Low-income housing provision: between governmental interventions and informal settlements - Greater Cairo Region between 1980s and 2010s

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ABSTRACT
Low-cost housing is an important subject for researchers as it affects many aspects of people's well-being and city planning. The urban poor, who form a respectable percentage of cities' residents in many developing countries, are the most affected segment by the availability and affordability of housing. Thus, governments often try their best to provide affordable housing through housing interventions and programs. However, many low-income people end up in informal settlements including slums and squatter settlements. This research analyses state-led low-cost housing initiatives compared to informal affordable housing in developing countries. The importance of this research is mainly associated with understanding how governmental housing initiatives and laws affect the housing preferences of the urban poor. The research starts by providing a brief background about the subject and its importance from the literature. The research uses mixed methods approach and a case study of Greater Cairo Region following the massive migration during the period between the 1980s and the 2000s to provide an in-depth understanding of the situation. The research then analyses/discusses some housing initiatives, and uses both quantitative/qualitative data in order to explain potential malpractice and issues. Finally, the research will highlight the key findings and provide some recommendations for change/improvement.
Introduction

Housing the urban poor and housing affordability are two interconnected very important subjects for researchers (Hussaen Ali Hasan and Wijdan Abdul, 2017). The term 'Urban Poor' or 'Housing Poor', usually associated with the lack of low-cost housing, is a multidimensional subject associated with the quality of life and people's well-being (UNESCO, 2015, United Nations Development Programme, 1997). The definition of 'Housing poverty' goes beyond those who do not have housing to include those who live in unsuitable or overcrowded housing which does not fulfil their basic needs (Graydon, 2001, Payne, 1977). Having suitable and affordable housing is considered one of the most important factors for development and is an important step to tackle the problem of urban poverty (UNDP - Human Development Reports, 22 October 2009, United Nations Human Settlements Programme, 2008). Thus, governments usually try to provide low-cost housing to the urban poor via special housing programs to tackle the issue of urban poverty and housing poor (Barlow et al., 1994, Brugger and Hannan, 1983).

Providing housing for the urban poor is associated with better lives for them as it is considered the first step in pulling them out of the quagmire of poverty (Clapham, 2003, Clapham, 2005). Additionally, housing the urban poor in a city plays a vital role in the overall city planning and residents' well-being. Housing have direct impact on health, living in a suitable housing is often related with having better health for the residents and the community (Smith, 1990). Having suitable housing also promote people's self-esteem, thus encouraging them to be active members in the community where they participate in building better lives for them and others, this in turn will enhance the economy of the city and the country (Clapham et al., 1996). Finally, having suitable housing is often associated with food security, better education, city sustainability, and more (Colantonio and Dixon, 2011, Gold and Ward, 1994, Haughton, 1999).

Despite the well-understood importance of housing and housing affordability in many developing countries in the Arab World, there is usually an affordable housing scarcity/crisis resulted from a variety of factors including neglect, rural-urban migration, political instability, corruption, social and cultural exclusion and other factors (UN Habitat, 2012). To make things worse, some of those countries suffered/suffering from extreme conditions and political/sectarian conflict, such as the 2014 ISIS conflict in Iraq and Syria, which forced many people to leave their home cities and all their belongings and migrate to other relatively peaceful cities (UN.O.C.H.A., 2016). Without any means of income and without suitable housing, many of those displaced people ended up as urban poor in cities like Baghdad and Damascus (U.N., 2017).

Despite the origins of the urban poor in cities and the circumstances/factors that made them urban poor in first place, housing laws and strategies play a direct role in the decisions of thousands of the urban poor on the best way to fulfil their housing needs (Kelletta and Moore, March 2003, O’Flaherty, 15 June 2011, Ochoa, September 24, 2008). In order to fulfil their housing needs, they try to acquire suitable housing either formally via one of the governmental/non-governmental housing initiatives they are eligible to, or informally in slums and squatter settlements (Kelletta and Moore, March 2003). The decision of those people is difficult to grasp and fully understand without getting an overall picture of the situations and conditions affecting it. It is not possible to understand the full pathway approach those people took in short time periods due to a number of reasons such as high uncertainty of the people themselves, lack of reliable statistical data and more (Clapham, 2003). For that and other reasons the Great Cairo Region (GCR) case study was selected.

