana, and the latter can also avoid falling into the traps other communities find themselves in today. Concerning the former, other areas can replicate ElHaggana's "street-by-street" organizing strategy, to build-up and operationalize social capital in the area; as well as local CDAs engagement with municipalities. While ElHaggana's community leaders can promptly tackle quality and maintenance issues that could avoid leading to situations in Gizah where contamination, leakages and breaks are common.

Chapter 6- Policy Implications

Recognizing the diversity of problems facing local communities in previous sections and the main axes of analysis, this section will look at some of the recommendations to improve policies regarding informality in general and informal upgrading specifically. The bulk of this section will look at potential government reform avenues, and also discuss improvements to aid-led interventions, potential local community organizing schemes, and societal and class paradigms.

Governmental Policy Changes

Although many hopes were expressed for government reform and a new social justice paradigm after the 25th January Revolution, as well as with Egypt's first freely elected president, they are yet to materialize. It seems “post-revolutionary governments have continued the old regime’s approach to these (informal) areas- neglect, marginalization and failed proscription” (Sims, 2012, p.283) and public policies targeting informality have followed suit. However, if we are not to follow in Mike Davis’s vein with a “treason of the state” approach, nor to classify local NGOs and local government as being uncooperative in tackling these issues, we must seek alternative feasible policies that need to be put forth (Satterthwaite, 2006, p.27). As seen from the literature, there is no clear winning silver bullet program that can solve the negative consequences of informality. What is needed is “painful” cooperation between all stakeholders, as well as learning from the Slum Dwellers International approach of engaging with “deep” government on all levels (Gasparre, 2011, p.792). Several axes for government reform are identified below.

Financial Investment and Institutional Set-up

It is well-known that most governments of developing countries do not have money to spare. The Egyptian case is no different, with the added burden of a 6-million-strong bureaucracy. As such

the government must distinguish between funds allocated for general issues of informality as well as those specifically targeting upgrading, including infrastructure. Regarding the latter, there are two options that the government can consider. The first is to exploit community resources and build on the grassroots investments that communities are willing to make. Developing different local programs to finance infrastructure upgrading has already started in international experiences, such as the Orangi Project where residents set up a Trust Fund under the name of the community. In Egypt, even developing a mechanism in which the community can match the reduced public investment in their area would be feasible in theory, though arguably not practicable in view of the bureaucracy. Also, it is not only about mobilizing resources, but “how these resources will be organized and used”, thus implicating good governance (UNHABITAT, 2003, p.182). Again the case of Ismailia previously discussed in the literature sheds light on how if there is political will, both budget from the national government as well as community funds can be combined and used as efficiently as possible for upgrading. The obstacle faced here is how to replicate this pilot project in other governorates, and remove the prerequisite of having a strong governor to move forward the local urban agenda.

The second is reprioritization. Since public money is a rare commodity, it should be directed towards the settlements that are the most populous, and not to half empty desert communities (Sims, 2012, p.132). As such simply reprioritizing budgetary allocations can solve many problems at little additional cost (Sims, 2012, p.270). The key word being “simple” yet, the fiscal processes of the Egyptian government are another dilemma that is yet to be tackled. Only 4.2 percent of the national budget is allocated for the local administration budget, which can do very little (Sims, 2012, p.254). In addition, there has never been any kind of disaggregation of the budget to analyze how much is being spent on the urban poor versus rural or even the new desert

communities. Reaching a framework within which both pro-poor policies and budgeting can be allocated would be a great step towards fair distribution of scarce resources; but given the line-item budgeting approach of the government, this will involve a large amount of painful restructuring.

This brings us to the other question of the institutional set-up of the numerous government institutions that are involved in the upgrading paradigm, and the powers retained within each of these. The generic concepts of decentralization and devolution have been floating around government reform endeavors for years, but their lack of implementation cannot be felt more than with residents attempting to unravel the roles of the myriad agencies involved in service provision. With the added layer of state utility companies making this even more complex, a clear definition of responsibilities and accountability is imperative. At the lower end of expectations, even granting the chiefs of municipalities more powers could help processes move along and respond to residents' needs faster. For example the governor of Ismailia was able to bypass many of the national bureaucratic processes during the upgrading experiences in the governorate, which aided their success; but unfortunately it has not been institutionalized, nor can we assume that it could without nation-wide reforms.

Inclusive Upgrading Policies and Processes

As previously discussed in the literature review, the concept of “inclusive” processes seems to be the direction that many governments and donors are adopting to improve their current upgrading programs as part of the participation “orthodoxy” in development. However, the first issue that must be addressed is the question of “to recognize or not to recognize” which will encompass policies impacting informality as a whole and not only informality. Currently, government officials are continuing their denial of dealing with informality as the official norm of the city.

