

# ANALYSING THE COLOMBIAN LOW-INCOME HOUSING MEGAPROJECTS FROM A MANAGERIAL PERSPECTIVE

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## Abstract

Over the last two decades, Colombian government has promoted private low-income housing production through implementing a series of financial and managerial mechanisms. These have sought to increase the participation of non-public firms in providing solutions for low-cost urban households. Despite these efforts, the deficit has not sufficiently diminished. For such reason, since 2008, the national administration has implemented a new policy called the Low-Income Housing Megaprojects (LIHM). These have been proposed mainly to generate improved urban design in city expansion areas and obtain scale economies. This study aims to examine the challenges that project management faces in terms of facilitating social housing production so as to reduce the Colombian affordable dwelling shortage through implementing the LIHM strategy. Since this is an on-going investigation, only preliminary results are presented. Analysis is performed by taking into account two LIHM located in the cities of Soacha (near Bogota) and Cali. Both projects are explored through identifying their main actors based on organisational field and project governance concepts. Our findings are directed towards making clear the real organisational complexity of developing LIHM, and emphasise the necessity of more collaboration among institutions (i.e.: public, private, and non-profit organisations) so as to provide adequate living conditions for the low-income population.

**Keywords:** low-income housing, megaprojects, organisational field, governance, project management

## 1. Introduction

One of the most important challenges faced by governments in developing countries is the provision of adequate living conditions for the low-income urban households. Before the 1980s, public institutions were in charge of producing housing solutions for the poor.

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However, over the last three decades, governments have started to address the housing problem by adopting a neo-liberal approach in which they have become a facilitator rather than a producer. Under this economic paradigm, the state seeks to perform fewer public functions and implement private sector practices in order to increase the efficiency of the residential sector. Over the last two decades, the Colombian government has promoted private low-income housing production through implementing a series of financial and managerial mechanisms. These have sought to increase the participation of non-public firms in providing solutions for low-cost urban households. Despite these efforts, the dwelling shortage has not sufficiently diminished. For such reason, since 2008, the national administration has implemented a new policy called The Low-Income Housing Megaprojects (LIHM). This strategy is a central government programme that aims to reduce the Colombian housing shortage and produce large-scale affordable residential initiatives through generating urban soil more efficiently than other regional-based approaches.

LIHM have many features in common with several global engineering projects. Both exert a significant impact on the communities where they are built and require a substantial amount of money to be developed. They also involve the interaction of many actors from many different backgrounds. Additionally, the two types of initiatives are carried out within a neo-liberal economic framework in which the private sector plays a paramount role. Based on these shared characteristics, we argue that LIHM can be examined, from an organizational standpoint by using the concepts of organisational field and project governance. This paper is organised in the following way: first, a description of the Colombian housing policy is presented. Secondly, the concepts of organisational field and project governance are introduced. Based on the national policy and the theoretical ideas shown, the research methodology is explained and the two case studies under examination are described. Subsequently, the actors and organisations involved in the development of the LIHM are identified and examined. Finally, conclusions are presented and recommendations for further analysis are highlighted.

## **2. A brief review of the Colombian social housing policy**

Social housing policies in Colombia have experimented dramatic transformations over the last 20 years. These changes have been intended to diminish the dwelling shortage by incentivising the private sector to take part in providing housing solutions and allowing public strategies to be specifically focused on facilitating access to housing through offering different forms of financial aid. According to these new policies, since 1991 private construction companies have been in charge of developing low-income housing projects and government agencies have been responsible for financing them through supplying bank loans and subsidies to the future homeowners. Thus, government strategies have sought to reduce the deficit through implementing a demand-oriented housing policy for the last two decades.

The new policies required a different institutional framework in order to undertake their transformations. Several new organisations were created so as to manage and grant loans and subsidies: i) the Ministry of Housing, Cities, and Territory, ii) the Housing National Fund (FONVIVIENDA) in charge of providing financial aid to informal workers; iii) the Family Welfare

Agencies (FWA) focused on serving formal employees; iv) FINDETER (a public rediscount bank), a bank responsible for approving social housing construction projects; v) the Military Housing Promotion Agency; and vi) the Public Agricultural Bank for rural households (Arbelaez et al., 2010).

