

AN **[I N]** FORMAL FRAME

INCORPORATING SOCIAL & ECONOMIC PRODUCTION OF SPACE IN REDEVELOPMENT OF INFORMAL SETTLEMENTS

Case study: Dharavi, Mumbai, India

Reflection

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ECONOMIC CLUSTERING AND ITS IMPLICATION IN REDEVELOPMENT PROJECTS OF INFORMAL SETTLEMENTS

Overview

The overall aim of the project was to explore how the existing socio-economic production of space could be incorporated into the redevelopment projects in informal settlements. The urgency to deal with the informal settlements rises from their persistence and increase over the last few decades especially in the global south. However, redevelopment projects addressing the informal settlements have been far from successful have not reached a long-term viable solution. In the selected case-site of Dharavi, explored in this research, also illustrates several failed attempts by urban planners and policy makers. The research attributes this failure to the indifferent attitude of the policy makers, planners and developers towards existing social and economic mode of production of space with its associated values, leading to highly insensitive, unsustainable and unequal redevelopment & upgrading projects.

This research, through a comprehensive analytical framework (figure 1.1) in Dharavi reveal strong correlation between the economic livelihoods and networks and the existing social structure. This correlation results in a distinct mode of production of space, to which Dharavi's resilience and economic success can be attributed to it. What is also revealed is the lack of policy in the current redevelopment that addresses the pre-existing economic networks and thereby its social structure.

In order to approach redevelopment of informal settlements such as Dharavi, in a more inclusive and sustainable manner, this project aims to use the hypothesis of 'economic clustering' in order to 'reframe' and develop a strategic framework for Dharavi.

The frame of 'economic clustering' offers a reframe on the traditional model of redevelopment in informal settlements in India and perhaps extending to the global south. Most informal settlements in the geographical realm of the global south, have distinct economic patterns and social networks which play a vital part in their existence and contributing to their perseverance. The proposed model of redevelopment aims to address and examine the existing economic networks incorporating them into a framework that provides a balanced combination of spatial guidelines and policy recommendations

The feasibility of using economic clustering

The hypothesis of economic clustering and its usage as a spatial tool, bears of particular relevance in Dharavi. Dharavi has been in the limelight over the past decade, especially regarding its high economic intensity that exist in squalid conditions.

Figure 1.1: Conclusions derived from the analytical framework for Dharavi; Source: Author