As Sims (2012) indicates "the rise and dominance of the informal, and the inability of the government to deal with it, to channel it, or even to extract positive elements is due to continued self-delusion" (p.272). This is also puzzling because the government has already taken official steps to connect infrastructure to these areas, and if "that is not state acceptance, then what is?" (Sims, 2012, p.132). it seems as though in other developing countries, the move towards policies for upgrading stipulated that informal institutions should be legitimized by the government and included in the planning processes (Van Horen, 2000, p.389). The experience in upgrading Besters Camp in South Africa showed how improvements came about where "planning, tenure delivery and public participation" were all avenues that the government invested in to bring about engagement with the public (Van Horen, 2000, p.390). Hence, infrastructure upgrading policies unintentionally brought about the state shift in policies towards informality as a whole towards recognition. As per an interview with Sims, since the Egyptian government seems to be a long way off from accepting the status quo, they could adopt the "provision, not recognition" approach and simply treat these areas as they do with formal or desert communities and use the nomenclature they want. Therefore, a compromise must be reached between the current blockage of access to services to full-on acceptance of these areas and integration. The avenues that would allow this to happen would be through community pressure to install infrastructure and constant dialogue on reaching installment schemes with state companies on the one hand; as well as local municipalities pressure on the national government on the other.

As such, it is important to look at the different levels of government we are addressing. The GTZ decision-makers guide identified three levels of government- local, regional (governorate administrations) and national (2010); and each of these have their respective interests and dilemmas. The local government, especially, plays a large role in promoting public

participation in local processes and decision-making. This is since they are aware that residents of a particular area have the knowledge and expertise of what works for them. An American researcher in a local urban forum stressed that reaching even “collaborative policies” and not necessarily inclusive policies will be a big stepping stone to including the urban poor. Ultimately, if the community has greater influence “on what is done and by whom (...) this could transform the quality, scale and cost-effectiveness of development assistance; eventually building governance systems from the bottom up” (Satterthwaite, 2005, p.128).

Yet as we strive to make “local government organizations more pro-poor- or less anti poor” (Satterthwaite, 2005, p.103), the interests of the government must not also be forgotten. As a government official put it “the government has to be a winner” in these processes. This is why as one of the experts mentioned inclusiveness can only come through social accountability. This is where both players are on equal footing and not just superficially represented, and the government can ultimately contract the people to implement its projects through a transparent system. The expert noted that the problem with the government is not its resources; it is on the other hand an inherent dilemma with its system and implementation through corrupt officials.

In the GTZ decision-makers’ guide (2010), different forms of inclusiveness have been detailed to allow the community to be in the “driver’s seat” or at least a partner with local government. These include providing the self-help initiatives with government grants to complement their resources; participation in all the phases of a project cycle including needs assessment, planning and budgeting, and even management of public facilities; and impact monitoring and evaluation (GTZ, 2010, pp.23-69). At the same time, it is of course essential to have the government be treated as a permanent partner in these processes and not be limited to attempting to gain foot in already established local informal systems. This is particularly clear in

the case of guaranteeing the quality of the self-help structures, which have serious public health problems that are already arising in different areas.

Macro-level Dilemmas

In addition to the above mentioned implications, there are also the usual inherent problems of dealing with informality as a whole through the government, which need long-term solutions and the political backing to even begin unraveling them. These include the capacities of local government officials, enforcement of the rule of law, improvements to accessibility of poorer income groups to employment opportunities (Satterthwaite, 2006, p.28) and of course corruption. The latter is particularly significant since as residents reported they cannot make any financial decisions without figuring in the cut for the local officials. Indeed they echo Sims's (2012) thoughts- "the government is not there to better their lives; advancement is based on connections and bribes" (p.252).

Ultimately, it is clear that both the government and community will continue to implement their respective interventions and as the state struggles with service provision it would seem that it should turn to the local communities for financing and decision-making. Local municipalities already have an established relationship within these areas, despite being rocky and based on corruption and mutual benefits; but recognition of this at the national level should take place in order to officially shift these interactions to being actual partnerships. By removing difficulties in formalization, the basics of trust can begin to form and the integration of the formal into the informal, not the opposite, can take place to construct systems that are pro-poor.

Implications for Bilateral and Aid Organizations

Although the programs of aid agencies were not the main theme of study in this research, however both the literature and interviewees expressed various opinions and critiques of aid-led

interventions in tackling informality as a whole. Despite the number of programs even in Egypt alone that target the urban poor, only a couple of aid agencies stand out as being regularly engaged in informal areas, GIZ being the most sustainable. Hence since most of these agencies are bound together to achieve the MDGs at the global level, their ground operations suggest that they seem to “ignore the urban bits” and prefer to work on rural poverty, which may be more relevant to the MDGs (Satterthwaite, 2003,p.184). Hence redirecting and developing programs that target the urban poor and informality as a whole are preliminary steps which aid agencies should advance their thinking to reflect new urban realities.

This does not necessarily mean an increase in aid money, but rather a look at how this money is being spent and who uses it on behalf of the poor (Satterthwaite, 2003,p.184). Most official development agencies lack the administrative structure to cope with many small projects as they were set up to provide assistance to governments and so “lack the structure to support low-income households and community initiatives” (Satterthwaite, 1996). As such, developing institutional capacity or maybe even pilot departments to experiment with dealing directly with local communities could be a potential path for these agencies. The Inter-American Foundation which operates in Haiti, Latin America and the Caribbean is a good example of this type of bottom-up assistance.