This research is concerned with understanding how governmental housing initiatives, system and laws affect the choices made by the urban poor on whether to fulfil their housing needs formally or informally. By understanding the drivers/factors influencing the choices of the urban poor on fulfilling their housing needs, we will be one step forwards to understanding the pathway of those people. This research is a continuation of previous research about transportation (Hussaen Ali Hasan, 2019).

After providing a brief background about the subject and its importance from the literature above, the research will start by giving a brief background about the case study and the justification of the choice of Greater Cairo Region as a case study for this research in accordance with the research methods criteria of Bryman (Bryman, 2008, Bryman, 2012). The research will use mixed methods approach to analyze the
case study of GCR after the massive migration during the period between the 1980s and the 2000s to provide an in-depth understanding of the subject. It will then analyze/discuss some housing legislations/initiatives using both quantitative/qualitative data in order to underpin potential malpractice and issues. Finally, the research will highlight the key findings and provide some recommendations for change/improvement.

Background
The Great Cairo Region (GCR), previously called Cairo or Masr, is Egypt's capital. It is situated on the Nile River and it is one of the Nile delta cities. It is located south of the Mediterranean Sea, west of the Red Sea and Suez Canal at the junction between Lower and Upper Egypt (Demographia, 2016). The city is 1043 years old and is considered one of the most important historic cities in the Arab World since it was founded in 969 A.D. The city is also known for its Islamic architecture and history for which it was called "The City of a Thousand Minarets". The Great Cairo Region currently comprise three main regions namely; Giza, Old Cairo, and Shubra El Kheima (Qaliubiah), in addition to several settlements surrounding these regions (Sutton and Fahmi, 2008). According to the Central Agency for Public Mobilisation and Statistics (2011), the population of Cairo alone is about 7.3 million people spreading over an area of nearly 453 square kilometres. This makes GCR by far the largest human settlement in Egypt and in the Arab world and Africa, and the sixteenth-largest worldwide (Demographia, April 2011).

As with many cities in the newly rapidly urbanizing world, GCR suffers from a number of problems such as housing shortage and traffic congestion due to rapid urbanization and population growth (See Figure 1). Additionally, because of the extreme weather/climate conditions and shortage of water in the desert, most of the Egyptian population is concentrated on the narrow belt along the river especially cities like GCR and Alexandria. According to the United Nations Population Fund (U.N.P.F.E., 2008), the deserts total area in Egypt form about 94% of the total area of the country. The Egyptian Central Agency for Public Mobilisation and Statistics (2011) stated that, just over 98% of the Egyptian population live in only 7.8% of the total area in Egypt. Quarter of those live in the Great Cairo Region (GCR) alone. Although, the overall population density is about 73 people per square kilometre, the actual density in the centre of GCR is over 925 people per square kilometre. This makes GCR by far the densest city in the Arab World (See Figures 2 & 3).

The high population density in GCR in addition to other factors such as political instability and economic crisis, were the lead factors to many urban issues including planning, social, environmental and services provision problems. However, the most severe problem, and probably the easiest to observe, is associated with housing affordability and informality in GCR. In addition to the 7.3 million people living formally in GCR, an estimated additional ten million inhabitants are living informally just outside the city and in it (Samaan, 1992). The importance of the housing crisis is derived from the role of housing on the overall well-being in the city and its magnitude as it affects the lives of a large segment of the population (i.e. low- and mid-income class).

