

**Public-Private Partnership and Affordable Housing: A Case  
Study of Greenwich Millennium Village**

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# **1. Introduction**

## **1.1 Background of the Study**

Housing, as one of the fundamental life components that has been related to sheltering, safety as well as economic development, is of vital importance to everyone in society (Henilane, 2016; Kemeny, 2001; Nair et al., 2005). Yet nowadays the provision and financing of housing for low-income groups has become one of the greatest challenges to countries worldwide and almost no country is immune to social problems such as lack of affordable housing supply, growing demand for housing and the imbalance between income and housing price (Dolbeare, 2001; Wetzstein, 2017; McKinsey Global Institute, 2014). Due to the huge amount of resources and financial investment needed in building affordable housing, the reliance on government as the sole source to fund affordable housing seems neither sufficient nor realistic. Therefore, in recent years, Public-Private Partnership (PPP), originally introduced as a way of financing infrastructure construction, has now been more frequently used in affordable housing projects as well (Ibem & Amole, 2013, p4; Jamali, 2004). Besides the financing function and providing more homes to the low-income groups, applying PPP in affordable housing provision can also bring about broader impacts in terms reducing the real estate bubble and mobilizing resources across the society, such as human and financial resources in the private sector that are not in use (Ibem, 2011).

Involving private developers in public projects to deliver a project successfully, however, can not be easily achieved, in view of the division of labor, management as well as the differences in interests between public and private sectors. One of the most-often cited successful examples of applying PPP in building affordable housing so far is the Greenwich Millennium Village (GMV) project in the UK (Silverman, 2007; Foletta & Field, 2011). In the 1990s, local authorities planned to build a housing project for urban regeneration in inner London as well as for the celebration of the Millennium 2000, which also explains why the project was named after "Millennium" (National Audit Office, 2008; Turner, 2000, p. 1632). This project was designed with many distinct features, such as PPP, low-carbon, innovative architectural design as well as diverse housing that combines both commercial and affordable housing (Innes, 2002). And with the successful delivery of the first stage (phase 1 and 2), the project has been considered a great success.

Though the GMV project has been extensively studied in terms of community building (Silverman, 2007), urban planning and design (Kim, 2005), and environmental protection (Williams, 2008), few studies have conducted in-depth analysis as to why it was established in terms of PPP and affordable housing, which distinguishes itself from

other housing projects. The successful establishment of the GMV project leads to the doubts as to why the British government would take a lead to plan such project while there was already the Millennium Dome specially built for the 2000 Millennium celebration in the UK? Why would private developers participate in this GMV project, when it should be more profitable in working in the commercial housing? And why would the London city government build such a community that mixes affordable housing together with regular commercial housing units?

With these puzzles in mind and considering the background stated above, this research tends to explore which factors have facilitated the establishment of the GMV project in terms of PPP and affordable housing. Studying this project in these two perspectives not only helps reach a deeper understanding of the application of PPP in financing affordable housing but also enables researchers to better assess the reasons behind its establishment other than the previous researches in disciplines such as urban planning or architecture. Moreover, as the provision of affordable housing has once again become the focus of discussion with rising housing prices in countries worldwide, this research also hopes to draw some insights from this case study and provide some recommendations for future projects (Brounen, Neuteboom & van Dijkhuizen, 2006).

## **1.2 Research Question**

Based on the background and research puzzles stated above, this research tends to explore in detail why the GMV project was established in terms of PPP as well as affordable housing, thus the research question is:

*RQ 1: Which factors facilitated the establishment of the Greenwich Millennium Village project in terms of PPP and affordable housing?*

## **1.3 Aims of the Study**

By conducting this research to answer the research question raised above, this study has the following aims:

*Aim 1: To identify the factors that are likely to facilitate a PPP project for affordable housing.*

*Aim 2: To understand the roles of the private sectors could play in affordable housing delivery in PPP.*

*Aim 3: To draw insights from this case study for future policies regarding PPP-financed affordable housing projects.*

## **1.4 Relevance of the Study**

The relevance of this research falls on both theoretical and practical grounds. Theoretically speaking, this study fills the knowledge gap of lack of systematic studies of the GMV project in terms of PPP and affordable housing, as most studies are done in disciplines such as urban planning and environmental protection. Thus, conducting a case study in these two perspectives helps bridge the knowledge gap and complements the current research on the GMV project, therefore enabling future researchers evaluate the GMV project in a more comprehensive way.

In practical terms, conducting such a thorough study on one of the most-cited examples of PPP helps both the academia and the industry to examine the factors that facilitated its establishment (Cooke, 2014). In this way, this research provides new perspectives on understanding the successful establishment of the GMV project. Furthermore, by analyzing the relevant factors in the Institutional and Analysis Development Framework, the research not only draws conclusion on the various possibilities that may have contributed to the establishment of the GMV project, but also provides insights on the role that private actors may play in public projects, which should be instructive on developing PPP-financed affordable housing and helpful for policy makers to better assess the role that private actors could play in undertaking public projects in the future.

## **1.5 Thesis Structure**

This thesis is organized in six chapters explained as follows.

*Chapter One* introduces the background, motivation and the aim, research question, as well as the structure of the research.

*Chapter Two* is concerned with literature review and theoretical framework. It first reviews previous research on PPP and its development in the UK. It then reviews literature on affordable housing, including its definition, significance as well as the rationale of the application of PPP in delivering affordable housing. As for the theoretical framework, the research first explains why the Institutional and Analysis Development Framework is suitable for the study and then explains the framework in detail. In the end, some expectations of the research question are also made based on the framework.

*Chapter Three* explains the methodology of the research, elaborating in detail the research design, justification of case selection, data collection instruments as well as the analysis techniques.

*Chapter Four* is about the empirical case study of the GMV project, which elaborates the case by firstly discussing the specific social and political setting under which the project was established. It then continues to explore the details of the project, such as the financing mechanism, relevant participants, different phases of development and the management.

In the analysis part of *Chapter Five*, the researcher starts the analysis by identifying the key variables as set in the theoretical framework and then explores their roles in the project. A figure of framework based on this project is drawn in the end to demonstrate an overall interplay among the factors and how they contributed to the establishment of GMV project.

Lastly, in *Chapter Six*, the researcher summarizes the findings of the research in the conclusion. The conclusion first returns to the original research question and theoretical framework to provide answers to the research question. It also discusses the strengths and limitations of the overall research design. Lastly, some recommendations are made both for future policy-making regarding the application of PPP in affordable housing and for further research.

## **2. Literature Review and Theoretical Framework**

### **2.1 Public Private Partnership**

#### **2.1.1 Defining Public Private Partnership**

Public Private Partnership, or PPP in short, generally refers to an institutional arrangement for the cross-sector collaboration between the public and private sectors (Wang, Xiong, Wu & Zhu, 2018). Originating in response to concerns about high level of public debt in the UK in 1990s, PPP was primarily intended to change the conventional model of public procurement (Rakić & Rađenović, 2011). Although it only started informally by individual negotiations among clients involved, it is now applied in various areas such as infrastructure, transport, and power industry, and is gaining more popularity among developed countries and developing countries alike (Ahadzi & Bowles, 2004; Melville, 2016).

Despite its popularity around the world and the strong momentum to grow, there has not yet been a universally-agreed definition for PPP. Various definitions have been given by scholars with the attempt to capture certain features of PPP (Mouraviev & Kakabadse, 2012, p. 5). For example, Sedjari (2004) believes PPP is a new "cultural phenomenon" and a "process of innovation" that demonstrates the "capacity for the collective mobilisation of participants which now forms the substance and strength of public programmes" (Sedjari, 2004, p. 13). In this perspective, forms of PPP can be

understood as "cultures" that vary in light of the differences among countries and specific conditions.

Collin (1998), instead of focusing on culture, argues that PPP is an instrument and an organizational form that situates between public and private sectors, with the incentives of public sector to attract scarce resources in the private sector, often in the form of money. Thus, from this perspective, PPP can be regarded as a viable strategy for financing (Collin, 1998, p. 7). Similar definitions can also be found in the work of Webb and Pulle (2002) and Sellgren (1990), where the financial arrangements within PPP are emphasized.

Bovaird (2004) argues that PPP should be an organizational arrangement where the risk is allocated and work is shared by public and private participants. Here, features such as cooperation and risk-sharing are underlined. Klijn and Teisman (2003) also had a similar definition where the sharing of risks, work, costs as well as benefits between the public and private partners are emphasized.

Grimsey and Lewis (2002) take a more comprehensive perspective, highlighting the roles of both public and private sectors in a long-term contractual agreement to provide public service. It is a relatively comprehensive definition in that it covers the necessary elements, such as long-term agreement and usually infrastructure facility construction in PPP that needs to be taken into account. Below is the table that summarizes the representatives and assess the key features of each strand of definition on PPP discussed above.