Therefore donors can shift towards what is known as localizing the MDGs and move from “quick wins”, to supporting local choices and priorities developed by local organizations, both formal and informal, in which poorer income groups have real influence. They would face the challenge of figuring out how they would be able to firstly access these areas, and secondly how they can support “encouraging, catalyzing and legitimating the diverse local processes through which the needs and priorities of the urban poor are identified and addressed”

(Satterthwaite, 2003, p.189-190). As such they can play the role of the middleman on the one hand supporting local solutions, and on the other having leverage with the government to negotiate changes in policies (Satterthwaite, 2003,p.190). Of course, given today's climate in Egypt with regards to civil society and conspiracies of foreign intervention, extra caution must be taken so that donors are not accused of interfering in internal affairs.

Implications for Local Organizations

Just as donors are currently identifying the extent of freedom they have in Egypt's new political climate, local Civil Society Organizations (CSOs) are also feeling the wrath of negative attitudes towards their activities. Developmental CSOs are currently escaping the radar, and local CDAs are rarely a source of interest to the government, given their smaller sizes and funding. Little research has been done on local CDAs in urban areas and the impact they have on the local developmental processes, and it was a surprise to find for example that in ElHaggana alone there were estimates of 35 cooperatives functioning. Also the staff of Nur ElMashreq themselves were at various points in time part of different CDAs, and continue to believe in the importance of creating these organizations that belong to the community. The GTZ strategy also stressed that these organizations can be the vehicle through which local self-help initiatives can be promoted, and at the same time their capacities strengthened (2010, p.50).

Hence, there are high hopes that these CDAs would begin to form coalitions of the urban poor. These will be particularly effective as they will give "voice" to the residents of these areas and help them consolidate their demands as one group with which the government can partner (Satterthwaite, 2005, p.111). Slum Dwellers International has already started to partner in Egypt with a cooperative in Manshiet Nasr, and hopefully this trend will continue. However, as previously mentioned by Sims, the ability of Egyptian communities to come together in

solidarity working groups has not been sustainable, although given the situation post-Revolution, there is reason to hope for higher sense of community solidarity. After the security vacuum during the Revolution days gave room for local committees per neighborhood and street to organically emerge, this may be the stepping stone toward stronger community ties.

When looking at both the Orangi, SDI and Ismailia models, it seems as though active organizations like Nur ElMashreq are adopting the same approach identified by Satterthwaite (2005, p. 116), changing the way official provision worked to be affordable for low-income households. Its staff continues to believe that the government should allow them legal ways in which they could get external funding and donations for developmental projects and so save the state funds and at the same time partner with them to get services to the area.

Societal and Class Paradigms

There is clear stereotyping in many of the stories that emerge from the slums and those that are also spoken by government officials. This seems to be the case across the board as in Africa, Asia, and Latin America; those that are providing the cities with the cheap goods and services available in the informal spheres are discriminated against (Satterthwaite, 2005, p.105). As they stereotype against them, these “anti-poor attitudes” lead both to routine forced evictions, as well as society-wide social exclusion and infusion of false beliefs to the elites and the urban middle class (Satterthwaite, 2005,p.106). As such, it is imperative that both the government and civil society take the lead in promoting public awareness campaigns, media material showing informality in a positive light, experiential school programs with projects in informal areas, and a clear cultural push for a pro-poor society. These are of course programs for long-term impact that aim to change behaviors, attitudes and correct misconceptions.

Chapter 7- Conclusion

Cairo under different lenses is viewed as one of the noteworthy stories of megacities that continue to work despite dysfunctional policies and a worn out bureaucracy. Sims (2012) attributes this success, and rightly so, to “the operation of informal processes” even though they are prohibited by law (p.268).

But reading about informality is inherently different than experiencing it firsthand with residents that battle every day to reach even the most basic of services. Through the case studies presented in this research, the struggle to survive is a daily one that residents have to endure in order to fend for themselves under the radar of bribe-seeking authorities. Informal processes are what helped these communities rely on themselves, build social networks, develop ambiguous and at times contradictory relationships with municipalities and change rigid formal systems that are simply not suitable for implementation (Sims, 2012, p.268).

The research also shed light on the internal struggles communities go through within themselves. Sometimes banding together to face governments, but other times stopping each other from infringing on one another's self-help structures for their own survival interests; residents are in a constant tug of war to live a ‘normal’ life. Profiteers emerged at different times during the community’s struggle, but natural leaders with initiative slowly made them irrelevant as they changed the residents from consumers to ‘owners’ of their own services. Despite low expectations of Egyptian community organizing to take authority especially after the Revolution, examples of the community coming together provide a basis for future development of local engagement.

In addition, a main emergent theme was that of the duality of governmental attitudes and policies as expressed with the study's original conceptual framework in **Figure 2**. While in some cases the authorities held steadfast to their position that all slums should be resettled and will thus be treated with neglect till then; others have realized that dealing with the communities is much more effective, and causes less headaches. Many cases in literature and international development have proven that slum participation is in fact effective, and even more so a step towards societal progress. As Turner indicated decades ago, if informal area residents "control major decisions" and contribute to "design, construction and management, this will stimulate both individual and societal well-being (Gasparre, 2011, p.784). On the other hand, if the urban poor "lack voice, influence, rights and protection by the rule of law" they will never actually be beneficiaries from aid money, national progress or emerging markets (Satterthwaite, 2005, p.128). This materialized in Egypt through the Ismailia experience that allowed financing both by the government and citizens, as well as collaborative planning strategies. The concept of "reverse participation" emerged where the government became the party that was attempting to find access to the already established informal processes. As such, the study of social capital, local informal networks and intangible local resources has become a recent area of research as well as a component in development programs.