The demand-oriented policy has been directed towards diminishing the housing shortage through implementing drastic budget reforms, changing the State's organisational structure, and promoting an active participation from the private sector (i.e. banks, construction firms, etc.). However, this strategy has not proven to be successful in terms of improving social conditions for the most vulnerable population. For example, according to the National Department of Statistics (DANE), the housing shortage for 2005 corresponded to more than 3.8 million units both in qualitative (i.e. 2.5 million dwellings with inadequate living conditions) and quantitative (i.e. 1.3 million families without shelter) terms. With these numbers in mind, it is easy to affirm that the mentioned housing policy is neither enough for solving the housing problem in Colombia nor adequate for serving the low-income people (DPU, 2006).

## **2.1 The Low-Income Housing Megaprojects (LIHM)**

Taking into account the increasing housing shortage for the low-income population, in 2006, the national government started to design the LIHM strategy in order to reorganise and streamline the process of getting access to land for affordable housing. Over the last seven years, the new policy has sought to develop housing projects throughout the country by making land available and providing adequate urban infrastructure (i.e. public services, urban facilities, etc.). This is being carried out through establishing a public-private partnership among the national government, local government agencies, and private developers. Under the LIHM scheme, the central government seeks to produce large-scale affordable residential initiatives through generating urban soil more efficiently than other regional-based approaches (Decree 4260-2007).

The execution of the LIHM has not been exempted from problems. Firstly, so far it is not clear how the municipal authorities have to adapt their local urban planning regulations so that a LIHM can be developed. Secondly, since either a private developer or a public agency can promote a LIHM, there have been multiple problems in terms of properly managing such initiatives. Thirdly, taking into account that the final goal of the LIHM policy is to efficiently generate land, there are many megaprojects located in peripheral urban zones with a clear lack of transportation infrastructure.

Currently, there are more than 31 on-going large-scale housing initiatives. In this paper, we are going to analyse two of them: Green City (GC) and Santa Helena Hills (SH). The former is located in Bogota (the Colombian capital) and involves the construction of 40 thousand units in a 107-hectare tract. The latter is situated in Cali (the third most important Colombian city) and comprises the development of 3.5 thousand dwellings in a 35-hectare lot. Additionally, while GC is an initiative led by a private developer, SH has been conceived by the local mayor's office. Despite the differences, both schemes have similar problems related with the government capacity to ensure not only the construction of low-income

housing solutions, but also the provision of infrastructure and public services for the two projects

### **3. The concept of organisational field**

According to DiMaggio and Powell (1983), the concept of organisational field refers to a group of organisations that constitute a recognised area of institutional life. For instance, key suppliers, consumers, regulatory agencies, and other institutions that produce similar products or services. In other words, the organisations within a field comprise a well-defined social sector and interact in a specific functional area (Machado da Silva, 2010). Based on Carrillo (2009), an organisational field is a collection of actors that belong to a particular social context. For example, an educational system is a field that consists of an aggregation of actors, such as, schools, parent associations, departments of educations, etc. In the same way, the LIHM can be understood as a specific functional sector. For this particular field, the participants are the organisations that work in providing social housing for the poor: construction companies, government agencies (at the local and national level), urban designers, the local community, the landowners, developers, etc.

Jooste (2010) argues that an organisational field has three main components: actors, logics, and arrangements. The actors are the institutions and organisations that belong to the same functional sector. They can influence such functional area at the local, national, and transnational levels. The logics are the beliefs and conceptual maps that guide the actors' behaviours. The logics among the participants might be in open contradiction if a particular field is comprised by public and private institutions. Finally, the arrangements are the governance mechanisms required for having an adequate coordination among actors and their logics.

### **4. The concept of project governance**

There are many definitions for governance. In this study, we have adopted the one given by Carrillo (2009). According to such author, governance is a concept for describing a set of game rules within a social system. The rules are those formal and informal regulations that belong to a particular social context and are dependent on its specific characteristics. A social system refers to a family, an enterprise, or social communities (at the local, national, or global levels). In terms of urban management studies, the idea of governance plays a key role in explaining how a state (i.e. central government), within a liberal economic framework, has to seek collaboration from other private and public organisations in order to properly implement urban policies and projects. Therefore, Rakody (2003) and Healey (2006) argue that the concept of urban governance is based on the idea that there has to be a regulatory framework (i.e. a set of game rules) so as to properly make decisions and execute programs at the urban level.