Table 2.1 Overview of Definitions of PPP

Name of the Author	Definition of PPP	Assessment
Sedjari (2004, p. 13)	"The capacity for the collective mobilization of participants which now forms the substance and strength of public programmes".	1. Focuses on the cultural perspective to demonstrate the property of PPP distinct from conventional public procurement; 2. One-sided and insufficient to explain or exactly define the process PPP.
Collin (1998, p. 7)	"A partnership between a municipality and one or more private partners is one of the	1. Stresses on the nature of sharing and joint efforts between the public and private sectors



	many forms for the municipal production of services to satisfy the needs and demands of citizens available".	2. Points out the most common and important aspect (financing) in PPP
Bovaird (2004, p. 1)	"Working arrangements based on a mutual commitment (over and above that implied in any contract) between a public sector organization with any organization outside of the public sector".	1. Pays attention to the key features of PPP such as risk-sharing and collaboration. 2. Stresses on the organizational nature and governance
Grimsey & Lewis (2002, p. 7)	"Agreements where public sector bodies enter into long-term contractual agreements with private sector entities for the construction or management of public sector infrastructure facilities by the private sector entity, or the provision of services (using infrastructure facilities) by the private sector entity to the community on behalf of a public sector entity".	1. It is a relatively comprehensive perspective that takes into account various elements of PPP. 2. Focuses on the exact process of PPP

From the concise review above, it can be noted that many of the definitions share certain features, such as the focus on the sharing of work and risks, and the financial relationship between the public and private parties (Khanom, 2010, p. 5). The overlaps and subtle differences among these definitions may suggest that the core feature of PPP, such as collaboration and financial relationships, are all recognized by these scholars while the exact definition need adjustments depending on specific conditions.

The conceptualization of PPP is not the only place that sparks controversy. Besides the controversy in the academia, the definitions of PPP given by institutions, where PPP have already been largely conceptualized as contracts, also differ a lot. This is because PPP is often established via and conceived as contractual partnerships, since it is frequently presented in the form of a specific project (Mouraviev & Kakabadse, 2012, p. 10). Thus it is more common to define PPP by conceptualizing it as "contracts". Below is a list of often-cited definitions of PPP made by various institutions.

Table 2.2 Definitions of Contractual PPP

Name of Institution	Definition of Contractual PPP
World Bank (2014, p. 14)	"A long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance".
UNESCAP (2011, p. 1)	"A legally binding contract or some other mechanism in which public and private parties agree to share responsibilities related to implementation and/or operation and management of an infrastructure project".
OECD (2012, p. 18)	"Long term contractual arrangements between the government and a private partner whereby the latter delivers and funds public services using a capital asset, sharing the associated risks".
Asian Development Bank (2008, p. 1)	"A range of possible relationships among public and private entities in the context of infrastructure and other services".
UK Trade & Investment (2013, p. 2)	"Partnerships which involve everything from operating facilities and providing services on behalf of the public, to flexible methods of financing these services".

Drawing from this table, it should safe to say that the term *Public Private Partnership* can be regarded as an umbrella concept that encompasses a wide range of cooperative and contractual relationships between the public sector and private entities in which both parties share the risk and the responsibility of delivering public service. Thus, a precise definition of PPP may need to adjust according to specific contexts.

For this study, the definition given by the UK Trade & Investment is adopted, as the case study is conducted under British context and thus this definition would be more relevant and applicable. Under this definition, a project qualifies PPP when works such as design, construction, financing and operation are done by the private sector in an attempt to deliver an infrastructure project.

### **2.1.2 Types of Public Private Partnership**

For an in-depth research regarding PPP, a more detailed distinction of the types of PPP is necessary. Scholars again take various approaches to classify the types of PPP in general. Kouwenhoven (1993), for instance, distinguishes PPP between broad sense and narrow sense, where "the broad PPP" refers various forms of partnerships, including less formalized platforms while "the narrow PPP" only refers to joint ventures between public and private parties (Kouwenhoven, 1993, p. 120); Dmitrieva

and Guseva (2017) distinguishes between contractual and institutional PPP. Under this approach, institutional PPP stipulates institutional structure with predominant control of the private sector, a Special Purpose Vehicle (SPV) or a company, for instance, whereas a contractual PPP does not stipulate any new entity but only contractual relations between the public and private parties (Dmitrieva and Guseva, 2017, p. 4); Lukmanova and Mishlanova (2015) analyzed via the object-based approach, classifying PPP depending on the "object" of the partnership, such as roads, housing and healthy services (Lukmanova & Mishlanova, 2015, p. 3). Each of these approaches builds on its own understanding of PPP, and yet so far no single approach is unanimously agreed.

In the UK, many types of PPP have been developed over the years and applied widely so as to provide more funding to finance public projects (Zhou & Xu, 2012). For example, in the local housing sector, the *Large Scale Voluntary Transfer*, refers to the practice that the local governments transfer large quantity of *council housing* (a form of public housing in the UK) to housing associations. These associations are expected to renovate the housing via private investments or loans to let these housing meet the standards set by the government (Zhou & Xu, 2012).

Nationwide, two main types of PPP exist in the UK market. The first type is the *Private Finance Initiative (PFI)*, which was introduced in 1992 by the Conservative government of John Major who aimed to reform in the public sector by bringing the expertise and efficiency from the private sector and encourage a systematic development of PPP in the UK (OECD, 2015). The fundamental difference between PFI and conventional public procurement is concerned with which party raises finance for the public project (National Audit Office, 2018, p. 2). That is, while it was the public sector that provides the finance for the public project in the conventional procurement in the past, it is now a private entity, often in the form of a SPV that does the job in PFI. Thus PFI can be conceived as a means for the state to finance without having to raise funding from itself so as to reduce the borrowing in the public sector (Chu, 2017). Since 1997, when the Labour government came into power, its leader Tony Blair furthered the PFI by switching to focus on "value for money" for the taxpayer, which refers to the "cost-effectiveness" of a project. A project can achieve the "value for money" if it can deliver the similar service at lower cost than its conventional cost on the public side while appropriately allocate risks. (Grimsey & Lewis, 2005, p. 15).

Nonetheless, it turns out that many PFI-financed programs ran out of budget and did not meet the goal of the "value for money" because in many cases it might seem cheap on the surface but the cost could easily add up (Creasy, 2017, p. 2). Thus the second type of PPP, the *Private Finance 2 (PF2)* was introduced in late 2012 in order to overcome the deficiencies of PFI. A number of changes have taken place to make

this new type of PPP more efficient and less costly. For example, the percentage of debt decreased from 90% to 75% in the total finance structure while the amount of equity increased 10% to 25%. But the core mechanism, in which the private sector is responsible for financing, building (and maintaining) while the public pays annual fee during the contract, still remained (National Audit Office, 2018, p. 38).

The ultimate difference between the PFI and PF2 lies in the requirement that the private developers need to invest a certain amount of funding as equity, "acting as a buffer against the risk borne by lenders" (National Audit Office, 2018, p. 38; Hellowell, 2015). Also, with PF2, the government tried to reduce procurement times, acting as a "minority co-investor" and improve transparency during the process (HM Treasury, 2018, p. 7). Such changes enabled the government to maintain the core advantage of the PFI of financing while having less risks of having tight budget. And the new PF2 was designed to attract new and more diverse equity and debt providers, such as investment funds and insurance companies (National Audit Office, 2018).

Currently, because the duration of both types of PPP are both relatively long (usually 20 or 30 years), there are hundreds of projects across many industries, such as housing and healthcare, running under both PFI and PF2.

## **2.2 Affordable Housing**

### **2.2.1 An Overview of Affordable Housing**

Before discussing the significance of affordable housing, it is essential to first understand the definition of affordable housing. Generally, affordable housing refers to housing that helps low-income households whose income is not sufficient to access housing with market price, though there are slight differences among regions and countries (Milligan, Phibbs, Fagan & Gurran, 2004, p. ii). In recent years, however, related terms such as *public housing*, *social housing* are often used interchangeably with *affordable housing*, which further adding the complication of definition (Gabriel, Jacobs, Arthurson, Burke & Yates, 2005, p. 6). Therefore, although it is a frequently-used term around the world, there has not yet been a consensus upon its definition.

The contest and debate of the definition over affordable housing mainly lies in the exact meaning and measurement of "affordable" (Urban Research Centre University of Western Sydney, 2008, p. 9). One common practice in defining affordable housing is to use the family income as a benchmark, often referred as the "income-ratio approach". For example, a housing unit that costs between 25% to 30% of the total family income would be considered as "affordable" (Koebel, Lang & Danielsen, 2004, p. 16). However, a definition with such a clear-cut standard can be difficult to apply to all circumstances due to the different specific situations. For instance,

sometimes housing that costs over 30 % of the family income are allowed in certain affordable programs while housing with the cost lower than 30 % of the income may not be considered affordable depending on certain characteristics of the renter, for instance, age (Koebel & Rennecker, 2003). Thus, this approach cannot be applied to all cases.

Another approach to define affordable housing relates to the residual income. Under this approach, affordable housing is defined by considering whether the income of the family could cover all expenses after accessing to the house (Stone, 2006, p. 8). This approach arises from the recognition that housing is often the single biggest expenditure of households, and that the family budget not only decides the type of housing, but also determines other related non-housing expenses such as maintenance and tax (Stone, 2004, p. 3). According to Stone (2004), a household can be regarded as "shelter poor" if it cannot meet its non-housing expenses after purchasing the housing unit, and the "shelter poverty" can thus be used as the standard to be eligible for affordable housing.

A third perspective of defining affordable housing is concerned with median housing prices or rents (Burchell & Galley, 2000). That is, if the costs of purchasing or renting the housing is affordable for a family that earns the median income in its region, the housing can be considered as "affordable". Via this approach, many more factors need to be taken into consideration such as the median income and minimum wage in the region (Koebel, Lang & Danielsen, 2004). Compared with the previous approaches, this approach is more flexible to regional differences.

In a nutshell, the problem with all the definitions discussed above is that although the term *affordable housing* can be relatively easy to understand, putting it into practice can be a completely different story due to the specific circumstances. The complexity of defining affordable housing also demonstrates that there might not be a single definition of affordable housing that applies to all situations and that it is therefore essential to clearly identify the policy backgrounds and social needs before designing any policies so as to meet the needs of the target group and let the policy play its due role (Gabriel et al, 2005, p. 37).