With the increasing significance of social capital both in literature and in development programs, this indicates the necessity of developing in-depth understanding of cities. Sims (2012) provided a stepping stone in his book as it began to peel back the layers of informality in Cairo. He also encouraged his readers to begin asking "why" questions such as "why certain processes (...) develop organically out of the activities and desires of the majority of city dwellers and can succeed in spite of government irrelevance" (Sims, 2012, p.273).

The present study provided a preliminary look into the “how” of informal processes related to infrastructure and utilities. Yet there is a vast body of potential research that remains untouched regarding informality in Cairo and the grassroots operations between state and community. As such there is great need for a variety of issues to be tackled such as beginning to quantify community financing and setting a metric for *gehood zateya*; mapping of the networks of *gehood zateya* initiatives including those in ElHaggana; looking in particular at sewage systems where Sims believes is the real grassroots investment (expert interview); tracing local government policy-making and implementation; documenting areas with intertwining informal and formal infrastructures (e.g. 3 and 4 water pipes); the “politics of informality” such as by looking at the workings of local CDAs, community leaders and political actors; and the invisible and largely untapped potential of the Female Heads of Households and youth in these areas. Two main areas of potential research that emerged from the analysis of the case studies are the quality levels of self-help initiatives and documenting health risks, as well as the incremental networking processes. The latter is particularly interesting when compared to the characteristics of other informal networks such as those supporting the creation of businesses or ROSCAs.

Nevertheless, a conscious effort must be made to avoid the “over-romanticizing” of informal areas and giving exaggerated credit to their systems (Sims, 2012). As previously mentioned, although these systems have in fact saved local communities' time, money and even lives; they are quite simply contributing to Sims’s notion of “sub-optimal development”. They simply cannot replace government systems, yet since the authorities are more than often broke and do not have the manpower to reach localities, this is where effective collaborations can take place. “Grassroots Public-Private-Partnerships,” to borrow Bremer's term, could be the channel for both new public management and community engagement (2013). The dilemma lies in the

lack of trust on both sides, safe spaces for real cooperation and a rule of law that is malleable enough to incorporate grassroots ingenuity into legal realms.

In conclusion, it is imperative to realize that when talking about these processes and existing dichotomies between state and informality, the people are those that ultimately matter. Throughout this research, the author was exposed to how people's fates are easily forgotten in the myriad of policies and decision-making whether in the government or in the informal areas themselves. One cannot help but be touched on seeing the breakdown into tears of one of the beneficiaries as she described an illness she believes is a result of poor water quality (whether or not this is the true cause) or learning of the death of two community workers in the Orangi Project in Karachi while this research was being written. Both incidents brought home the reality of informality. Putting the public's well-being at the center of policies, regardless of where they live or how they came there, is a change that Cairo and all governorates in Egypt will inevitably have to go through.

References

Ababsa, M. & Dennis, B. & Dennis, E. (2012). Popular Housing and Urban Land Tenure in the Middle East: Case Studies from Egypt, Syria, Jordan, Lebanon and Turkey. Cairo: The American University Press in Cairo.

Amnesty International. (2009). Buried Alive- Trapped by Poverty and neglect in Cairo's Informal Settlements. London: Amnesty International Publications.

Amnesty International. (2011). 'We Are Not Dirt' Forced Evictions in Egypt's Informal Settlements. London: Amnesty International Publications.

Asia News Monitor. (2010, 26 May). Yemen: Local communities show commitment for upgrading of informal settlements. Bangkok: The News Service Group.

BBC. (2013, March 14). Pakistan mourns murdered aid worker Parveen Rehman. *BBC Online*.

Retrieved from: <http://www.bbc.co.uk/news/world-asia-21783304>

Last date accessed: 13 May 2013

Belsky, E. (2012). Planning for inclusive and Sustainable Urban Development. In *State of the World 2012: moving Toward Sustainable prosperity*. (Chapter 3) World watch institute.

Bremer, J. (2013). Community-led infrastructure development in informal areas in Egypt: Implications of self-help strategies for local government effectiveness and capacity building. Conference Paper: International Institute of Administrative Studies. Manama, Bahrain.

Cities Alliance. (2008). Up Close Experiences of Six Cities. Washington D.C.: The Cities Alliance.

Cities Alliance. (2004). 2004 Annual Report. Washington D.C.: The Cities Alliance.

Davidson, F. (2006). Development Planning: balancing demands between performance and capacity- A personal View. Conference paper: Berlin Technical University.

De Campos Guimaraes, J.P. (2009). Participatory Approaches to Rural Development and Rural Poverty Alleviation. Working paper: Emerging issues in rural poverty reduction: The role of participatory approaches. UNESCAP.

Gasparre, A. (2011). Emerging networks of organized urban poor: Restructuring the engagement with government toward the inclusion of the excluded. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, 22, pp.779-810.

Hasan, A. (2008). Financing the sanitation programme of the Orangi Pilot Project-Research and Training Institute in Pakistan. *Environment and Urbanization*, 20, pp.109-119.

ISDF Website. (2012).

Retrieved from: <http://www.isdf.gov.eg/About/Gomhoric.htm>;

Last date accessed: 29 April 2013.