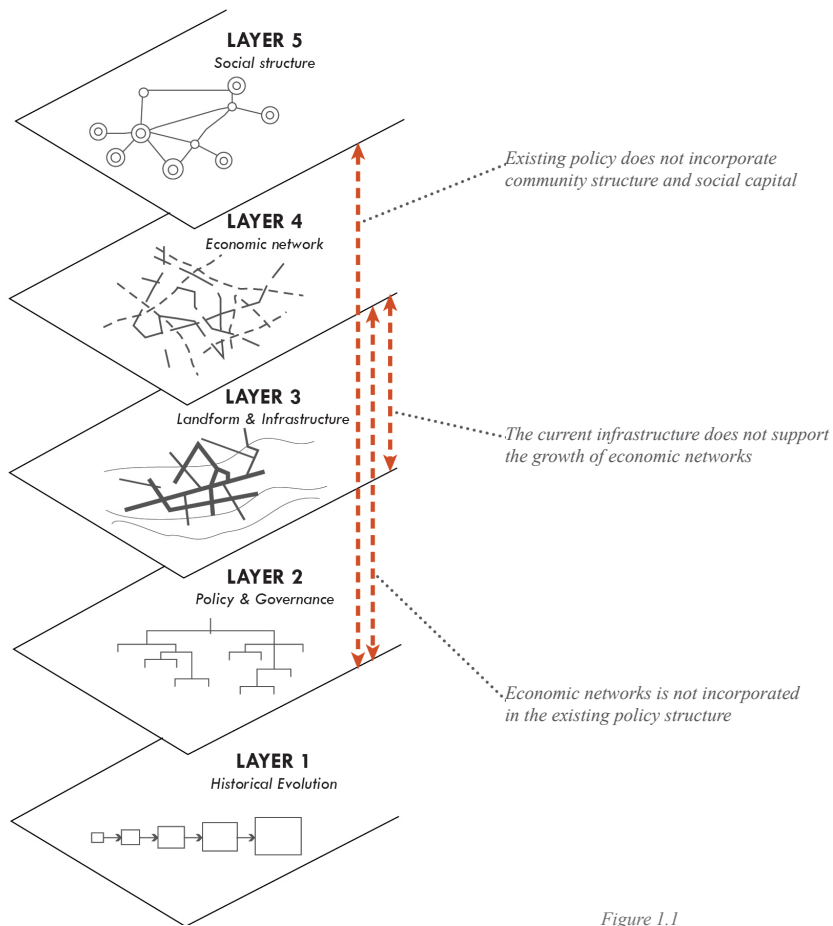


Figure 1.1

Conclusions from Analytical Framework

It's current model of redevelopment, i.e., Dharavi Redevelopment Project currently only addresses the housing need of its inhabitants, without responding to its intense economic production. The current model perceives informal settlements and the area it occupies as a potential source of high-end real estate (figure 1.2), ignoring the existing economic potential of the area. Unsurprisingly, this model has faced criticism from its residents, with regards to its ignorance towards their means of livelihood. The model has also faced difficulties in finding suitable investors and private developers, notably because of the eligibility conditions imposed on them along with the perceived difficulty in getting cooperation from the inhabitants. This would also limit the long-term viability of redevelopment attempts in Dharavi.

This project proposes that instead of approaching the redevelopment projects of informal settlements such as Dharavi through the lens of generating low-income housing along with the high-end real estate (figure 1.2), redevelopment could proceed with reinforcing the existing economic production and encouraging them to join the formal economy. This model (figure 1.3) caters directly to the needs and aspirations of the local inhabitants, especially aiming to retain the livelihood and social structure of the area as its primary objective. In order to make this model implementable, the finer social structure and grain of Dharavi is explored in order to incorporate them into the strategic framework. The strategic framework also aims to address policy at the national level of the Slum Redevelopment Authority. The current policy offers a more top-down mechanism making provisions for meeting the housing needs of the slum dwellers. This

research proposes an integrated model where interested private enterprises can collaborate with the industrial units of Dharavi, for their mutual interests of generating a higher economy. This change enables inhabitants and workers in Dharavi to enter into a direct dialogue regarding redevelopment, and thus ensuring a more viable and long-term solution.

The proposed model, therefore, offers a re-frame to look at redevelopment processed in informal settlements, such as Dharavi in Mumbai. It offers an opportunity to view informal centres as productive economic spaces (figure 7.4), interconnected and networked with each other.

Limitations and future direction of the research

The proposed model is not without its challenges. The selected case site of Dharavi is emblematic at best and cannot represent or be equated with other informal settlements, even in India. The proposed model of redevelopment through economic clustering can incorporate the economic networks and social structure in Dharavi, but would require to be catered and modified to redevelopment models in other locations. The research has presented just one example of how a strategic framework can be formulated, viewed through the lens of economic clustering. What remains to be tested are its implications as a large scale development model for other informal settlements and its inevitable impact on the larger urban system. The long-term viability and success is currently difficult to perceive empirically within the given parameters.

Figure 1.2: Existing policy model towards informal settlements in India; Source: Author, derived from policy analysis of SRA

Figure 1.3: Proposed policy model of economic clustering to address redevelopment in informal settlements in India; Source: Author

Figure 1.2: Informal centres as possible interconnected economical sites for redevelopment; Source: Author