### **2.2.2 Defining Affordable Housing in the UK**

To study the GMV project located in London, it is also pivotal to explore how the concept is defined and categorized in the British context. Over the years, many attempts have been made to define affordable housing in the country, and no all-encompassing definition has been reached in England (Wilson & Barton, 2018, p. 5). Various government agencies and documents gave different definitions on this term. For example, in the third report of the Office of the Deputy Prime Minister (ODPM):

Housing, Planning, Local Government and the Regions Committee, affordable housing was defined as "subsidized housing that meets the needs of those who cannot afford secure decent housing on the open market either to rent or buy" (ODPM, 2006, p. 5). In 2018, in the *National Planning Policy Framework (NPPF)*, affordable housing is defined as "housing for sale or rent, for those whose needs are not met by the market (including housing that provides a subsidised route to home ownership and/or is for essential local workers)" (Ministry of Housing, Communities and Local Government, 2018, p. 64).

The dissension over the definition of affordable housing also appeared among political parties. For example, in his speech at the Conservative party conference in 2015, the then-party leader Cameron intended to reform conventional housing policies by shifting "generation rent" to "generation buy", leading the definition of affordable housing to include "starter homes" (homes specifically for the first-time buyers) besides properties for rent (Cromarty, 2016, p. 3). On the other hand, the Labour Party, in view of the fact that the definitions given by the Ministers are not trusted by the public, created a "legal definition" of "affordable homes" that linked to local incomes instead of market prices and to residual household deposit at disposal (The Labour Party, 2018, p. 3).

At the local level, a definition was also given by *the London Plan*, which is now commonly used in the UK government, describing affordable housing as "social rented, affordable rented and intermediate housing, provided to eligible households whose needs are not met by the market. Eligibility is determined with regard to local incomes and local house prices. Affordable housing should include provisions to remain at an affordable price for future eligible households or for the subsidy to be recycled for alternative affordable housing provision" (Greater London Authority, 2017, p. 117).

Again, even no certain consensus on the definition of affordable housing was achieved in the nationwide of the UK. But this study chooses to adopt the definition given by *the London Plan*, as the GMV project is located in London and that *the London Plan* was launched during the construction of the project. Thus definition is more relevant for this context. Under this broad definition, according to *the London Plan* (2017), affordable housing can be classified into three kinds: social rented, affordable rented and intermediate housing. *Social rented housing* refers to the housing that is owned by local governmental or private entities, whose target rents are decided by the national rent schemes (Greater London Authority, 2017, p. 117); *Affordable rented housing* refers to the housing let by local governmental or private providers of social housing to those eligible households for this type of housing (Greater London Authority, 2017, p. 118); And *intermediate housing* refers to the housing that are available for sale as well as for rent at a cost above social rent, but

still below market levels, such as shared ownership and equity loans (Greater London Authority, 2017, p. 118).

### **2.2.3 The Challenges of Affordable Housing in the UK**

The challenges of affordable housing in the UK arise primarily in the imbalance between growing demand and the short supply. According to The Office for National Statistics (ONS), which is responsible for estimating the number of households in England, there had been a steady increase in almost all the regions in England from 1996 to 2017, and overall, the need of household increased by about 15% (ONS, 2016). By contrast, the supply of affordable homes had been bumpy and not far from being sufficient to meet such demand (Ministry of Housing, Communities and Local Government, 2018, p. 3). The objectives for the government remained to drive up affordable housing supply and increase home ownership (National Audit Office, 2017, p. 5).

A second challenge for the UK in affordable housing is concerned with the dominance of "home for sale" in the UK housing market. This may exacerbate the first challenges in affordable housing because it makes home ownership almost inaccessible for those low-income group who are not capable of affording a property and that little incentive remains among the private developers to build houses to meet the growing demand if their profits are damaged (Archer & Cole, 2018).

Last but not least, for tenants, due to the lack of sufficient supply on housing market, they would need to continue to pay for the high rent and have less savings in their pocket to buy a property later. This vicious circle not only damages the economic benefits of the tenants but also have an impact on the sustainable usage of the land in the society at large, because the developers can now earn without developing any new properties with rising land prices (Wilson & Barton, 2018).

In short, building more affordable housing in the UK is confronted with a host of challenges, including the high cost of building affordable housing, the disequilibrium between the supply and demand, as well as the motives of developers. Among the challenges for affordable housing, the supply side has always been considered as the root cause (Wilson & Barton, 2018). Addressing these challenges, especially the root cause, helps relief the economic burden of the low-income groups, sustain the development of land and drive the housing market to develop in a healthy manner (Wilson, 2018).

## 2.2.4 The Significance of Affordable Housing

As one of the most important public goods in the society, the significance of affordable housing cannot be emphasized too much (Coate, 2013). It plays important roles in areas such as employment, local fiscal benefits and wider economy. To be specific, the construction of affordable housing creates more jobs, the ongoing construction brings more income to the government by taxes such as sales taxes and income taxes from the workers, and the community development of the affordable housing may bring spillover effects such as more consumption, more investment and more jobs, which stimulates local economic growth (Wardrip, Williams & Hague, 2011). This part mainly explores the significance of affordable housing in the UK as a rationale for addressing the challenges discussed above.

First of all, the challenges of the UK housing market mentioned above may lead to a "housing crisis", in which the lack of housing supply and the problem of affordability account for the two major and direct reasons according to the debate of House of Lords (2018, p. 3). In view of the fact that the UK already faces these two major problems at present, addressing the problem of affordable housing may help to prevent a potential housing crisis in the future.

Secondly, affordable housing can be an entry point for governance in housing market. As described, a housing market where the developers are no longer incentivized to develop new property but only wait for the price of the land to rise may induce aberrant market development and thus lead to potential housing crisis. Governing such anomaly from the government side would thus bring the housing market back on track. And as the housing market is closely related with the general economy, tackling problems in affordable housing would also drive the economy to develop in a healthy manner (Quigley, 1999).

Thirdly, it serves for poverty alleviation. Housing and poverty are related in a number of ways. For example, high housing costs reduce household income, and short of housing supply may also lead to more homeless people or reduce the earning potential if it has an impact on the ability to secure employment (Crisp, Eadson & While, 2016). As in the case of the UK discussed above, the higher the rent, the less savings there would be in the pocket of the tenants. Therefore, the poor would remain in this vicious cycle and stay in the poverty trap. Increasing the supply of affordable housing would bring about more household income at disposal and more chances to purchase a home of their own, and thus alleviate the issue of poverty in the region.



## 2.3 Why Use PPP in Affordable Housing Provision

The provision of affordable housing, as stressed above, is crucial to society. The conventional wisdom in the UK to solve this problem often starts from the supply side, namely to build more affordable houses by the government so that the houses in general, due to large supply, would be more affordable (Blumenthal, McGinty & Pendall, 2016). However, this is not always plausible because of barriers such as the large amount of investment requirement, the red tape of the planning system and the viability tests in which developers always seek to reduce the affordable housing from planned development (Wilson & Barton, 2018, p. 54).

The lack of funding and the need for financing made the involvement of private sector, namely PPP, a popular option among countries worldwide (Schur, 2016). Furthermore, besides the benefit of alleviating the financial burden for the government, according to a reassessment report of PPP released by HM Treasury in 2012, introducing private capital into the public sector brings extra benefits. The major benefits of PPP are summarized below from both the supply side and the demand side. From the perspective of the supply side, using PPP in providing affordable housing mainly lies in the advantages in the private sector, such as bringing expertise as well as risk-sharing, as well as in the shortfalls of public sector, such as low efficiency and lack of funding.

### *Financing Sources*

Sometimes public projects fail for a variety of reasons, such as poor leadership, inefficient project management, the unwillingness from the government to undertake certain risks and above all, the lack of sufficient funding to provide financial support for the project in the long run. This is because public projects, such as the building of infrastructure or affordable housing, are often both so time-consuming and money-consuming that they easily go beyond the fiscal sustainability of the governments (Holgeid & Thompson, 2013). Under these circumstances, private funding could zoom in by bridging this gap and thus form a collaboration with the public sector. Compared with public entities, private parties often have more sources of funding and flexible ways of financing, thus PPP can serve as an efficient financing source to financially support public projects (Ahmad, Bhattacharya, Vinella & Xiao, 2014). It is also one of the fundamental drivers for the application of PPP worldwide (Botlhale, 2016).

Moreover, one recent study of PPP in the UK in particular has shown that with the participation of private capital, the expected returns far exceed the underlying cost, making the PPP project much more cost effective than pure public funding (Inderst, 2017). Therefore, with more cost-efficiency, PPP-financed projects are often not only sufficed with funding but also could be of high value-for-money for both public and

private sectors that would benefit the society as a whole in the long run (Adighibe, 2015).

### *Mobilizing Resources*

The resources here refer to the unfair competitive advantages in public and private sectors respectively. For example, the private sector is known for its expertise and efficient management while the public sector has more advantages in legal and administration power as well as in the decision-making process (Pârvu & Voicu-Olteanu, 2009). These resources are scattered in an imbalanced manner and during PPP, a resource-relocation process would take place in this cross-sector collaboration, in which the private entities would relocate their unique resources to projects that produce higher values to them, while the public sector also mobilize their unfair resources to project delivery (Allas, Assi, Carrigan & Dillon, 2018).

Relying on the resources brought by the private sector and the decision-making power in the public sector, PPP projects may be achieved with more expertise, higher technical standards, efficient management as well as better project delivery to the public (Ojebode, 2016, p. 58).