Khadr, Z. & Nour El Dein, M. & Hamed, R. (2010). Using GIS in constructing area-based physical deprivation index in Cairo Governorate, Egypt. *Habitat International*, 34, pp.264-272.

Khalifa, M. (2011). Redefining slums in Egypt: Unplanned versus unsafe areas. *Habitat International*, 35(1), pp.40-49.

Khoury, B.Z. (1996). Implementing the new urban agenda: the case of Ismailia, Egypt. *Environment and Urbanization*, 8 (1), pp.195-209.

Marin, P. (2009). Public-Private Partnerships for Urban Water Utilities- A Review of Experiences in Developing Countries. *Trends and Policy Options (World Bank)*, 8, pp.1-194.

Nitti, R. & Dahiya, B. (2004). Community Driven Development in Urban Upgrading. *Social Development Notes*, 85, pp.1-6.

MDG Website (2013).

Retrieved from: <http://www.un.org/millenniumgoals/envIRON.shtml>;

Last date accessed: 19 April 2013.

Nour, A. M. (2011). Challenges and Advantages of Community Participation as an Approach for Sustainable Urban Development in Egypt. *Journal of Sustainable Development*, 4 (1), pp.79-91.

OECD. (2007). Informal institutions- How Social Norms Help or Hinder Development. Development Centre: MA.

Participatory Development Programme in Urban Areas (PDP). (2009). Cairo's Informal Areas-between Urban Challenges and Hidden Potentials. Cairo: GTZ.

Participatory Development Programme in Urban Areas (PDP). (2010). Participatory Upgrading of Informal Areas- a Decision-maker's Guide for Action. Cairo: GTZ.

Piffero, E. (2010). Best Practices in Practice: Critical Reflections on International Cooperation and Participatory Urban Development in Cairo's Informal Areas (Egypt). *Universitas Forum*, 2 (1), pp.1-11.

Public-Private Infrastructure Advisory Facility (PPIAF). (2006). Reaching unserved communities in Africa with Basic Service- Can small-scale private service providers save the day? *Gridlines*, 2006 (9), pp.1-4.

Sabry, S. (2008, April 17-23). "Lost in the Slums, social policy failure is deepening inequality, particularly among Egypt's youth". *Al-Ahram*.

Sabry, S. (2010). How Poverty is underestimated in Greater Cairo, Egypt. *Environment and Urbanization*, 22, pp.523-541.

Satterthwaite, D. (1996, June 12). Poor People power. *The Guardian*. London.

Retrieved from: http://tr6rt9pf7u.search.serialssolutions.com/?ctx_ver=Z39.88-2004&ctx_enc=info%3Aofi%2Fenc%3AUTF-8&rft_id=info:sid/summon.serialssolutions.com&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&rft.genre=article&rft.atitle=HABITAT+II%3A+Poor+people+power+David+Satterthwaite+argues+that+planners+are+ignoring+a+key+resource+-+the+efforts+of+the+citizens+themselves&rft.jtitle=The+Guardian+%28pre-1997+Fulltext%29&rft.au=DAVID+SATTERTHWAITE&rft.date=1996-06-12&rft.issn=0261-3077&rft.page=004&rft.externalDBID=MG9&rft.externalDocID=17285643

Last date accessed: 16 May 2013

Satterthwaite, D. (2003). The millennium development goals and urban poverty reduction: Great expectations and nonsense statistics. *Environment & Urbanization*, 15(2), 179-190.

Satterthwaite, D. (2005). Meeting the MDGs in Urban Areas. In *How to Make Poverty History- the Central Role of Local Organizations in meeting the MDGS*. (Chapter 5). London: International Institute for Environment and Development.

Satterthwaite, D. (2006). Book Review of Planet of Slums- Asking the Right Questions about Slums. *UN Chronicle*, 3, pp.27-28.

Shaw, M. & Carli, V. (2011). Practical Approaches to Urban Crime Prevention. Montreal: International Center for the Prevention of Crime.

Slum Dwellers International. (2013). Online Website- Affiliate Countries Egypt page.

Retrieved from: <http://www.sdinet.org/country/egypt/>

Last date accessed: 16 May 2013

Sims, D. (2012). Understanding Cairo: The logic of a city out of control. Cairo: The American University in Cairo Press.

Soliman, A. (2002). Typology of Informal Housing in Egyptian Cities. *IDPR*, 24 (2), pp.177-201.

Soliman, A. (2008). Diversity of Ethnicity and State Involvement on Urban Informality in Beirut. *Theoretical and Empirical Researches in Urban Management*, 3 (9), pp.15-32.

Soliman, A. (2012). The Egyptian Episode of Self-build Housing. *Habitat International*, 36, pp.226-236.

Van Horen, B. (2000). Informal Settlement Upgrading: The Gap between the *De Facto* and the *De Jure*. *Journal of Planning Education and Research*, 19, pp.389-400.

WaterAid. (2008). Turning Slums Around: The Case for water and sanitation. Discussion paper. London: WaterAid.

Water and Sanitation Program (WSP). (2008). Performance Improvement Planning- Upgrading and Improving Urban Water Services. World Bank: New Delhi, India.

Water and Sanitation Program (WSP). (2010). Helping Small Water Utilities Become Bankable. *Smartlessons, Nove 2010*, pp.1-4.