Choosing the case of GCR to study in this research has many pillars. The social and cultural nature of the people in GCR is very similar to that of Baghdad (Demographia, 2016). Additionally, while the issue of housing informality in Baghdad is relatively new (mostly after 2003), the issue of housing informality in GCR dates back to the last century specifically the 1960s and 1970s (Brunn and Williams, 1977, Raouf, 1985, UN Habitat, 2012). This means that it is easier to grasp on/understand the relations and topographic change in GCR compared to Baghdad due to the availability of relatively reliable data. In addition, as housing informality is a phenomenon that evolve over long time, it is important to take a relatively old case study to fully understand the co-relations especially with local authorities in GCR longer time to deal with the issue under study.
Figure 1: Great Cairo Region expansion timeline and regions  
Source: based on (Sims et al., 2003)

Figure 2: Population Density in Egypt  
Source: based on CAPMS (Central Agency for Public Mobilisation and Statistics, 2011)
Case study Analysis

Housing informality and informal settlements is one of the most complex topics for GCR. Many governmental and non-governmental organizations recognize the severity and importance of informal settlements and housing in GCR. However, there no consensus on the actual total number of informal settlements and the population living in them. Based on (C.A.P.M.S., 2001, C.A.P.M.S., 2008), there were 3.2 million inhabitant distributed over 174 slums in GCR alone by 2002. The E.M.O.P. (2003), on the other hand, stated that there were 4.5 million inhabitant living in 171 slum areas in GCR in 2002. While the E.M.O.L.D. (2002) claims that the actual total number of informal settlers in GCR is 2.1 million over 184 slums and squatter settlements. The differences in these estimations between the different governmental organizations is seen as an indicator of unreliable statistics. This is also seen as an indicator of a biased advertising of the actual number of informal residents to improve the image of the government and local authorities. According to U.N.D.P.E. (2004), it is estimated that over 10.7 million inhabitants, 55% of the total population of GCR, are living and working informally in slums and squatter settlements in GCR (See Figure 4).

The formation of squatter settlements and slums in GCR is not new. According to El-Batran and Arandel (1998), formation of informal settlements in GCR is dated to the 1930s and they kept expanding since then despite governmental actions to limit this phenomenon in the 1970s and onwards. The main factors leading to informal settlements formation/expansion are sequentially:

1- The rapid population growth and urbanization after World War 2 specifically between 1937 and 1966 due to the introduction of new life standards and norms where cities became the hotspot of development (See Figure 5).

2- The rapid internal migration from rural areas to cities and urban areas (Samaan, 1992). This is attributed to the receding agriculture land, lack of job opportunities in rural areas, new investments and services in cities and urban areas, and the attractiveness of lives in cities that is normally associated by the public with development and modern life.
3- The inflation and new housing standards cemented by the lack of affordable housing projects and the lack of financial and legal support programs for low and mid-income households. This pushed formal housing to be out of the reach of many residents in cities economically.

4- The increasing poverty levels in Cairo due to the scarcity of jobs especially for uneducated/undereducated and unskilled workers who migrated to the city. Even if these people were employed, they usually get minimum wage with no housing/health benefits. Samaan (1992) stated, “In the late 1970s, about 40 percent of Cairo’s population lived under the poverty line. By the 1990s, perhaps 50-60 percent of the population will have fallen under the poverty level”.

5- Other factors such as administrative corruption that obstructed the legal and support systems and even encouraged the formation of informal settlements, inefficiency of governmental monitoring system and planning authorities to limit/control the use of desert and agricultural land for informal housing.

Figure 4: Geographic Distribution of Informal and Formal Settlements in Cairo

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<tr>
<td>Cairo</td>
<td>4.7</td>
<td>3.6</td>
<td>4.1</td>
<td>1.7</td>
<td>3.4</td>
<td>3.1</td>
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<tr>
<td>Giza</td>
<td>2.4</td>
<td>4.2</td>
<td>5.0</td>
<td>3.9</td>
<td>4.5</td>
<td>5.4</td>
</tr>
<tr>
<td>Qaliubiah</td>
<td>2.0</td>
<td>3.1</td>
<td>4.2</td>
<td>4.3</td>
<td>5.8</td>
<td>6.2</td>
</tr>
<tr>
<td>Total GCMR</td>
<td>3.9</td>
<td>3.7</td>
<td>4.2</td>
<td>2.5</td>
<td>4.0</td>
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Figure 5: Annual population growth rates in GCR governorates