### *Risk sharing*

Any project that entails investment is subject to uncertainty and risks (Checherita & Gifford, 2007). Especially for PPP projects, the risks can be of greater scale due to the relatively big amount of investment, long duration of the project, and the trade-offs and compromise between the public and private actors.

Under PPP, risks are always shared between public and private entities. To be specific, risk sharing is achieved by transferring certain risks that were only borne by the public entity to the private entity. This process, when finished with efficiency and optimization, could create a "good deal" for the society (Hovy, 2015, p. 1). At the same time, common risks seen in the market as a result from relevant market conditions, transaction costs as well as the risk allocation mechanism are all shared by public and private parties.

As for the demand side, with rising housing prices and growing need for housing, affordable housing is always in demand and even short of supply (Wilson & Barton, 2018). The very reason to meet the demand side lies in primarily the right to housing as written in the commitment of the UN. That is, housing provides protection against forced eviction, freedom from arbitrary interference with the home of others, and the right to choose one's own residence (OHCHR, 2015, p. 3); Also, sufficient supply of affordable housing, can relieve social issues and strengthen the cohesion of the society (Ponce, 2004).

## **2.4 Theoretical Framework**

Theoretical approaches vary according to the focus of research. Especially for the analysis of a complex institutional policy outcome, process-focused approaches are often preferred in order to conduct in-depth analysis of the variables scattered in the action arena (Yilmaz, 2013). For this reason, the Analysis and Development Framework developed by Elinor Ostrom is adopted. In this section, the researcher first explains the rationale of why particularly this framework is adopted and elaborates the framework in detail. In the end expectations are made regarding the potential factors that may have contributed to the GMV project based on the framework.

### **2.4.1 The Selection Rationale**

To answer the research question, it is fundamental that this study should adopt a comprehensive theoretical framework that enables the researcher to examine the multiple factors in the complex societal setting, which may have contributed to the establishment of GMV project in a simultaneous as well as a consequential manner. For this reason, the Institutional Analysis and Development framework was selected as the grounding theory for analysis.

The Institutional Analysis and Development (IAD) framework was first developed by Elinor Ostrom, a Nobel Laureate in Economics, in the 1980s in an attempt to analyze the dynamics of institutions and their formations. And with years of development, the IAD framework now, according to Ostrom (2005, p. 15; 2011, p. 3), has become a "multi-tier conceptual map" that is possible to "zoom in" or "zoom out" of any particular hierarchical part of the interaction in a social system. Over the years, this framework has been constantly extended and enriched by many other researchers and is now characterized by its interdisciplinary nature, featuring the capability of combining and synthesizing with many other analytical techniques from other disciplines (Polski & Ostrom, 1999). The framework now encompasses a host of variables to analyze the actors, their actions and the patterns of their interaction, concerning institutions, social backgrounds as well as policy outcomes (McGinnis, 2011; Ostrom, 2011). Therefore, it is suitable for analyzing a complex societal issue that involves multiple factors and institutions like the GMV project.

Besides the comprehensive consideration of the policy-making process, this framework also possesses two distinctive features that makes it suitable for this research. On one the hand, its informative and extensive structure allows the researcher to further explore the various kinds of exogenous factors that have had an impact on the action setting, making the research more thorough and substantial in its content (Ostrom, Gibson, Shivakumar & Andersson, 2014). On the other hand, it is

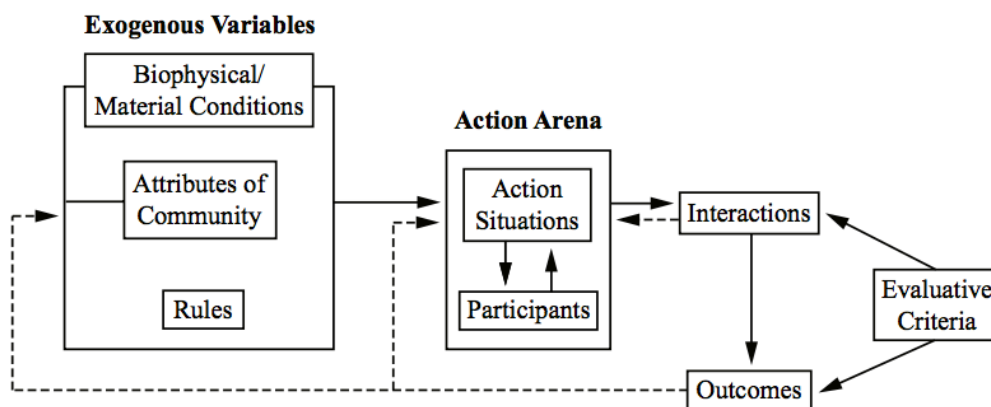
also a highly flexible framework that could be employed to examine the dynamics between various actors, institutions and policy outcomes (Lam, Lee & Ostrom, 1997).

In short, the IAD framework can be best summarized as a systematic and comprehensive method of analyzing policies, which takes into account the context, actors, action area, mechanism of interaction as well as the final outcome (Carter, Weible, Siddiki & Basurto, 2015). And by applying this framework, the researcher hopes to derive insights from the impact of different institutions and actors as well as the dynamics of their interaction so as to explore the potential factors that have contributed to the establishment of GMV project.

### 2.4.2 Institutional Analysis and Development Framework

The IAD framework can be regarded as an institutional arrangement that enables the researcher to identify structural variables which jointly produce a final outcome (Ostrom, 2011, p. 3). Within this framework, the actions of actors and the social space in which they interact with each other form the *action arena*, whose structure is jointly determined by three sets of exogenous variables, namely *biophysical conditions*, *attributes of community* and the *rules*. The action arena then leads to a certain pattern of interaction and produce an outcome. A detailed description of the IAD framework can be elaborated by the diagram as follows:

Figure 2.1 Institutional Analysis and Development framework



Source: Adapted from E. Ostrom, Gardner, and Walker 1994, p. 37; Ostrom, 2011, p.

In the figure above, for the exogenous variables, the concept *Biophysical/Material Conditions* refers to the physical conditions in which the actions are acted (Ostrom, 2005, p. 22). The particular attributes of the physical world have a great impact on the outcome of actions, so an action may produce contrasting results in under different physical conditions; *Attributes of Community* is concerned with a community in which the action arena is located. According to Ostrom (2005), these attributes

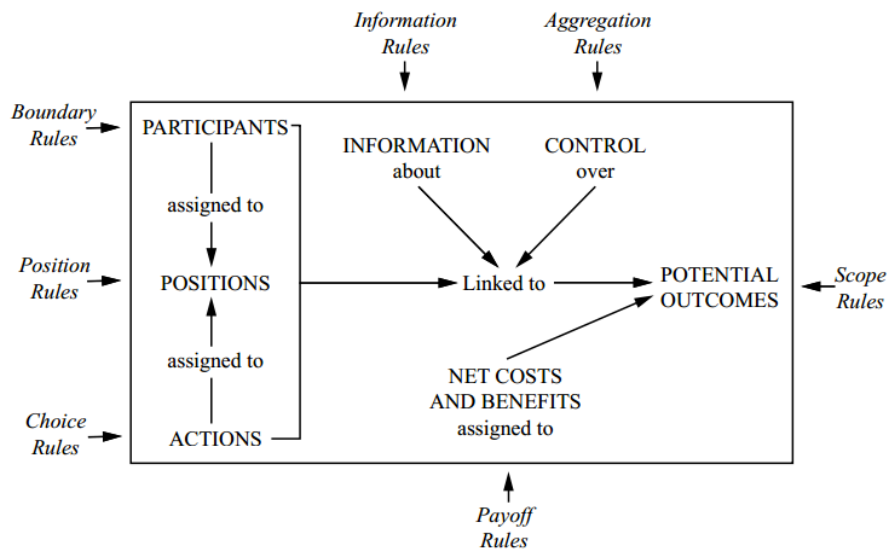
include: the values of action that is accepted by the community, the common understanding shared by participants regarding the action arena, the extent to which the preferences among the community members are homogeneous, the scale of the community and the equality distribution among those that are affected by the action.

The concept of *Rules* is of fundamental importance in analyzing institutions (Hodgson, 2004), but this concept has been conferred with different meanings and significance by scholars over the years, such as instruction (Black, 1962) and widely accepted moral standard within a community (Allen, 2005). Under this framework, the concept of rules refers to a common understanding shared by participants on the requirement, prohibition and permission of certain actions (Ganz, 1971; V. Ostrom, 1980; Commons, 1959; Ostrom 2005). To some extent, rules define and constrain behaviors (Ostrom 2005). On their origin, rules are often presented principally in the form of physical laws and regulations. Thus rules, with a regulatory purpose, are meant to "rule in" certain actions while "rule out" some other actions (Ostrom, 2005).

Different types of rules have different impacts on the action arena. According to Ostrom (2005), *position rules* are the fundamental building block in the actions situation. It sets the position and the number of the participants, restricts their actions and links participants to the actions in the IAD framework. But these rules vary in their specifications and the number of participants allowed; *Boundary rules* are more clear-cut that sets the criteria for entry and exit of the action arena. They sometimes even specify which actor is eligible for a particular position (Ostrom, 2011); *Choice rules* take a step further, setting the more specific rules of what a position is supposed to do and not to do under given conditions. These rules are dependent on the position, and prior actions taken by the participants (Ostrom, 2005); *Aggregation rules* are about the decision making, which are often necessary when the choice rules assign a number of positions the control over the same action process. Under these circumstances, aggregation rules are needed to determine which participant(s) have the ultimate control or decide which actions to be taken (Carter, Weible, Siddiki & Basurto, 2015, p. 5); *Information rules* are the channels from which the participants acquire information and by which the participants are required to communicate in the action arena in a certain form (Ostrom, 2005); *Payoff rules* is about offering rewards or imposing sanctions for a certain action. Sometimes, it can also be concerned with profit-sharing among the participants (Ostrom, 2010, p. 5); Finally, the *scope rules*, which affect an already-known outcome variable in the situation, specify the range of the outcome in the action arena (Ostrom, 2011).