World Bank, (2006a). The. Infrastructure at the crossroads- lessons from 20 years of World Bank Experience. The International Bank for Reconstruction and Development; Washington D.C.

World Bank. (2006b). Approaches to Private Participation in Water Services- A Toolkit. The International Bank for Reconstruction and Development; Washington D.C.

World Bank. (2006c). Reaching the Poor through Sustainable Partnerships: The Slum Sanitation Program in Mumbai, India. *Water Feature Stories*, 5, pp.1-2.

World Bank. (2008) Benchmarking Analysis of the Electricity Distribution Sector in the Latin American and Caribbean Region. The International Bank for Reconstruction and Development; Washington D.C.

World Bank, (2011). The International Benchmarking Network Water Supply and Sanitation Performance Blue Book. The International Bank for Reconstruction and Development; Washington D.C.

World Bank Website. (2013). Innovative Expansion of Water and Sanitation Services in Morocco.

Retrieved from: <http://go.worldbank.org/ATDAKL8WU0>

Last date accessed: 16 May 2013

UNDESA. (2013). Population Projections. Population Division, Population Estimates and Projections Section.

Retrieved from: <http://esa.un.org/unpd/wpp/unpp/p2k0data.asp>

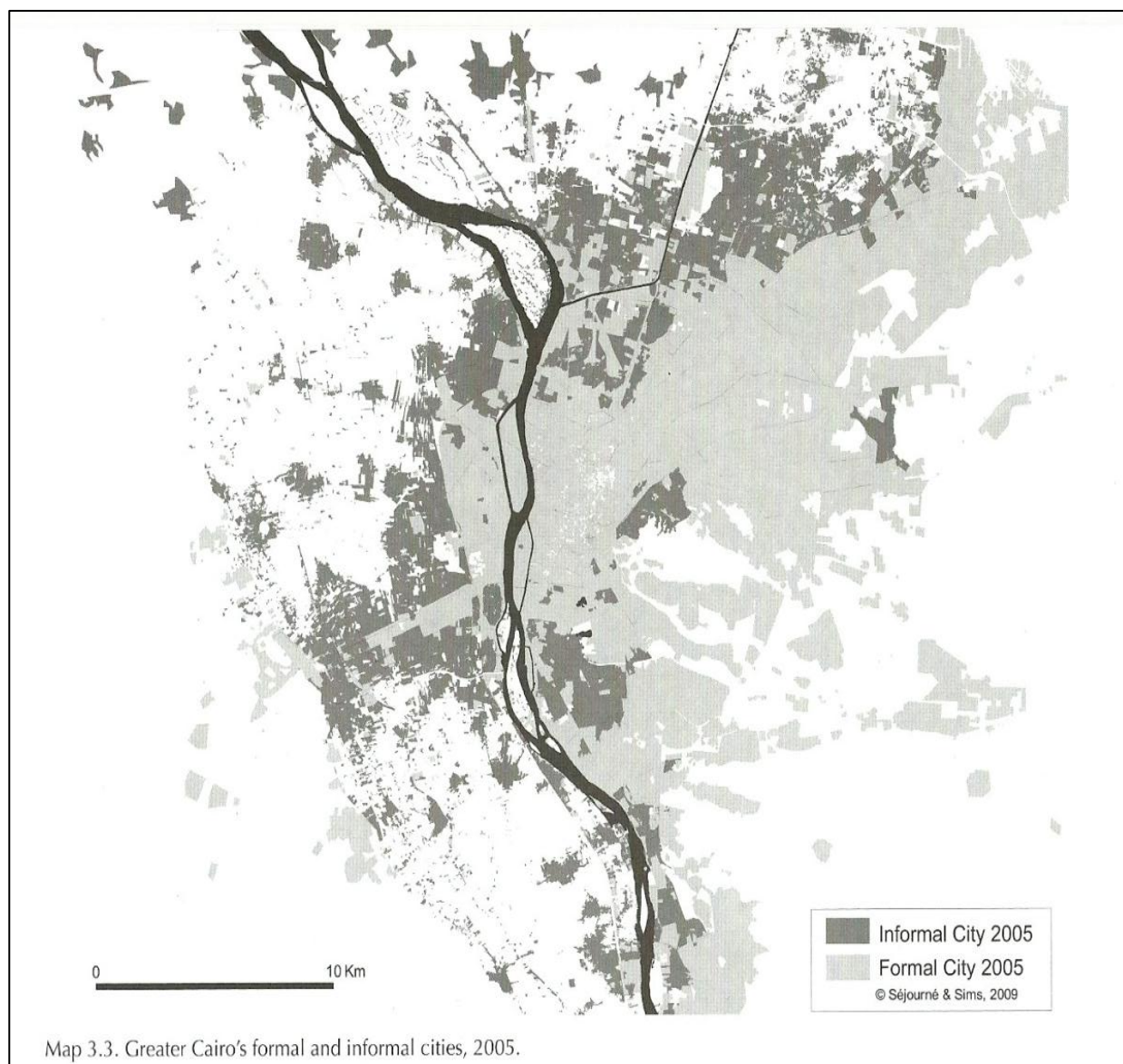
Last date accessed: 16 May 2013

UNHABITAT. (2003). The challenge of slums: Global report on human settlements 2003. London and Sterling, VA: Earthscan

Zawahri, N., Sowers, J., & Weinthal, E. (2011). The politics of assessment: Water and sanitation MDGs in the Middle East. *Development and Change*, 42(5), pp.1153-1177.