Figure 1.2

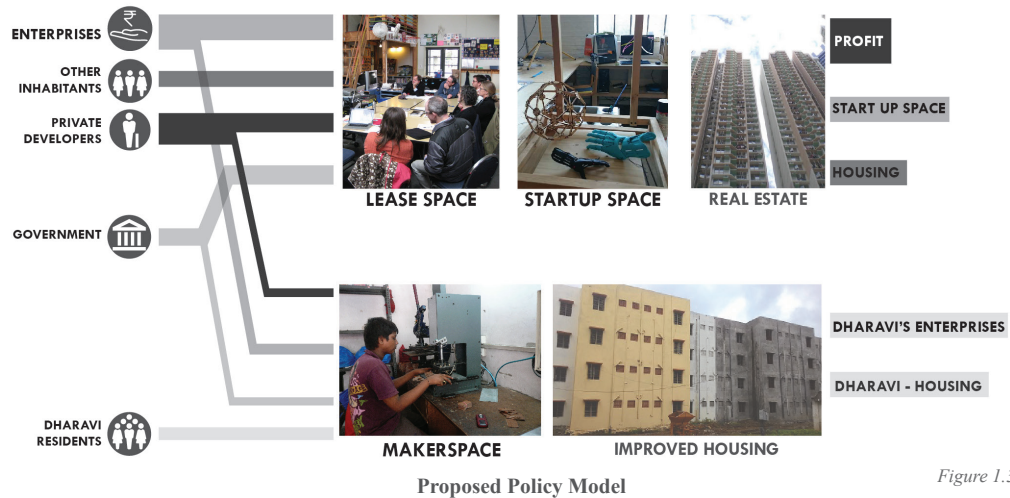
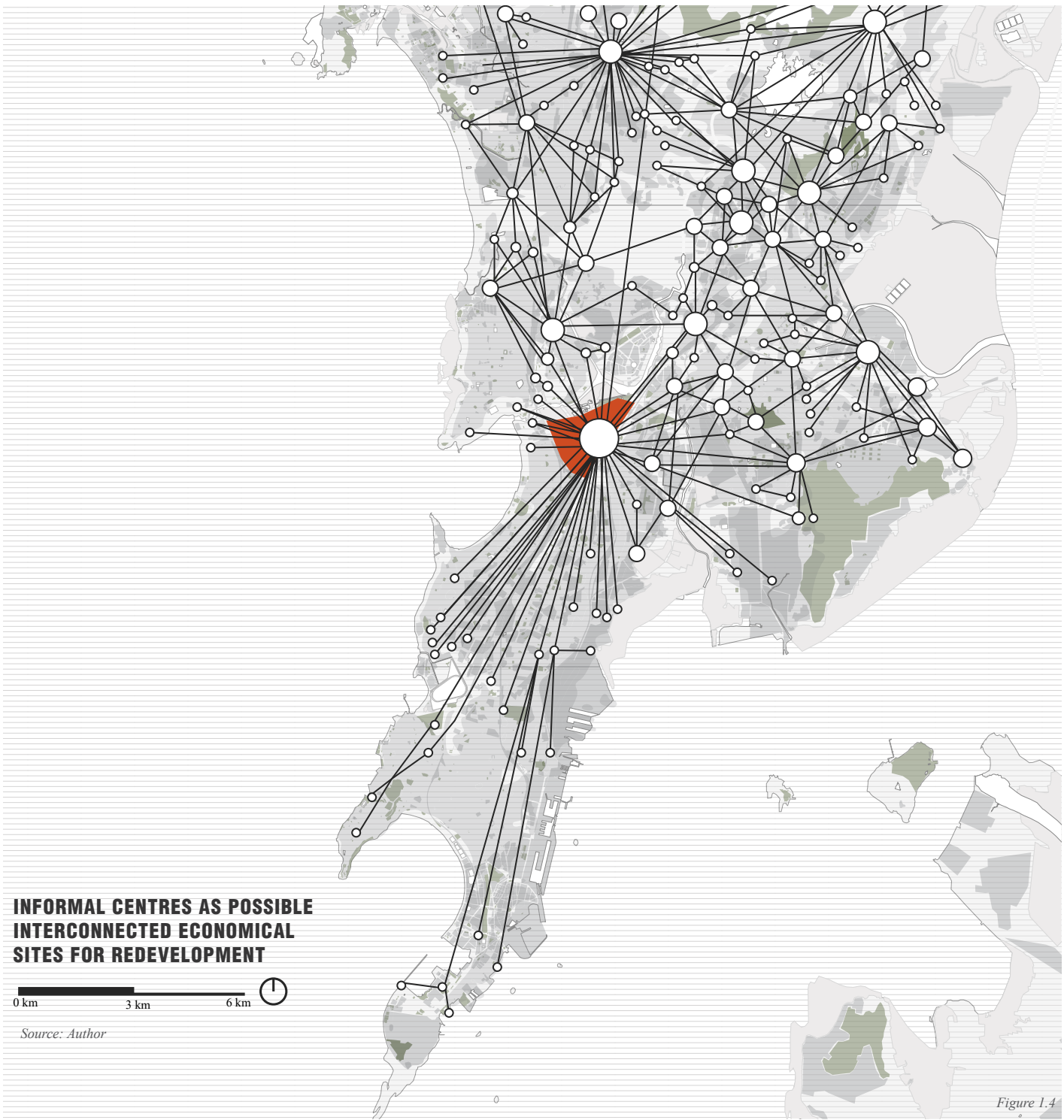