The more intuitive functions and interrelation of these rules, according to Ostrom (2005), be demonstrated as the figure 2.2 shows below.

Figure 2.2 Types of Rules



Source: Ostrom 2005, p. 189

Similar to rules, *action arena* is also a broad concept, which be of local, regional, national and international scale (Ostrom, 2005, p. 13). It is a focal point for analysis, consisting of the action situations and its participants. When certain actors are confronted with a series of actions that lead to an outcome in a social space, they can be regarded as "participants" in an action situation (Ostrom, 2005, p. 32; Nigussie et al., 2018, p. 2). This is because on the one hand, the participants are the major "working parts" and the driving forces for the action. Their behavior depends primarily on the preferences driven by self-interest, but could also be affected by external interventions (Frey & Jegen, 2001, p. 591). In the *Motivation Crowding Theory*, Frey and Jegen (2001) explained that external interventions could have both a function of "crowding out" intrinsic motivation when the individual perceive control from external parties, and a "crowding in" function when they feel supported by external parties. In the former case, individuals would react by reducing their motivation, while in the latter case, they react by taking more initiative and being more active; On the other hand, the action situations are the elements structuring the given conditions for the participants to act (Ostrom, 2005). Given different situations, the actions and the interaction among the participants would lead to different outcomes.

For the *patterns of interaction*, they refer to the "structural characteristics of an action situation and the conduct of participants in the resulting structure" (Polski & Ostrom, 1999, p. 24). Although they are not necessarily the prerequisites for establishing certain policy outcomes, they indeed affect the efficiency of outcome delivery and thus the success of the project. For example, under highly tight-up circumstances with constraints on action situations, it is often more likely that a policy analyst could make strong interferences and predictions following the logic development in the

action arena (Polski & Ostrom, 1999, p. 24). During this process, the availability of information also plays a key role, as it enables the participants to take certain actions and positions accordingly (Ostrom, 2010; van Es, 2017). And after the outcome is produced, *evaluative criteria* will be employed to judge and evaluate the performance of the system as a whole. During this evaluation process, the patterns of interactions and outcomes would be examined again and adjusted.

It should be noted here that the outcome is not only evaluated, but will also feed back onto the participants in the action arena. Over time, as a result, the outcome will gradually transform, which would also have an impact on the outcomes (Ostrom, 2005, p. 13).

### **2.4.3 Possible Factors Contributing to the GMV Project**

Based on the theoretical framework discussed above, it should be safe to say that the outcome of a single project can be attributed to multiple-level institutions and actors, which can be categorized into the IAD framework discussed above.

If the IAD framework suits the GMV case well, it could be expected that various variables could all contribute to the establishment of the GMV. Firstly, exogenous variables rooted in physical societal backgrounds, the wide-accepted social values in the British society as well as the policies regarding affordable housing and PPP, may have established the physical need for establishing such project; Next, the roles of actors and the action situations on which they acted upon may also impact on the final outcome, that is, the delivery of the GMV project. Moreover, during the process, the interactions among these actors may further decide the efficiency and final outcome of project.

And indeed, according to the IAD framework variables like the *evaluative criteria* may also have an impact on the adjustment and progress of the project. But as this research studies specifically the factors that have facilitated the GMV establishment in the first place, the evaluative criteria are not extensively discussed.

## **3. Research Methodology**

Building on the literature review in the previous section, this chapter elaborates on the broad methodology as well as specific techniques used in this research.

### **3.1 Research Design**

To study the factors that promoted the establishment of PPP, many studies adopted qualitative approaches (Ojwang, 2015; Ojebode, 2016; Oliveira, 2015). This study also follows a qualitative approach, because it enables the researcher to understand not only the interrelation between variables, but also discover the how exactly the interaction of these variables facilitated the establishment of PPP. Moreover, this research employs a single-case study that gives more flexibility in interpreting and evaluating the causal mechanism in more dimensions (Gaya, 2016; Nock, Michel & Photos, 2007).

Another important argument for choosing this qualitative approach is that this study has little intent to count exactly how many factors contributed to this GMV project or make any predictions on the tendency of future for generalization. Therefore, a qualitative approach serves better for the research goals than the quantitative approach. A more detailed description of the research strategy is elaborated below.

### **3.2 Research Strategy**

This study adopts a single-case study method to explore the factors that promoted the establishment of PPP.

#### **3.2.1 A Single Case Study**

The method of case study is one of the most common methods for conducting research. Researchers use case studies not to just analyze the case itself, but also in order to define cases and to understand it in a social setting (Cousin, 2005). The method of case study is said to be useful in evaluating programs (Baxter & Jack, 2008) and can be helpful in understanding the internal organization and process (Gilbert, 2005; Galunic & Eisenhardt, 2001).

Case studies, can be further distinguished as single case study or multiple (two or more) case studies. And for this study, the single case study approach is adopted primarily because the research is designed to explore the reasons as to which factors contributed to the establishment of the specific GMV project in London. Under this research design, it would be necessary to focus on this project alone by employing a single case study instead of employing the multiple case study approach, which is often adopted for comparative purposes.

Moreover, single case studies, though being the only case studied by the researcher, according to Bennett and Elman (2010, pp. 505-506), can be identified as: *deviant*,



*most-likely, least-likely, and crucial cases. Deviant case* refers to the case study that has contrasting outcome from the theoretical framework; *Most-likely case*, is believed to be a case which can be well-explained by the theory, while *least-likely* cases are those can not be well-explained; Finally, the *crucial cases* refers to the case that "must closely fit a theory" (Eckstein, 1975, p. 118). The various types of single cases allow the researcher to carefully examine the data in the case and to analyze them under the theoretical framework, which refers to the IAD framework in this case, thus explore the causal relationship between several factors and the establishment of PPP (Eckstein, 1975). A detailed rationale for the case selection is elaborated below.

### **3.2.2 Case Selection Rationale**

The GMV project stands out among all other PPP- financed affordable housing and is selected as the subject for research both due to its theoretical and practical significance and the suitability for analysis for this research. The detailed reasons are stated as follows.

Firstly, the GMV project, as one of most famous PPP-financed housing projects in the history of the UK and even worldwide, has received great attention due to its success in design, architecture, connectivity, cross-sector collaboration as well as its impact on later projects. This case, therefore, provides a typical and suitable example for exploring the positive factors that may have facilitated such a successful PPP project.

Secondly, ever since the idea of developing a mixed community for diversity as well as avoiding social segregation was born, blending affordable housing with regular commercial housing has been much desired (Hill, 2012). Building a pure affordable housing community has been less popular than building a mixed community that blends several kinds of housing. As one of the biggest urban development project in the UK, 30% of the total housing units were designed as affordable housing. This quota of affordable housing, which is higher than a regular 10% quota (Wilson & Barton, 2018), not only showed the emphasis on affordable housing but also makes this case study more relevant for exploring the factors for its establishment from the perspective of affordable housing and PPP.

Last but not least, the GMV project itself has been the pioneering effort in building a diverse community in London and is of great historical significance--it was the first Millennium Community, a commitment by the English Partnerships (EP) to build sustainable community with advanced technologies that sets the living standards for the 21st century (English Partnerships, 2007). Thus studying this project in a comprehensive manner would help researchers better assess its success and deficiencies as well as position it in the PPP history of the UK.

However, despite the significance of the GMV project, there has not yet been many systematic studies of this project as to how exactly this project was successfully established. Moreover, the fact that many private developers were committed to participate in this project with such a large percentage of affordable housing makes this project a *least-likely* case study, as theoretically speaking, it was more profitable to build pure commercial community. Such a *least-likely* case provides the exact opposite setting as in the theory and demonstrates a causal relationship that is not supposed to work but does in reality (Beach & Pedersen, 2016). This allows the researcher to make "sinatra inference", which means that if it can make it here, it could make it anywhere, adding to the strength of the research and generalizability of its conclusion (Levy, 2002, p. 442). Thus selecting this project as the subject of study would also help strengthen the external validity of the single-case research and better examine factors that may have positively facilitated the PPP establishment when it was more profitable not to do so for private developers.

### **3.3 Operationalization of the Key Variables**

#### **3.3.1 Independent Variable**

In this research, the independent variables are the factors that promoted the establishment of the GMV project. Put in the IAD framework, these factors can be recognized in the three kinds of exogenous variables, the type of action arena in which all the participants are involved as well as the pattern within which they interact with each other.

To be specific, according to the IAD framework, the exogenous factors that lead to the establishment of PPP could be categorized into three kinds: biophysical/material conditions, attributes of community and the rules. Secondly, in the action arena, the action situation could also be a factor that have an impact on the dependent variable. For example, when there are strong factors that promote the GMV project development, just as the support from the political actor, it is very likely that the project would have a relatively smooth development and establishment; Finally, the patterns of interaction also play a role in affecting the project establishment. For instance, when the pattern of interaction has a strong trend for a specific development, the policy would often have positive feedback and that it would be relatively easy for policy analysts to make predictions and for the policy-makers to make further decisions regarding policy design (Polski & Ostrom, 1999, p. 25).

In this case, biophysical/material conditions can be identified as facts existing in the society, such as high housing prices and the environmental pollution; The attributes of the community can be recognized as the general social values accepted and pursued in the UK and in London in particular. For example, the embracement and acceptance of

PPP in the society and particularly among the policy makers; The rules can be understood as the policies and political movements that have impacted on the action of the actors or the social environment in general.