Source: (Araby, 2002)
In order to limit the impact of affordable housing crisis and tackle the issue of the expanding informal settlements and slums in Cairo and GCR, a masterplan was suggested by the ministry of planning and local authority of GCR in 1974. The masterplan went through several modifications and improvements in 1983 and early 1990s (Sutton and Fahmi, 2001, Yousry et al., 1998, Fahmi, 2008). The aim of the masterplan was to start tackling the housing crisis in GCR by transferring some of the responsibilities of housing provision, particularly for the high- and mid-income class, to the market by enabling/supporting the private sector through loans and low taxation. The government will be responsible for providing affordable housing to the rest of the population, especially the low-income class, through large-scale affordable housing and development projects/programs. Simultaneously, as a response to the dramatic increase of informal settlements formation/expansion, the government put a plan to limit the formation/expansion of informal settlements and their impact on GCR through:

- Establishing new self-sufficient large-scale housing projects in/near GCR to accommodate new migrants and lure some of GCR low-income and informal residents outside the already overpopulated city centre.
- Limiting urban sprawl on arable and agricultural lands by controlling the existing informal agglomeration of houses and decreasing them in GCR.
- Classifying some of desert lands as potential land for new housing sided by providing necessary infrastructure and basic services.
- Financing and constructing Cairo's Ring Road to decrease transportation in the city centre and work as surrounding belt limiting city's expansion (See Figure 6).

As planned, four new large-scale housing projects were planned on the basis of being self-sufficient towns providing affordable housing, services and markets, while counting on the old metropolis area for providing job opportunities especially in early stages of occupation. Three of the new towns were constructed namely; Al-Badr, the 6th October, and Al-Obour, the fourth West Bank project was, nevertheless, not proceeded (Sims et al., 2003, Stewart, 1996). More housing projects were planned to be constructed in the same matter between early 1980s and 1990s, the new towns were planned to be to the north of Cairo towards Al-exandria and to the east towards the Suez Canal such as New Cairo city, Sadat city, and the 10th of Ramadan city (Sutton and Fahmi, 2002). See Figure 7.
Despite the intended plan to lure new migrants and low-income families out of the already overcrowded Cairo, only two of the towns were, to an extent, successful in attracting low-income residents, namely the 15th of May Town and the South Extension of Helwan. Overall, the program failed to attract its expected numbers of low-income people and informal settlers and many housing units ended up under the ownership of mid and high-income investors and real-state agencies who bought these housing units to sell them later in the market formally or even informally. This could be attributed to a number of factors:

1. Inefficient governmental financial support system for the targeted low-income and migrant families. Most of the subsidies and loans available required collateral, which was unavailable for the targeted families.
2. Higher costs of the formal housing in these new towns especially when compared with the informal housing in GCR. Additionally, the informal sector was more flexible option as it does not require collateral, rather it was often financed through loans from friends and families.
3. The high costs of transportation from the new towns to the metropolis areas where jobs are available and labour is needed. This added an additional economic pressure on the new towns' residents.
4. The lack/delay in services provision within some towns particularly primary education, high education, and healthcare which was underdeveloped.
5. Most low-income families living in slums in GCR lost their assets due to short-notice removals by the local authority, which decreased their ability to finance/maintain their housing units in the formal sector.
6. The strong/special social and cultural ties between families living in informal settlements for many years and providing support for each other as neighbours or business partners.
7. The strong ties between people and their jobs in the informal sector. Moreover, most informal settlers were undereducated/uneducated making it extremely hard for them to find appropriate jobs in the formal sector.

Because of the above factors, most housing units in these towns ended up housing some mid-income families instead of the low-income families they were planned to house (See Figure 8). This was seen by some researchers as huge malpractice that ultimately increased migration to GCR as more housing were available which caused a reduction in housing prices in the market (Fahmi, 2008).