Figure 1.3

A further challenge is presented in the application of economic clustering by the generally high density of habitation in informal settlements such as Dharavi. Although, there is an intrinsic socio-economic system present, which manages to operate even within the high densities, any implementation of a redevelopment project of a large scale proposes a logistical challenge. Although, the framework presented in this research presents a more involved system with Dharavi's inhabitants and workers (i.e., stakeholders), ensuring long-term validity, it also presents further logistical challenges to implement the urgently required redevelopment.

The 'economic clustering' model also aims to address the urgency regarding redevelopment in informal settlements. Lack of basic services such as water and sanitation are hurdled to any redevelopment project as they require a significant investment and a long time frame to execute. The use of the analytical framework in the project highlights this missing service, noting that for any redevelopment model to work in an inclusive and sustainable manner, this investment into the provision of basic services is inescapable and crucial.

Despite the challenges presented, the exploration in this research highlights the potentials of reframing redevelopment of informal settlements through the lens of economic clustering. The proposed model aims to thus provide for an inclusive and sustainable redevelopment while retaining the existing production of socio-economic space.



REFLECTION ON GRADUATION PROJECT & PROCESS

The graduation project originated with the aim of understanding the model of socio-economic production of space in informal settlements. The objective was to explore how to incorporate and adapt the current mode of production of space into redevelopment projects, so as to ensure a more long-term, sustainable and inclusive development of its inhabitants. For this reflection, five crucial aspects of the graduation process are explored and reflected in this section - on the thesis's process, the relationship between research and design, the limitations and the direction for future research.

Aspect 1: The relationship between research and design

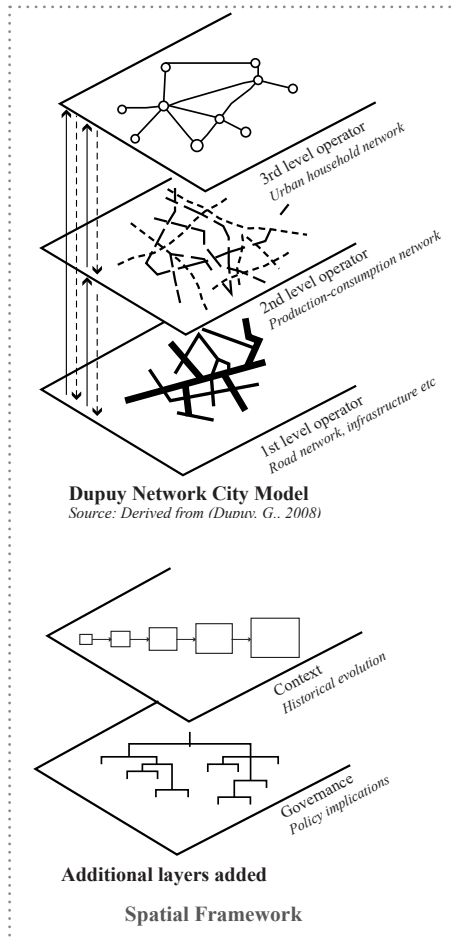
Since the topic of socio-economic production of space in informal settlements is quite broad and can be explored through various facets, an emblematic and prolific case study is selected which would provide a backdrop to test and explore the research. Dharavi, in Mumbai, India provided as the ideal site, where its production of space has been of some interest to several academicians and scholars. The selection of the case-site was also heavily influenced by my participation in the honours programme (2016-2017), which used Dharavi as an empirical site for testing dominant western theory on self-made or informal settlements.