The definitions provided by Carrillo (2009), Rakody (2003) and Healey (2006) are useful in terms of explaining the urban complexities. However they are not directly oriented towards examining the difficulties in developing large-scale urban projects. These types of projects have always been a societal challenge due to their great number of participants. Henisz et

al. (2012) propose the concept of project governance as a theoretical framework for understanding the interactions among the actors involved in large-scale initiatives. Since Henisz et al. (2012) work on the basis of the ideas proposed by Scott (1995), they suggest that each project can be analysed from three governance perspectives: regulative, normative, and cognitive.

The regulative perspective refers to the set of formal rules, incentives, and sanctions (i.e. laws, decrees, professional regulations, etc.) that control the project participants' behaviour (Henisz et al. 2012). Based on regulative mechanisms, project participants tend to do only what the project contract establishes. In other words, from a regulative point of view, actors only do what they are compelled to do. On the other hand, the normative standpoint refers to a series of expectations and exchange processes that are collectively shared by all the individuals involved in the initiative. According to this viewpoint, actors try to avoid social punishment (i.e. ridicule, isolation, etc.). Finally, the cognitive perspective seeks to create common identities, shared interests, and long-lasting relationships among the participants (Henisz et al. 2012).

Taking into account the three governance perspectives, many authors have analysed large-scale infrastructure projects. For instance, Joose (2010) analyses public private partnership schemes in Australia, South Africa, and Canada. Henisz et al. (2012) show the importance of social exchanges through presenting examples of projects in Argentina and the Philippines. Chi et al. (2012) examines the development of two Chinese projects by employing the concept of relational governance. Since LIHM have many features in common with several global infrastructure projects (e.g. the impact on the communities, the amount of money required, the interaction of many actors from many different backgrounds), we argue that they can be examined, from an organizational standpoint, in a similar way as many infrastructure projects have been previously analysed. In order to do that, the next section shows the research methodology employed for this study.

## **5. Research methods**

The main research question for this study is: how to ensure, since the conception phase, an adequate coordination among the different institutions that participate in the development of the LIHM, in order to benefit the low-income population? This was based on the evolution of the Colombian housing sector, its current neo-liberal organisation scheme, its stakeholders, and its existing difficulties (Jaramillo and Cuervo, 2010; CENAC, 2006).

We sought to answer the research question through employing a multiple-case study approach based on Yin (2003), Eisenhardt (1989), Corvin and Straus (2008), and Jooste (2010). The two cases (i.e. GC and SH) were selected because: (i) they were developed under the LIHM scheme; (ii) the two projects shared similar problems (i.e. lack of coordination among stakeholders); and (iii) they had different execution strategies (i.e. GC was managed by a private company and SH was directed by the City of Cali). The information was collected through a literature review, observation exercises (i.e. site visits), archival analysis (i.e. examination of laws, decrees, local regulations, and project-based information), and two rounds of semi-structured interviews with leading representatives of

organisations involved in the development of the two projects. For each case, 20 interviews (i.e. 10 interviews per round) were conducted with individuals from different institutions, such as local government agencies, national government institutions, project management firms, urban designing companies, main contractors, professional organisations, and universities. The interviews were recorded, transcribed, and analysed by using QSR Nvivo (a total of 20 hours of audiotape were examined).

Based on the literature review, the archival analysis, the first round of interviews, and the concept of organisational field, the data was categorised in three conceptual groups: actors, logics, and institutional arrangements. The analysis was conducted through identifying similarities and differences within the three theoretical classes in the two case studies. Based on this exercise, the information for each project was subsequently grouped in four sub-groups (i.e. public services, accessibility, urban facilities, economic opportunities). Once the conceptual categories and sub-categories were completely defined, a second round of interviews was performed. However, this time, the information was examined through the lens of the concept of governance. Through this approach, conclusions have been directed towards proposing improvements for the types of governance perspectives employed in the LIHM in order to enhance coordination among institutions and benefit the Colombian low-income population. In this paper, we only present a series of preliminary results based on the examination of the organisational field (i.e. the actors that participate in the projects) for the two cases under study. The analysis is supported by the organisational and governance concepts previously presented.