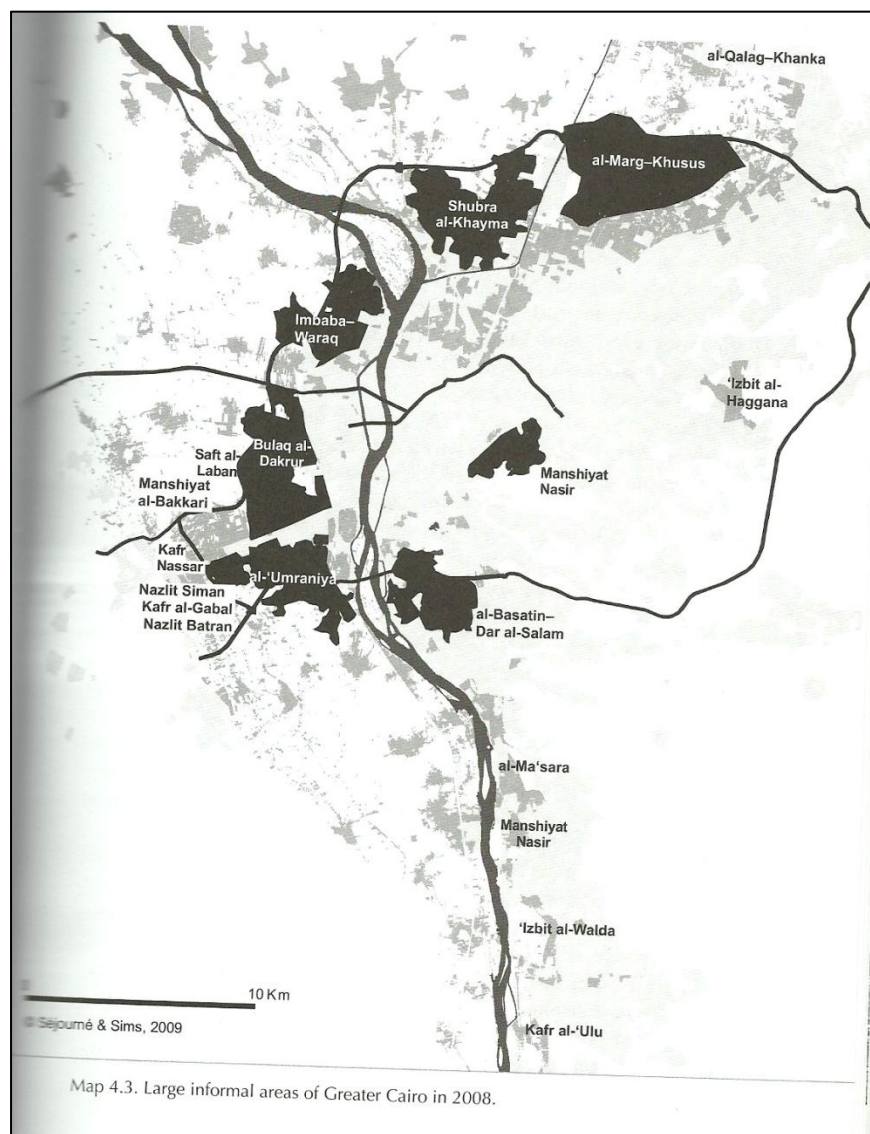
Annex 1- Informality in Cairo

Source: Sims, 2012, p.60.



Annex 2- Largest Informal Areas

Source: Sims, 2012, p.127.



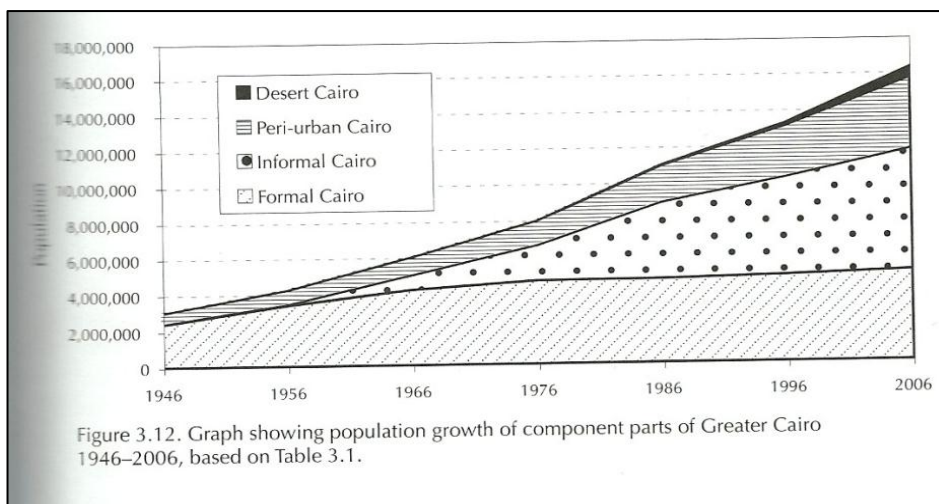
Annex 3- Population Growth in Cairo

Source: Sims, 2012, p.83.