The action arena, as a result of the exogenous variables, is the venue where the actors are involved in the interaction. In this case, the GMV project itself is the venue where all actors are gathered together and interact with each other.

Lastly, the patterns of interaction also play a role that affects the development of the GMV project. In this case, the partnership is established between the government and private developers, involving the distribution of design, construction, financing, maintenance of the GMV project.

### **3.3.2 Dependent Variable**

The dependent variable in this research, the establishment of the PPP in the GMV project, is known. It can be simply recognized by the participation of private companies or capital in the project. In the IAD framework, this refers to the "outcome" as a consequence of joint effect by the independent variables mentioned before.

## **3.4 Data Collection**

The importance of data variety in helping researchers conduct analysis cannot be emphasized too much and that the diverse sources of data are especially important in case studies for the reliability concerns (Saunders, Lewis & Thornhill, 2009).

### **3.4.1 Primary Data**

Different researchers have different definitions of primary and secondary data. A certain kind of data, for instance, documentary data, might be considered primary data by one scholar while viewed as secondary by another (Saunders et al., 2009, p. 258). For this research, the primary data are defined as the factual and original sources of information collected by the researcher (Ajayi, 2017). Usually primary data include interviews, surveys and empirical observations from the researcher.

In this research, due to the difficulty in approaching the relevant personnel for interviews and empirical observation in short period of time, the real-time data are not collected by the researcher.

### 3.4.2 Secondary Data

The secondary data in this research refer to the data that are already collected for other purposes and thus are not original. This includes both already published documents as well as raw data (Saunders et al., 2009, p. 256). In this study, the secondary data come from a wide range of sources such as newspapers, online blogs as well as commentaries. These data are used not only used for articulating the conceptualization of the PPP as well as affordable housing, but also frequently cited in the case description part, providing insights from different perspectives on the GMV project, as it has been a much debated topic in both the academia and the society (Hawley & Hodkinson, 2001).

### 3.4.3 Data Collection Tools and Techniques

As discussed above, this study mainly employed secondary sources to collect data. The sources for data collection are quite diverse, including research reports, official government archives as well as the official websites of the partners of the UK GMV project, serving for different purposes and emphases.

The research reports are reviewed in order to acquire an overview on the past studies of the GMV project and collect useful data for this study; The official government archives are reviewed for gaining insights of major policy trends and the specific policies that are related with the GMV project in this research; The official websites of the GMV project partners and academic journals are browsed for obtaining the details of the project, such as the amount of investment, the division of workload and the allocation of responsibility.

In conducting the search, the key words used by the researcher include: "Greenwich Millennium Village", "GMV development history", "GMV project and PPP", "UK affordable housing policy", and "London housing market".

Below is the list of websites and online databases that are used by the researcher:

Table 3.1 List of Websites and Databases

Names of the websites/databases	URL
The Greenwich Millennium Village official website	<a href="https://www.gmv.london/">https://www.gmv.london/</a>
Taylor Wimpey	<a href="https://www.taylorwimpey.co.uk/about-us/what-we-do/case-">https://www.taylorwimpey.co.uk/about-us/what-we-do/case-</a>

official website	studies/regeneration/greenwich-millennium-village
Bennett Construction official website	<a href="http://www.bennettconstruction.ie/project.php?id=4&amp;project=177&amp;title=Phase%203%20Greenwich%20Millennium%20Village">http://www.bennettconstruction.ie/project.php?id=4&amp;project=177&amp;title=Phase%203%20Greenwich%20Millennium%20Village</a>
Jestico + Whiles official website	<a href="https://www.jesticowhiles.com/projects/greenwich-millennium-village/">https://www.jesticowhiles.com/projects/greenwich-millennium-village/</a>
Countryside official website	<a href="https://www.countrysideproperties.com/all-developments/london/greenwich-millennium-village">https://www.countrysideproperties.com/all-developments/london/greenwich-millennium-village</a>
Wikipedia	<a href="https://en.wikipedia.org/wiki/Greenwich_Millennium_Village">https://en.wikipedia.org/wiki/Greenwich_Millennium_Village</a>
Research Gate	<a href="https://www.researchgate.net/">https://www.researchgate.net/</a>
Google Books	<a href="https://books.google.com/">https://books.google.com/</a>
Google Scholar	<a href="https://scholar.google.com/">https://scholar.google.com/</a>
LSE Library	<a href="http://www.lse.ac.uk/library">http://www.lse.ac.uk/library</a>
The British Library	<a href="https://www.bl.uk/#tabcollns">https://www.bl.uk/#tabcollns</a>
The UK Parliament	<a href="https://www.parliament.uk/business/publications/">https://www.parliament.uk/business/publications/</a>
The UK government	<a href="https://www.gov.uk/government/publications?official_document_status=command_and_act_papers">https://www.gov.uk/government/publications?official_document_status=command_and_act_papers</a>
The government of London	<a href="https://www.cityoflondon.gov.uk/things-to-do/london-metropolitan-archives/the-collections/Pages/Governing-London.aspx">https://www.cityoflondon.gov.uk/things-to-do/london-metropolitan-archives/the-collections/Pages/Governing-London.aspx</a>
The Guardian News & Media archive	<a href="https://www.theguardian.com/gnm-archive/archive-collections">https://www.theguardian.com/gnm-archive/archive-collections</a>
SpringerLink	<a href="https://link.springer.com/">https://link.springer.com/</a>
Elsevier	<a href="https://www.elsevier.com/">https://www.elsevier.com/</a>
Leiden University Library	<a href="https://catalogue.leidenuniv.nl/primo-explore/search?vid=UBL_V1">https://catalogue.leidenuniv.nl/primo-explore/search?vid=UBL_V1</a>
Wiley Online Library	<a href="https://onlinelibrary.wiley.com/">https://onlinelibrary.wiley.com/</a>

By applying these data collection techniques and the tools, the researcher is enabled to access more details of the projects; Moreover, these secondary data provide the researcher with fresh insights that are later applied to the empirical analysis.

### 3.5 Data Analysis

For a qualitative study like this one, as the data are all non-numerical and mostly unstructured, analyzing data could depend completely on the researcher and the context (Jupp & Sapsford, 2006). But in general, there are two main approaches: deductive approach and inductive approach (Gabriel, 2013). The deductive approach is based on a predetermined theoretical framework while the inductive approach does not follow

such rigid rules and is applied when the researcher has little knowledge regarding certain phenomenon. As this study is established on the basis of the previous research of PPP and affordable housing, and it takes the IAD framework as analytical framework, the deductive approach is chosen for data analysis in this study.

Regarding the specific analytical approach, according to Yin (2009), the data analysis process includes data examining, categorizing, tabulating, creating a data display, testing and finally combining all forms of evidence to answer the proposed research question and draw a conclusion.

In this research, the researcher firstly examines the qualitative data to trace the details of the the GMV project and tries to reproduce the social, political and economic background of such project using the data collected; Secondly, under the IAD framework, the researcher identifies the exogenous variables, key actors, their resulting action arena and the mechanism of interaction from the case description. Namely, the data that could be categorized into sections of the IAD framework; Next, as the data in this research are mostly qualitative in nature, numerical presentation and analysis of the data seems impossible. Here, one specific analytical technique, explanation building, is applied. According to Yin (2009, p. 147), for a complex situation where the causal links are difficult to be measured specifically, explanation is desired. The explanation is presented in mostly narrative and iterative form. This is because the qualitative research is a process of constantly refining ideas and revising statement (Yin, 2009, p. 150). And building on the IAD framework introduced before, the general narration of the case is placed in different sections of the framework for case-specific descriptions, which adds to the accuracy of the analysis. Finally, throughout this process, the researcher combines all sorts of evidence to identify the key factors that led to the establishment of the GMV project to answer the research question.

### **3.6 Reliability and Validity of the Research**

Reliability and validity are the very two common concepts when evaluating researches (Golafshani, 2003, p. 7). Reliability refers to the "dependability and consistency" of a research (Neuman, 2014, p. 212). This suggests that given the same set of data and research methods, the research findings should always be the same. For qualitative studies, as the data collection as well as the interpretation process are conducted in a flexible way rather than in a fixed way as in quantitative way, it is hard to give a definite standard of evaluating the reliability in quantitative research. And for this reason reliability has always been a major concern for qualitative studies (Patton, 2001).

This claim, however, might not hold true for this study, as the researcher takes several strategies in order to ensure and improve the reliability of this single case study. First, triangulation, namely the application of a variety of methods to collect data and

interpret the social phenomena by understanding the insights from different researchers, has been employed to strengthen the research (Patton, 2001); Second, this research tries to track the original and objective development process of the GMV project by including the detailed description to support the findings, adding to the credibility and transferability of the research (Slevin & Sines, 2000); Moreover, the research also tries to avoid pure perception-based opinion as much as possible to reduce the subjectivity and personal biases of the researcher in the analysis (Noble & Smith, 2015), as demonstrated in the systematic data analysis in the IAD framework. Building on these efforts, this study should be of high reliability.

Validity, on the other hand, refers to the "truthfulness" of the research (Neuman, 2014, p. 212). This implies that the measures should be as precise as possible to capture the reality in social life (Toshkov, 2016, p. 117). In qualitative studies, the researchers are often more interested in multi-dimensional truth rather than the limited facets and they tend to convey a "insider view" rather than the "outsider view" of the case (Moore, 2015). And for single-case studies, due to its focus on the single unit of analysis, usually the researches are of high internal validity and relatively low external validity as it can hardly be generalized to other cases (Jiménez-Buedo & Miller, 2010). This is also true for this study. In this case, as multiple sources for data collection are used to trace the historic process of the GMV project, it is believed to have high internal validity, but it is difficult to generalize the analysis to other cases.