## **6. Case studies: a basic description**

### **6.1 Green City (GC)**

The LIHM of GC is located in Soacha, one of the biggest municipalities that have a border with Bogota. This urban centre has a housing shortage of approximately 36 thousand households. Over the last years, Soacha has experimented an increasing demographic growth due to migrations originated by forced displacement phenomena, expansion of Bogota's bordering neighbourhoods, and conurbation processes. This rapid increment in the number of inhabitants took place without any formal governmental control and has incentivised the development of several illegal urbanisations.

GC has a total area of approximately 327 Ha, which includes 107 Ha for housing, 18 Ha for urban infrastructure facilities, and 35 Ha for commercial and service land use. The project intends to generate 42 thousand social housing units, it started to be executed in December 2009, and it is expected to be finished by 2018 (Henao, 2011). In terms of its development strategy, the initiative has been led and promoted by private actors (i.e. a housing construction company) and it has been financed through a combination of private funds (i.e. landowners, bank loans, trust funds, etc.) and public mechanisms (i.e. facilitation for changing the land-use).

## 6.2 Santa Helena Hills (SH)

The LIHM of SH is located in Cali, the third main city in Colombia. Cali is situated in the south-western region of Colombia, it has a population of about 2.5 million people and a housing shortage of approximately 580 thousand households. The project is intended to generate five thousand units and has an area of around 306 Ha, of which 70% corresponds to land for housing use. The initiative has a duration of 60 months and has been led and promoted by the local government (i.e. the local housing agency) and the national administration (i.e. the ministry of housing). Since this project is a governmental initiative, it is important to highlight its funding and managerial mechanisms. On the first hand, the project's funds are controlled through a trust scheme. A committee that consist of representatives from the national and local administrations manages such scheme. On the other hand, a local FWA (i.e. Comfenalco) undertakes the project management tasks related with institutional, commercial, financial, and technical aspects (i.e. marketing activities, subcontractor hiring procedures, etc.).

The following table presents a comparison between the two projects under analysis.

**Table 1: A comparison between Green City and Santa Helena Hills**

LIHM Category	Green City (GV)	Santa Helena Hills (SH)
Location	Soacha (border with Bogota)	Cali (third main city in Colombia)
Size	327 Ha – 42 thousand units	31 Ha – 5 thousand units
Urban context	Housing shortage: 36000 households Lack of urban facilities and public service infrastructure Illegal urbanisation processes	Housing shortage: 85000 households Illegal urbanisation processes
Developers	Private construction company	National and local administrations
Financial mechanisms	Trust scheme Integration among 7 construction firms	Trust scheme Project management contract

## 7. The organisational field for the LIHM: actors and organisations

As it was mentioned before, an organisational field consists of an aggregate of organisations that forms a recognised area of institutional life (DiMaggio and Powell, 1983). We argue that the Colombian LIHM can be analysed from an organisational-field point of view because the development of such projects involves multiple institutions with formal and informal relationships at different levels. Although an organisational field has three main components (i.e. actors, logics, and governance arrangements) (Jooste, 2010), in this paper we only discuss the actors that participate in developing the megaprojects. Since there are many organisations involved in the delivery of the housing initiatives, we only focus on those who exert the greatest influence.

## **7.1 The national government**

The Ministry of Housing and the Housing National Fund (Fonvivienda) are the two main governmental agencies in charge of developing the LIHMP throughout the country. The ministry focuses on analysing the project conceptual phase, examining the feasibility and technical studies, producing the decrees that regulate the initiatives, and participating in the trust scheme committee. Fonvivienda is in charge of managing the resources for developing the project. Such resources comprise the funds required not only to build the housing units, but also to build the urban infrastructures.