The ring road around Cairo, which was constructed to stop city's expansion and direct some of the transportation outside the overcrowded city centre, ended up serving the expansion of informal housing
outside the city of Cairo. Transportation to areas outside Cairo, which was once considered difficult and expensive, became more affordable after the construction of the ring road. In addition, the construction of the ring road and the re-classification of some desert lands nearby as housing units allowed the private sector to build housing units for both the mid and high-income classes. This dramatically increased urban sprawl in GCR, and produced a housing belt around the old Cairo with a majority of mid-income households and some high-income households.

As seen in Figure 9, the program was to some extent successful in decreasing the growth of informal settlements and even limiting the formation of new ones in the old city of Cairo. The program was also successful in decreasing the overall population density in the city centre of GCR as many mid and high-income families moved to the new less crowded areas in Cairo's new housing belt. Those families were keen on paying a higher transportation cost in order to get newer housing units in relatively more peaceful, safer areas. For that, it is safe to say that the program did not fail completely as it did help reducing the housing crisis informal settlements in GCR to some extent especially in the overcrowded city centre.

![Figure 8: Lack of progress of Cairo’s new towns. Source: based on (Sutton and Fahmi, 2001, Stewart, 1996)](image)

![Figure 9: Population distribution change of the GCR. Source: based on (Sutton and Fahmi, 2001)](image)
Conclusions

As discussed in the previous paragraphs, anticipating future impacts of any planning initiative on the community and the overall city/regional planning is crucial for the success of the initiative. This is especially important for housing affordability as it directly affects the lives of not only the low-income class (the weakest part in the chain), but also other residents in the city and the social/cultural ties. Additionally, affordable housing has an enormous impact on the urban fabric of the city as it directly linked with the style of living and well-being, working and job opportunities, health and more.

In the case study of the Great Cairo Region, there are a number of issues with governmental housing initiatives that worth highlighting:

- There was a huge gap between the planned number and actual number of low-income residents in the affordable housing projects. This indicates a number of issues such as the failure to prioritise, select and target low-income residents and their needs that led other classes to take over. Administrative corruption and the exploitation of state-led affordable housing provision initiatives to achieving personal benefits for some mid and high-class people and government officials.
- The inefficiency of some supporting systems and programs such as financial support and subsidies programs especially for the urban poor. Most affordable housing programs required the applicants to have permanent paying jobs or some sort of collateral that many low-income families and urban poor lack. This meant that many of the informal settlers were ineligible to apply for affordable housing, at the same time many of them lost most of their assets in the planned removals of informal settlements by the authority. Systems such as microfinance and group-based loans could hugely improve these people access to formal affordable housing provided by the government as it eliminates the need for collateral.
- Lack of monitoring/evaluating systems to closely monitor the progress of the programs. While the central government is the strongest party directing the affordable housing programs, there was a huge chaos when it comes to the different responsibilities of the different actors and governmental organisations that caused problems regarding the monitoring and decision making of the affordable housing programs. Monitoring the success levels and progress of such initiatives is vital for early identification of issues and to guaranteeing the best results. It could also dramatically improve the success rates in achieving affordable housing programs' targets by allowing necessary modification to the housing programs and the supporting programs.
- The lack of important services in many affordable housing projects such as health and education necessary for building self-esteem for the residents especially because it is seen by many as a crucial factor for getting out of poverty as it allows future generations to have better opportunities. For instance, starting a habitation/education program to produce skilled workers alongside the affordable housing programs could have huge impact on their lives and future.
- The insufficiency of public transportation system and unavailability of jobs in the new areas had negative impact on the low-income residents. Not only do they have to commute for long periods to get to their jobs loosing valuable time of their low-wage jobs, but also they have to pay for transportation that added extra burden on their low-income salaries.
- Other factors/issues such as the lack of social awareness and countryside support programs could play a vital role in the success of the affordable housing initiative and limit rural-urban migration. Additionally, these programs could prove useful as the low-income could participate in the decision-making processes of the affordable housing programs.

Overall, the continuous failures of affordable housing programs in GCR and other regions might make us wonder about the real reasons of that failure. Are the reasons mentioned above is actually the only reasons behind the affordable housing crisis and informal settlements expansion? Is not it possible that the factors leading to this problem is purely political? This, however, will be left for future research.
References