## **4. Case Study**

### **4.1 The Affordable Housing in London**

There has been long-standing consensus that affordable housing is in great demand in England (Richardson, 2013). This is especially true for a city like London, which has been known for its high housing price and living expenses in the world and has the higher-than-average housing prices than other parts of the UK. As a result, the provision of sufficient affordable housing is pivotal for low-income groups who are unable to afford a property in London. In a shocking but true statistics, in London, only 0.1% of homes with two bedrooms or more are affordable to first-time buyers (Elledge, 2015). According to a survey held by Kantar UK, a research firm that focuses on deep data in the UK, 31% of the British public ranked affordable housing as the second priority only next to investment in healthcare (Fitzner, 2018). Moreover, with this number of people that could not afford a regular property in London, over 80% of them still had the desire to own a house, (Lewis, 2016). The fundamental reason that caused such phenomenon is that London is short of houses in general, let alone the supply of affordable houses (Richardson, 2013). Consequently, both the price of the houses and the price of land are too expensive to be affordable to the ordinary working people. Thus, building more affordable homes becomes essential

and that the lower prices of the housing, the more chances for these people to have their own property.

But the significance of affordable housing in this city, as discussed in the previous section, is more than the economic benefit for those low-income groups--it also serves a purpose for the wider economy. In a modern welfare state as the UK, the government pays a certain amount of the rent for low-income groups, such as those who do not have savings over £16,000 or who are unemployed living in temporary accommodation. Under these circumstances, the government would need to pay for part of their rent as a means of social help ("Housing Benefit", 2018). In a metropolis like London where the housing units are in short supply but the population is constantly growing, more investment in affordable housing can also be beneficial to government. This is because when most of the population is priced out of the urban area and move to the suburbs of London for rental houses, the government would need to pay more subsidies to those that are eligible for housing benefits and thus the government budget grows higher. But on the contrary, when a substantial amount of investment is put into affordable housing, the cost of annual housing benefit for the government would be much lower (Hillsdon, 2017). Moreover, when developers are committed to building affordable housing with borrowed money, their loan could be paid via rent and the housing benefit from the government, which, would otherwise go to the pocket of private landowners (Ratcliff, 2016).

In sum, building more affordable housing, therefore, not only helps the low-income groups with their accommodation, but also helps to stabilize the rent and housing price in the housing market and prevent a housing crisis in which urban residents would be priced out of the downtown area due to high rent (Brown, 2016).

## **4.2 Policy Background**

### *New Public Management*

Since 1980s, there has been a trend in the UK to introduce business values into the public sector and to make public management more "businesslike". Due to its divergence from tradition public management beliefs, this trend has been termed as *New Public Management* (NPM). Following the reinvention movement focusing on how government should work beginning in the 20th century (Gore, 2001), NPM took a further step to regard the government as a "public entrepreneur" that "steers" rather than "rows" (Osborne & Gaebler, 1992, p. 32) so as to achieve the result of "work better but cost less". As a result, it emphasizes professionalism, efficiency, and a more private style management in delivering public services. This new mode of governance, though originated in the Western countries, was soon expanded worldwide in 1990s.



NPM was first practiced in the UK by the Conservative government led by Prime Minister Margaret Thatcher. Since her premiership in 1979, radical reforms in the public sector had taken place due to the fact that the state was not able to deliver public service in an efficient and effective way to its citizens while holding the absolute control of the public sector (Kajimbwa, 2013, p. 1). Such practice gained support, for instance, from OECD (1995, p. 29), which confirmed that NPM is more flexible compared with conventional public management by devolving authorities and improved performance in reality. With the theoretical support and positive feedback from practice, John Major, Thatcher's successor in the Conservative party and later the Prime Minister, continued such practice on the reforms in public sector. He also launched new derivatives and practices of NPM among which the Private Finance Initiative was the most well-known.

### *Three Major Policies*

Since 1980s, the UK government has been implementing the *Right-to-Housing* policy, which entitles the tenants the legal right to buy the houses at a discounted price in which they lived in (Foster, 2015). *The Right to Acquire* was also introduced, which refers to the rights of tenants of housing association to purchase the houses with subsidies at a smaller discount. In recent years, some adjustments have been made to this policy. For example, the qualification of the tenants to buy the houses increased (Disney & Luo, 2014) and that former Prime Minister David Cameron later proposed to increase Right-to-Buy discounts introduced by Margaret Thatcher's government in 1980s in order to boost the housing market and the British economy in general (Mulholland, 2011).

Since 2010, the UK government launched another *Help-to-Buy policy* to help those first-time buyers to buy property in the UK. It is an extension of the previous *Right-to-Housing* policy but had a more targeted group of the first-time buyers. The forms of "help" include equity loans, mortgage guarantees, and shared ownership. This policy is aimed to facilitate the transaction of the new-built homes and thus indirectly stimulate the supply side of the housing market (Stacey, 2014).

There is also *the London Plan*, a regional spatial development strategy for the Greater London Area written by the Mayor of London. It was first published in 2004 and has been constantly adjusted to the current development status. In its most recent edition in 2017, the Mayor seeks to maximize the provision of affordable housing in the region and tends to provide an average of at least 17,000 affordable homes to be built per year in London (Greater London Authority, 2017, p. 119).

### *Two Housing Green Papers*

In view of the lack of affordable housing in the UK, the British government released the Housing Green Paper *Quality and Choice – A Decent Home for All* in 2000, which

stressed the urgency of lack of housing in the UK and the need for providing more affordable housing in the 21st century (Department of the Environment, Transport and the Regions, 2000). The decent home programme sets technical standards to be met for the housing construction in order to be "decent", such as reasonably modern facilities as well as services provided, and the current statutory minimum standard for housing. With these specific standards, the programme was supposed to strengthen community ties and provide a better setting for families in the future (Department of the Environment, Transport and the Regions, 2000, p. 7).

In 2007, another Housing Green Paper named *Homes for the Future: More Affordable, More Sustainable* was released, aiming for two goals: the first one is to provide more homes, among which at least 70,000 would be affordable homes a year by 2010 (Department for Communities and Local Government, 2007, p. 10); the second one was to by the end of 2010, 95% of the social housing needs to be made "decent" (Department for Communities and Local Government, 2007, p. 80).

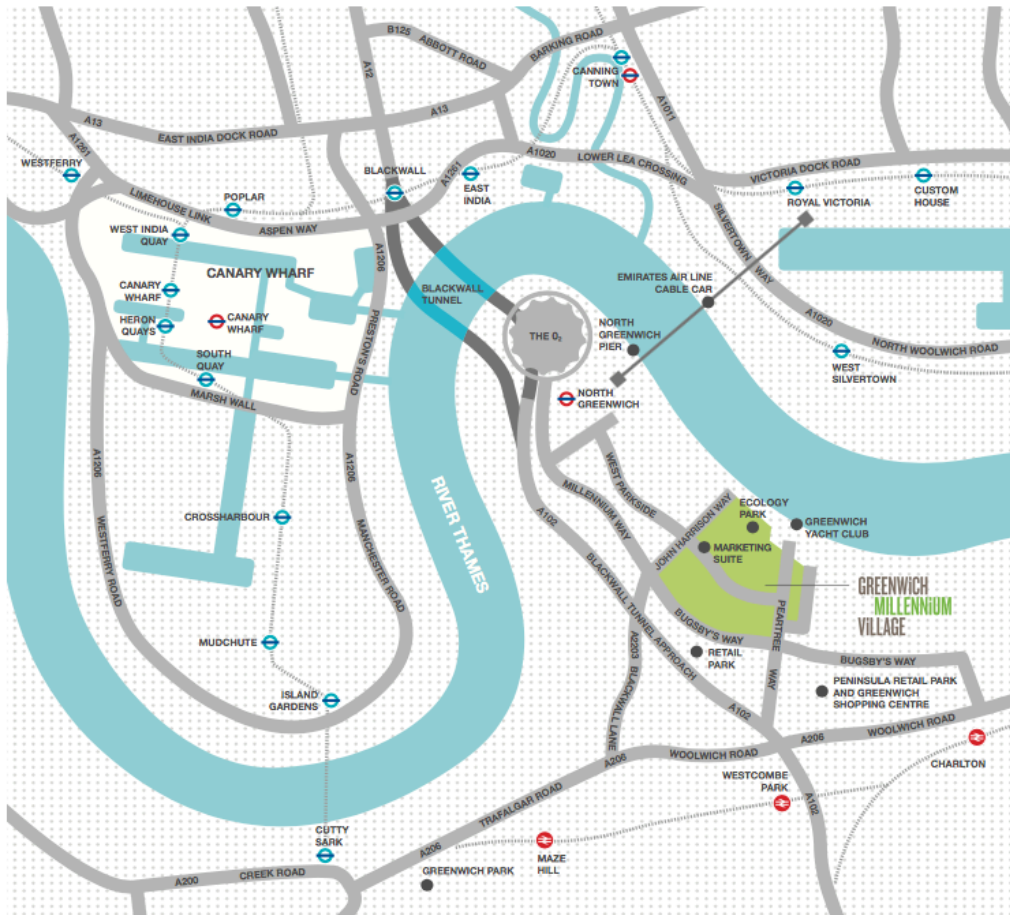
To meet the goal of these two housing green papers, the UK government needed a budget of £19 billion (Department for Communities and Local Government, 2007, 2007, p. 8), which was much more than what was capable of financing in the government. As a result, several financing mechanisms, such as PFI and PF2, were developed to fill financial gap to fund the affordable housing.