In the case of GC, the Ministry of Housing, in conjunction with a private company (i.e. the project developer), developed the conceptual phase, undertook the feasibility study, and approved the initiative submitted by the private firm. Additionally, it was in charge of obtaining the environmental approvals for the project. Although that was not competence of the national government, one of the interviewees claimed that was a necessary step in order to streamlining the feasibility and approving procedures. On the other hand, in terms of transportation accessibility to the project, the Ministry also committed to make agreements with the local municipalities so as to build an extension of one of the current lines of the Bogota's mass transit system. In the case of SH, the national government was specifically in charge of approving the project and giving resources for the construction of both housing units and urban infrastructure facilities. Since the local housing department led the initiative, the national agency had to sign an inter-institutional agreement with them in order to establish the trust scheme for the project. Although, at the beginning, there were high expectations regarding the national government participation, there have been severe delays in delivering the promised urban facilities. This has deteriorated the relationship between the local and national levels.

In short, it is clear that national agencies are in charge of generating the decrees that regulate the housing initiatives and take responsibility for approving the project concept and its feasibility and technical studies. These procedures may vary depending on who is the project leader. In GC, for instance, the main project sponsor is a private company; in SH, the main promoter is the local administration.

## **7.2 The local administrations**

The analysis of this actor took into account elements, such as its role for ensuring an adequate public services provision and a satisfactory construction and operation of the urban infrastructure facilities. In the case of GC, the municipality of Soacha is an extremely weak urban centre in terms of the maturity of its institutions. For example, such city does not even have an agency specialised in housing issues. These are managed jointly by the local planning and infrastructure offices. In respect to public services provision, Soacha is not responsible for the project's water and sewage systems (this is responsibility of the developer). Regarding the development of the urban facilities, the municipality does not have resources for financing the amenities. For such reason, it established an agreement with the developer through which the sponsor may finance them in exchange of tax exemptions or urban land.



In contrast to Soacha, the City of Cali has a housing agency. Its role in the development of the SH project has consisted in providing funding for developing the initiative through supplying urban land and offering subsidies for the future households. Based on that, the Cali's city hall is, in conjunction with the Ministry of Housing, the main sponsor of the megaproject. The local housing agency has been in charge of the conceptual phase, it has undertaken the technical and feasibility studies, and it has established a management contract with a local FWA so as to administer the design, procurement, and construction stages of the megaproject. Furthermore, The regional housing department has also been responsible for the public services provision and the construction of the required urban infrastructure (i.e. access roads, facilities, etc).

### **7.3 The public utilities**

The Bogota Water and Sewerage Company (BWSC) and the Cali Public Services Provider (CPSP) are the two main state-owned firms that exert a great level of influence in the development of GC and SH, respectively. On the one hand, taking into account that the BWSC provides its services to Soacha, such company has played a key role in the development of the GC project. For instance, before beginning construction, the private developer had to obtain a certificate of technical feasibility in order to show that the BWSC could provide water for the 42 thousand housing units. However, currently, there are still some discussions about how to provide the services. While the promoters (i.e. an aggregate of private construction firms) argue that they can build the water and sewerage infrastructure and operate it through paying a fee to the BWSC, the BWSC wants to design, build, and operate the system by itself.

On the other hand, the CPSP is in charge of providing services related with water, sewerage, energy, and telecommunications. Although over the last years the state-owned company has had budget difficulties and problems with its Union, it continues to be the main public services provider in Cali. In the same way than the BWSC, the CPSP had to give a certificate of technical feasibility in terms of supplying the water and sewerage infrastructure for the SH megaproject. Although, during the project's conceptual stage, the company ensured the services viability, it was later on discovered that the water supplier did not have the capacity to build the required infrastructure for ensuring an adequate service provision. This caused time delays and cost overruns.

### **7.4 The Family Welfare Agencies (FWA)**

The FWA have played a key role in the development of the housing megaprojects. In Cali for example, a local agency (i.e. Comfenalco) has been in charge of managing the project. In other words, Comfenalco has participated in the conceptual, design, procurement, and construction phases. It has also been involved in selecting the future residents, supervising the contractors, and ensuring an adequate financial administration of the project trust scheme. In contrast, the FWA in Soacha have only been limited to provide urban facilities when required. For instance, a local FWA has won the contract for developing a school in the GC premises. This is because a private company has managed the GC project since its conception.

## **7.5 The private sector**

In Soacha, a private construction company has been the main sponsor of the project. The company conceived the idea, established an association with the landowners, and presented the proposal to the Ministry of housing. The same company has been also responsible for funding the project through bank loans and forming a consortium with other construction firms in order to build the 42 thousand units. In this case, a single enterprise has directed the whole initiative and been responsible for linking the interest of both public and private entities. Conversely, private firms did not participate during the conceptual and feasibility phases of the SH project. They did not provide any form of funding and have been involved in the initiative after the procurement stage.