The main research splits into two sections – the spatial framework and the theoretical framework

(figure 1.5), in order to develop both parts complementary to each other. The theoretical framework provides the overview of the socio-economic dynamic and production of space within the informal settlements, focussing in the global south. Split into three sections thematically – urbanisation processes, the economic challenges and the policy implications - the project explores the dominant theoretical themes pertaining to informal settlement in the global south. This is supported by spatial analysis of Dharavi, using Dupuy's Network city model providing an exploration of Dharavi through three levels of operators – infrastructure networks, production-consumption networks and urban household networks. Both the theoretical and spatial analysis is combined to create a final analytical model for Dharavi, which comprises of a total of 5 layers (figure 1.5). The layers of historical context, policy and governance, landform and infrastructure, economic networks and social structure is used to explore Dharavi through a multitude of layers in order to develop a strategic framework for the whole of Dharavi illustrating it through a detailed design at the selected site of 13-compound.

This analytical model forms a core component of the thesis, echoed and reflected in both in the analysis as well as the design section, tying the narratives of research and design. The strategic framework and design framework proposed is derived directly from the conclusions of the analytical model, addressing absent or weak links within the layers of the analytical model. The research and design sections

Figure 1.5: Analytical Framework as a combination of spatial framework and theoretical framework; Source: Author



Analytical Framework

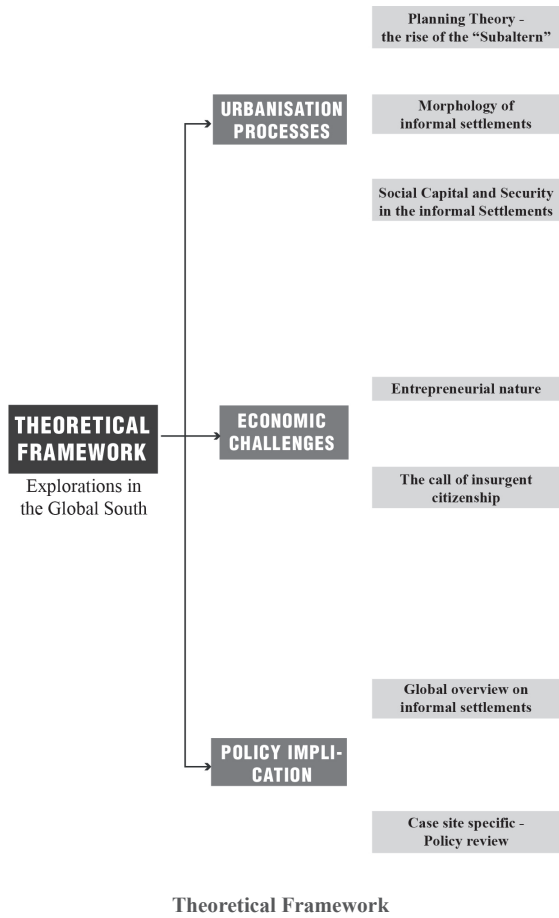


Figure 1.5

are therefore, irrevocably linked through the layer model which reflects in both research and design.