Table 3.1: Evolution of the population of Greater Cairo and its component parts (1947–2009)

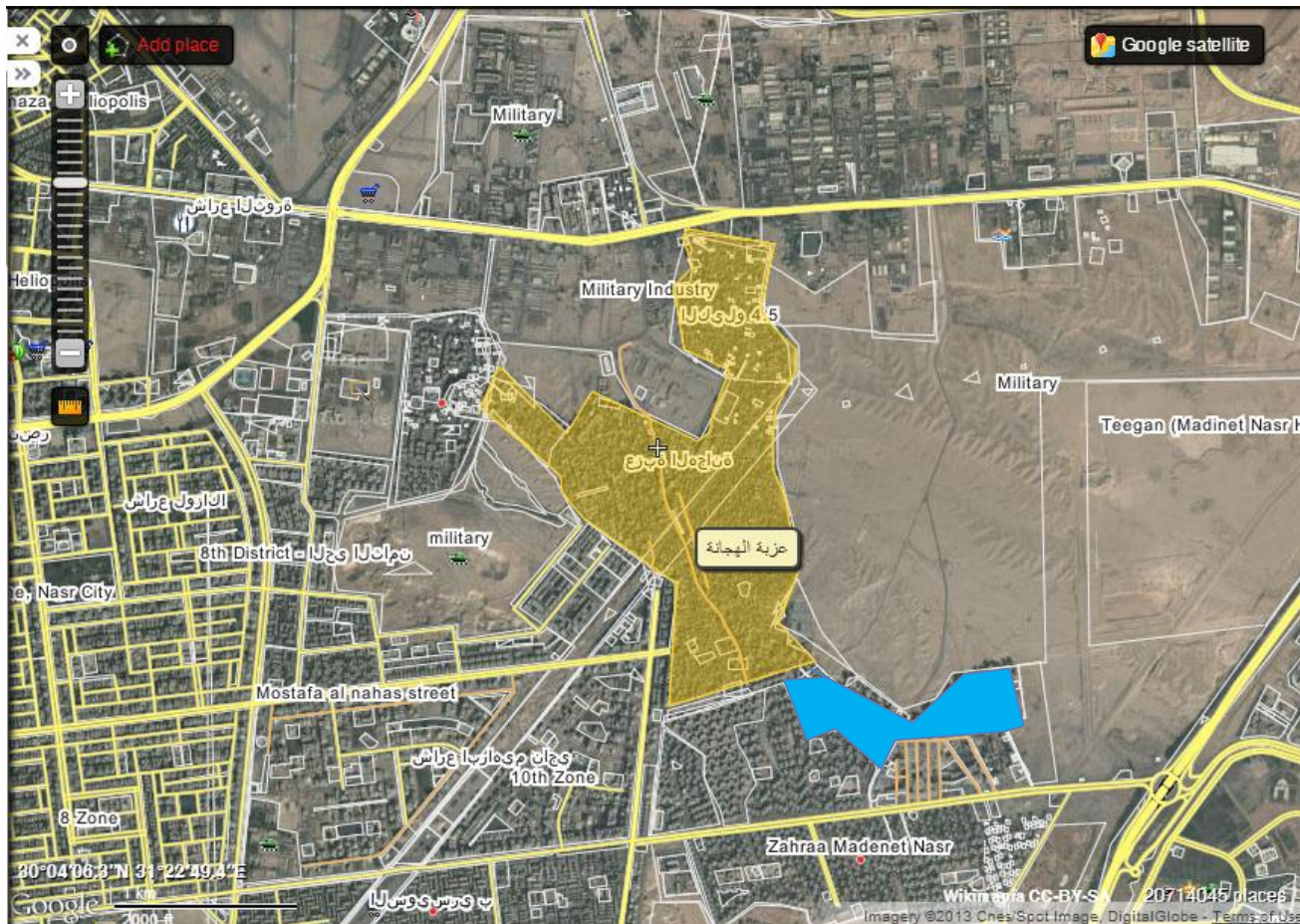
Year	Formal Cairo	Informal Cairo	Peri-urban Cairo (mostly Informal)	Desert Cairo	Total Greater Cairo Region (GCR)	GCR Annual Increase (%)	Percent Informal in Cairo proper	Percent Informal in GCR
1947	2,400,242	0	586,038	0	2,986,280		0.0	10.2
1960	3,905,670	100,000	955,166	0	4,960,836	3.98	2.5	15.6
1976	4,610,326	1,969,000	1,374,317	0	7,953,643	2.99	29.9	38.1
1986	4,650,000	4,248,866	2,063,376	32,615	10,994,857	3.29	47.7	54.5
1996	4,807,632	5,436,477	2,857,468	149,992	13,251,569	1.88	53.1	59.7
2006	5,005,824	6,742,416	3,942,262	601,767	16,292,269	2.09	57.4	62.8
2009*	5,038,763	7,155,106	4,345,567	800,952	17,340,388	2.09	58.7	63.6

Source: *Census of Egypt*, various years: detailed results, combined with map and satellite image analysis by the author to distinguish informal areas.



Annex 4- Location of Izbit ElHaggana

Source: Wikimapia, 2013. Accessed: 12/5/2013



Accessed: 12/5/2013