## **8. Key issues in the organisational field**

Taking into account the main actors within the organisational field, there is a series of critical issues that hinder the generation of low-income housing to the poor through the LIHM.

### **8.1 Lack of administrative capacity of the local administrations**

The LIHM initiative represents a real challenge to the traditional public sector capacity. For the Soacha administration, the development of GC highlighted the necessity for having a better institutional framework so as to manage large-scale projects. It is clear that the municipality was not prepared for supervising a megaproject. For instance, there are not local agencies specialized in housing-related issues. This would have helped to have better control mechanisms in order to ensure that the private actors respond not only to their own interest, but also to the city's concerns. Conversely, Cali was very prepared for big housing initiative because its local administration had not only a local housing agency but also a special office to deal with the megaproject's issues.

Despite having public organisations for dealing with the LIHM, the Cali administration has shown capacity-related weaknesses due to constant changes of city's directives. For example, there was a change of mayor between the project conceptual and construction phases. In other words, the mayor that initially sponsored the initiative was not the same than the one who was in charge of its construction. This implied diverse changes in the project scope due to political differences.

### **8.2 Leadership**

Neither in GC nor in SH, there has been a clear project leader. Although a private actor has led the initiative that takes place in Soacha, this has not been able to properly negotiate with the Bogota utilities about the provision of public services, such as water, sewerage, and transportation. The mentioned negotiations have not been successful due to political differences between the utilities' general manager (i.e. the mayor of Bogota) and the owner of the construction company that conceived GC. In the same way, the local administration in Cali has not been able to manage the SH project due to a lack of coordination among its own agencies and deficiencies in communication procedures with the national government.

### 8.3 Urban facilities and public services

Urban facilities and public services are one of the most important concerns in terms of stability of the LIHM in the long-range. Based on the two cases under analysis, it is not clear who is going to be the sponsor of the several amenities required for both initiatives. So far, GC has made an agreement with a FWA in order to build a private school; in Cali, the project manager has also established an association between the national and local governments so as to develop a kindergarten institution. The development of any other kind of amenities remains unknown. On the other hand, for both projects is clear that there is not a strong relationship between the project managers and the local utilities for ensuring and adequate service provision. Neither of the two local public utilities (i.e. the BWSC and the CPSP) has strongly supported the LIHM development.

## 9. Conclusions

Based on account the information collected from the GC and SH projects, it is clear that the main participants in the LIHM are: the Ministry of Housing, the private sponsors, the local administrations, and the FWA. Unfortunately the relationships among them are primarily based on formal regulations. The lack of a formal regulation for controlling the communication among two or more actors creates conflicts, project delays, and in some cases, cost overruns. This is case of the public service provision for both projects because there is not an adequate communication channel between the local administration, the national government, and the public utilities. It is evident that it is necessary to implement governance mechanisms related with the normative and cognitive perspective. Additionally, there is not an adequate integration among the institutions within the organisational field. As it can be seen in Figure 1, there is not a single institution in charge of the whole lifecycle for both projects. Such diagram shows that Green City (see GC boxes on figure 1) has been primarily controlled by a private sponsor; and Santa Helena Hills (see SH boxes on figure 1) has been managed by the local administration. Further studies are required in order to show how to implement relationships based on relations (i.e. relational governance) instead of always relying on formal regulations.

ACTORS	THE ORGANISATIONAL FIELD IN THE LIHM LIFECYCLE				
	IDEA	FEASIBILITY	PROCUREMENT	EXECUTION	OPERATION
Ministry of Housing	GC SH	GC SH	GC SH	GC SH	
Local Administrations	SH	SH	GC SH	GC SH	GC SH
Private Sponsors	GC	GC	GC	GV	
FWA	SH	SH	GC SH	GC SH	SH
Public Utilities			GC SH	GC SH	GC SH
Banks				GC SH	GC SH
Contractors				GC SH	
Residents and Neighbours				GC SH	GC SH

**Figure 1: The organisational field in the LIHM lifecycle**

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