Aspect 2: The relationship between the graduation lab theme and the subject/case study chosen:

In this thesis, the overall objective is to develop a strategic framework illustrated through a design framework, i.e., deriving a set of spatial guidelines in combination with policy recommendations for Dharavi. In this connection, the graduation lab offered by the Complex Cities research group provides the necessary tools and techniques required to prepare a comprehensive project. Within the larger research group, the challenges of developing inclusive and sustainable redevelopment projects, particularly in informal settlements of the global south is addressed particularly by the 'Inclusive Cities' sub-research group, where design is proposed through a 'research-based' studio. Design and spatial planning is viewed as a cyclic process, illustrated in figure 1.6, which involves the formulation of strategic framework along with spatial design and policy to achieve that framework. The testing of this strategic framework contributes to the body of academic research challenging and revising the existing knowledge base. The theme offered by the Inclusive City sub-research group also explores issues of urbanisation, environmental sustainability and socio-economic integration under conditions of rapid urban growth, often coupled with inadequate governance and weak institutional capacity. Therefore, the selection of the research group and the sub-research group played a crucial part in developing an in-depth problem analysis.

The problem analysis is divided into 3 themes regarding informal settlements of global south in general and Dharavi in particular– urbanisation processes in India, production of economic space in informal settlements, and the paradox of redevelopment schemes in India. Each aspect is explored in-depth, writing critically on the processes involved in each aspect, contributing to defining the composition of sustainable and inclusive redevelopment projects for informal settlements more in general. The implication of current urbanisation processes on informal settlements such as Dharavi is explored through the shift in India's national economic and housing policy from its independence era (post 1947) to post economic-liberalisation era (post 1991¹). The latest shift in the national policy are dominated by market forces, which ignores the existing mode of production of space in informal settlements, that have resulted in non-inclusive, and unsustainable redevelopment projects. Redevelopment attempts and their failure are especially highlighted and evident in Dharavi, where the presence of a large economic industrial base is largely overlooked by policy makers and planners, which is presented by the problem analysis in the graduation report.

The project aims to propose a 'reframe' on the current approach towards redevelopment in informal settlements, approaching it through the lens of 'economic clustering'. The proposed model aims to achieve an implementable system for redevelopment that incorporates the existing socio-economic production of space, ensuring a more inclusive and sustainable result. What emerges from this research is the need to re-think the redevelopment models, especially in the

*Figure 1.6: Project Methodology;
Source: Author*

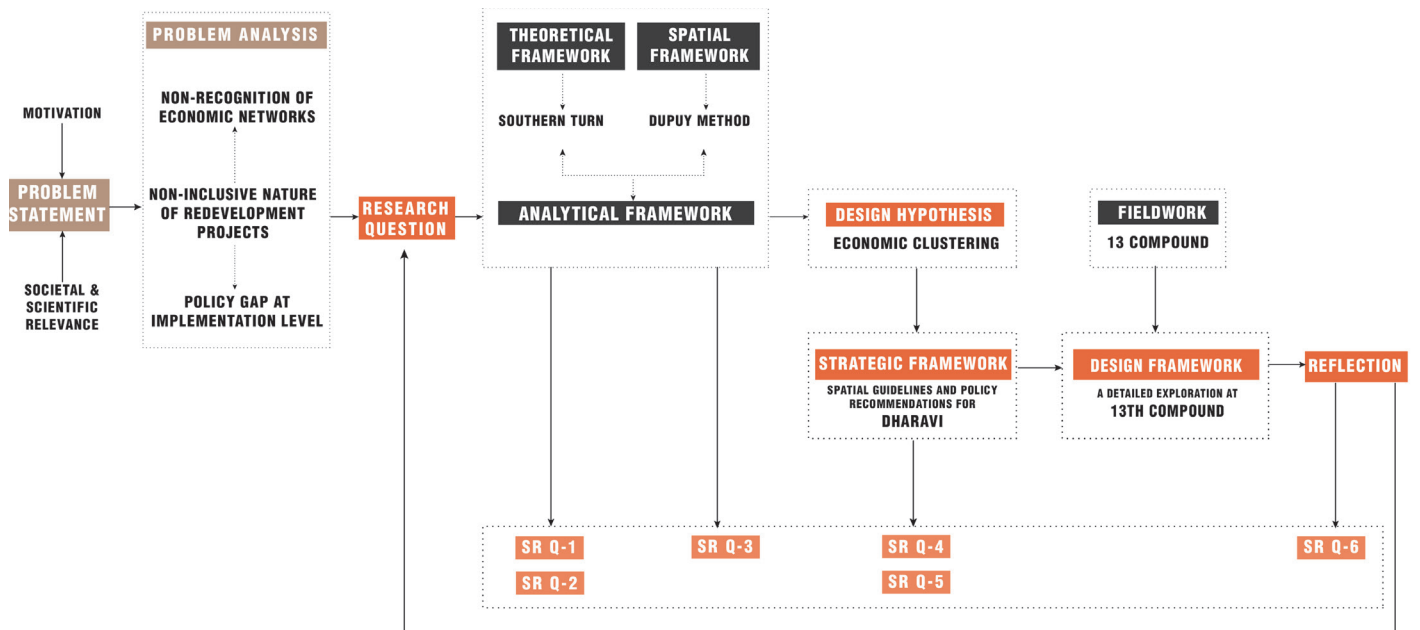


Figure 1.6

Project Methodology

urbanising global south. Academic explorations need to recognise the shift in urbanisation centre to the global and therefore needs to develop a deeper understanding of its distinct nature of production of space. This research aims to shed light on one such emblematic case-site of Dharavi, thereby contributing to the current body of work on informal settlement in the global South.

Aspect 3: The relationship between the methodical line of approach of the graduation lab and the method chosen by the student in this framework

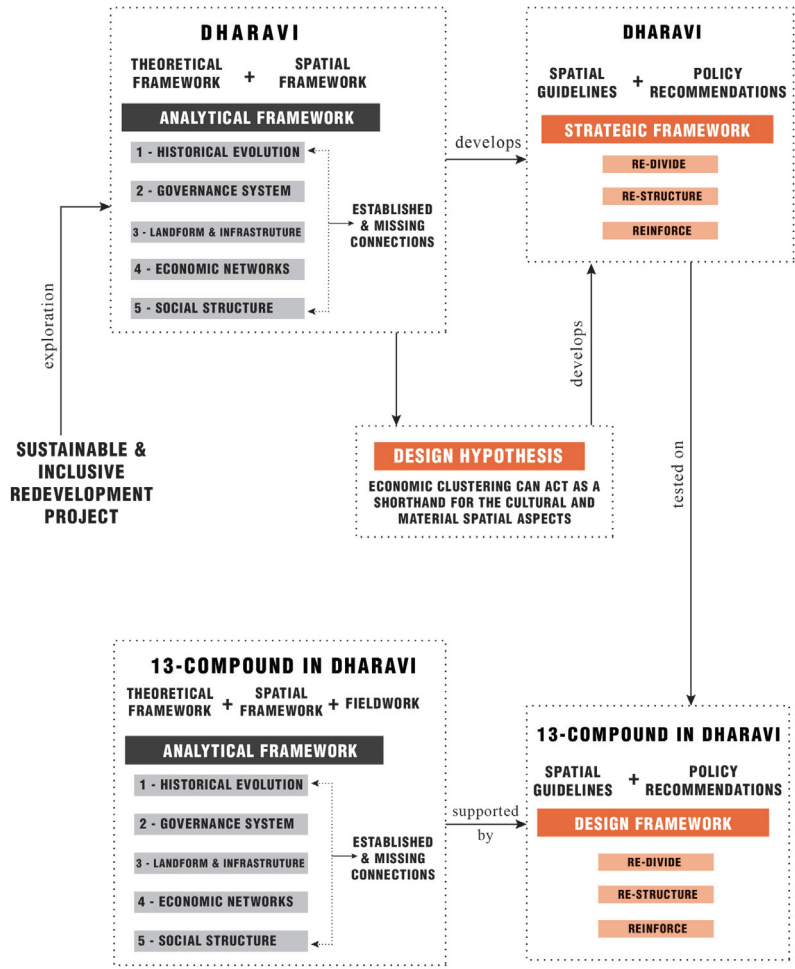
The methodology used in the project was guided predominantly by the research group's (Complex Cities – Inclusive Cities) approach of combining a theoretical model with a detailed spatial analysis, resulting in a final analytical framework for a selected site. This analytical framework also includes a detailed exploration of policy models and its implication on the spatial quality of redevelopment projects. The combination of theoretical, spatial and policy analysis is guided by the research studio's methodological approach. Other aspects of the research was supported by fieldwork – site observations and interviews, which forms an important part of the methodology, filling the gap imposed by the lack of data in informal settlements (such as Dharavi). Conducting interviews (both structured and non-structured) in Dharavi, proved particularly challenging as the given nature of its diversity in terms of economic activity and social structure. The workshops organised by the research

group regarding methodological approaches in fieldwork played a critical role in structuring the interviews and providing a framework for the observational analysis. Stakeholder analysis also formulates an essential part of the research which was guided by additional support from the research group. With the structure provided by the Complex cities graduation lab, fieldwork was assisted by URBZ (a research collective, working in Dharavi) who provided the much needed support at site level. Interviews and site visits were conducted with the logistical support from URBZ, who also provided historical insight into the socio-economic dynamics of Dharavi.

Aspect 4: The project and the larger social context

Research regarding redevelopment projects in informal settlements is not new – they have been part of a polarizing discourse in academia and policy makers. Informal settlements have proved their persistence and resilience even with promises of a modern India in the 21st century, however with deplorable living conditions in most Indian cities. Although there are several organisations and policies working for the rights of these settlements, there is a surprising lack of knowledge and discourse about the spatial quality of these settlements in relation to their cultural, social and economic standing. It is this missing discourse that this research places itself in – exploring the gap present in the policy discourse and the pre-existing socio-economic dynamics present in informal settlements such as

*Figure 1.7: Project & Design approach;
Source: Author*



Project Approach

Figure 1.7

the selected site of Dharavi. As a comparatively established and older informal settlement, Dharavi has been a prominent part of the academic discourse in India, especially in the last decade. Its socio-economic dynamics with economic and industrial production has also received attention from popular media. However, despite this attention, policy makers and planners in India have been unable to formulate long term redevelopment plans, resulting in deplorable and unsustainable living conditions that lack basic services and infrastructure in most informal settlements including Dharavi. Dharavi's notoriety, and the troubles faced by the recent attempt at redevelopment by the Dharavi Redevelopment Plan (DRP) have highlighted the problems faced by most slum rehabilitation processes in India, where the existing economic livelihoods and social networks are not considered. This does not mean that upgradation schemes are not required and that the pre-existing economic and social networks need to be preserved, rather, policy makers and planners need a rethink as to how to reformulate projects so as to ensure a long term inclusive and sustainable redevelopment. It is within the dual dialogue is required to be addressed by academia and policy makers, which this research aims to address and highlight.

Aspect 5: Project Limitations

Any research or graduation project is not without limitations. The biggest restriction faced in this project were the constraints of limited empirical fieldwork. Survey data and precise mapping is

limited in informal settlements such as Dharavi, restricting the accuracy of the spatial study in this thesis. The current data and survey set used is based off a survey commissioned by MM Consultants in 2008 and conducted by 'Mashal (Maharashtra Social Housing and Action League), at the commencement of the latest redevelopment scheme proposal for Dharavi. The survey data set is not comprehensive along with certain areas not being commissioned for survey work. Hence it is difficult for this project to truly present a complete picture of Dharavi. However, the project still make attempts to fill in this missing information of the database, particularly in the economic clustering present with Dharavi in general and 13-compound in particular. What would also provide a better contextual reference, would be a comparison with another informal settlement in Mumbai would validate some of the assumptions regarding the socio-economic space produced. It would also help map the impact of the redevelopment model presented in this research on the larger scale of Mumbai.

Notes:

1. The economic liberalisation in India refers to the economic liberalisation, initiated in 1991, of the country's economic policies, with the goal of making the economy more market and service-oriented and expanding the role of private and foreign investment. Specific changes include a reduction in import tariffs, deregulation of markets, reduction of taxes, and greater foreign investment. Liberalisation has been credited by its proponents for the high economic growth recorded by the country in the 1990s and 2000s. Its opponents have blamed it for increased poverty, inequality and economic degradation