### **4.3 The GMV Project in Detail**

#### *A Short Summary of the GMV Project*

The Greenwich Millennium Village is a mixed-tenure community, a community that encompasses a wide range of residents as well as a variety of buildings such as regular residential units, commercial spaces, affordable homes as well as a considerable amount of green area and advanced technologies that features its sustainability. It is located in the south-east of London on the Greenwich Peninsula, sitting along the Thames river and is separated by the Canary Wharf.

Figure 4.1 The Location of the GMV Project



Source: Greenwich Millennium Village: Transport, 2018

The project was initiated in late 20th century with the aim of regenerating the long-derelict Greenwich Peninsula due to decades of industrial pollution in the area since the 20th century. Up to today, it covers an area of 25.8 hectares and represents a £689 million investment from both public and private entities (Urban Land Institute, 2006).

### *Development Process*

In recent centuries, London has long been favored for development due to its advantaged location on the Thames River and the industrial revolution. But after the WW II, reconstruction policies started to favor emerging cities (Urban Land Institute, 2006). Thus the Greenwich Peninsula, which used to accommodate dwindled highly-polluting industrial plants, was lagged behind and suffered from economic downturns, though many regeneration efforts were made around that region, such as modification of roads and construction of riverside walkways.

By the 1990s, EP, the national regeneration agency in England responsible for urban regeneration and brownfield development, started to notice such phenomenon and identified several problems to overcome, such as the environmental contamination

and the efforts of providing transport linkages between the Peninsula and other places (Urban Land Institute, 2006).

At the same time, there were two major events in play: the general election in 1997 and the need to celebrate the millennium in the UK at the end of the 20th century.

For the general election, before its official start in 1990s, environmental protection and sustainability already had begun to receive more attention from the public in 1980s due to a host of international and domestic events in the UK, such as the the 1986 Chernobyl disaster in the former Soviet Union and the fact that the UK had been a net exporter of oil and gas up to the end of the 20th century. Thus the role of environmental protection in political campaigns and elections had been on the rise as demonstrated by party manifestos in 1987 and 1992 (Rollinson, 2010, p. 13). As a result, voters had a strong preference for sustainable development and environmental protection, and the Labour Party, who had commitment on such development, stood a bigger chance of winning the election (Rollinson, 2010, p. 16).

As for the millennium celebration, before the general election, a Millennium Dome project was initiated and constructed by the Conservative government led by John Major to showcase the achievements of the country in the past 100 years. But when the Labour Party came to power under the leadership of Tony Blair, the Millennium Dome project, which was designed at a relatively small size, was greatly expanded to be "a triumph of confidence over cynicism, boldness over blandness, excellence over mediocrity", as claimed by the its leader (Orchard, 2001). Actually ever since his election campaign, Blair had tried to highlight his personal achievement. For example, he put forward a new definition of socialism "in terms of a set of values, which were constant, while the policies needed to achieve them would have to change to accommodate a changing society" (Burgess, 2016, p. 81). And after becoming the leader of the Labour Party, he further altered the Clause IV with a set of new values and goals for the Party, which laid the steppingstone for his reform on PPP and support for the GMV project.

The Millennium Dome, after the expansion, however, did not live up to the public expectation with the huge cost of averagely £1 million per month, but only 7% was actually spent on the Dome (Womack, 2001; Rogers, 2015). As a result, it was largely derided as a failure for being an empty structure with no purpose and huge cost (Nisse, 2001). The expansion was also criticized to be highly political for mainly highlighting the achievements of the New Labour (Orchard, 2001). Consequently, there was again the urgent need of a new place for celebration.

Later in 1997, in order to reboot the regeneration plan for the Greenwich Peninsula under the proposal of the EP and build a new place for millennium celebration, the

then-Deputy Prime Minister of England, John Prescott suggested to launch a competition among private developers to bring about an innovative housing plan on the Greenwich peninsula. Moreover, he also set up a Construction Task Force that aimed to modernize the construction industry in the country, including the reduction in construction cost and time as well as the improvements in project processes. Within this task force, there were also campaigns that explored how to reuse brownfields and better make use of the public space (Hatherley, 2013).

In response to the call of the Task Force, EP purchased the land and acquired the right to master-plan the region. It then launched a series of international bidding and competition to attract leading architects and developers to build a modern living space that sets the standards of the 21st century (Frey & Yaneske, 2008). Via the competition, a consortium consisting of Hunt Thompson Associates, Taylor Woodrow, Countryside and Ralph Erskine won the bid due to their expertise and design proposal, who later become the developers of the project. The construction firms Countryside and Taylor Wimpey, later jointly established the Greenwich Millennium Village Ltd (GMVL) to develop this land together with EP.

#### *Financing*

The GMV project is a PPP project realized by the jointed venture GMVL. For its start, EP invested £47.8 million in the upfront work before the construction of the project, such as the environmental remediation, infrastructure and master-planning (English Partnerships, 2008, p. 21). For the remaining work of the GMV project, the developers on average paid £741,000 per hectare (Urban Land Institute, 2006). A more detailed cost contribution can be seen below.

Table 4.1 Distribution of Cost for the GMV Project (All 5 Phases)

Nature of the Developers	Item of the Contribution	Amount of Contribution	Percentage of Total Contribution
Public	Preliminary Cost by EP (environmental remediation, infrastructure and master-planning)	£48.7 million	7.07%
Private	Construction Costs	£487,972,442	70.82%
	Soft Costs (i.e., architects and consultants)	£92,714,764	13.45%
	Marketing and selling	£35,264,126	5.12%

	Contributions to local improvements	£25,214,612	3.66%
Total Public Developer Cost	£48.7 million		
Total Private Developer Cost	£641.3 million		
Total Project Cost	£689 million		

Source: Urban Land Institute, 2006

One thing needs to be mentioned here is that for the public contribution of the cost, besides the cost of EP for the initial stage, there was also public subsidy from the government to fund the affordable housing (Minton, 2001). During the construction process, since the share of the affordable housing increased from 20% to 35% (details described below), the British government needed to pay more for the subsidy, but as the amount varied according to the specific situation of each buyer, current studies have not included this part as the public contribution to the project.

As for the profit-sharing mechanism, though it would still be a long time to know exactly whether this GMV project is profitable or how profitable it is, an initial agreement of profit-sharing was achieved between the EP and the private developers: they share the profit above the certain threshold (Urban Land Institute, 2006, p. 8). Via such a mechanism, EP could recover every penny initially invested in the project from the value created by GMV project, and the remaining profit could be gained by private developers (Urban Land Institute, 2006).

However, the fact that the project could be described in a rather neat way does not necessarily implies the whole development process went smoothly without any twists and turns. First of all, wrangles appeared in the division of work. Though EP promised to invest for the preliminary work of the GMV project, its investment was only meant to cover the cost of building the houses, which means that rest of the work, including including the road construction, planting of over 60, 000 shrubs as well as local healthcare center, was left to the developers, which was a huge amount of work (Niesewand, 2000). But when Department of the Environment, Transport and the Regions cleaned up the industrial contamination in the neighborhood, as commissioned by the EP, the private developers were reluctant to take-over the remaining landscaping and master-planning work.

This was a surprise to Ralph Erskine, the major designer and architect of the GMV who had spent most of his professional experiences in Sweden, where the council is responsible for the master-plan and implementation but the cost could be recovered by

reducing the costs of houses and the revenue from the commercial activities such as restaurants in the neighborhood once the residents move in (Niesewand, 2000). By contrast, in the GMV project located in the UK, the houses needed to be sold in the first place in order for the private developers to cover their costs, which explains the reluctance of the private developers to take over the preliminary work. The two sides were locked in a stalemate and thus the project was delayed. In view of such a bad start on the GMV project in which it initiated, in the end, EP did all the remaining preliminary work for the project.

The second handicap happened in the communication between the government and private developers. Due to the delay of the project and the involvement of EP to take over the remaining work in terms of infrastructure construction, the cost control was a major concern for the government. Yet the private developers were not satisfied and two sides again had disputes, since the developers, for instance Hunt Thompson Associates, believed that the work of the EP "dumbed down" the original design (Niesewand, 2000). The dispute was settled later by the Chair of Construction Task Force, though the private developers remained unsatisfied regarding the preliminary infrastructure and landscaping finished by the government. But it is noticeable that even with such a bad start in the beginning, no actors, either from the public or the private side, quitted the project. These actors stay unchanged throughout the the first stage (Phase 1 and 2) of the GMV project, which also demonstrated the strength of the partnership.

Only when these major problems of labor division and communication were largely resolved, did the next steps concerning financing, and management and maintenance, came into operation.

### *Construction Process*

As a result of the Public-Private Partnership, the whole project has been divided into 5 phases listed below.

#### *Phase 1 and 2 (1999-2009<sup>1</sup>)*

Constructed under the "Millennium Communities Programme", a commitment by the EP to build the "role model of new communities" (English Partnerships, 2007), the village is featured by its green space, sustainability and the diversity of the tenants. Upon its initial design, GMVL agreed to designate 20% out of the total dwellings as affordable housing (Foletta, 2010). Among the 1095 new homes, 219 are affordable housing ("Greenwich Millennium Village | Taylor Wimpey", 2018). In 2006, a new agreement was achieved among the Greenwich Peninsula landowners, EP, and GMVL, which increased the total housing units to 2900 and the share of affordable

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<sup>1</sup> There have many various sources for the phases of the The Greenwich Millennium Village project. In this study, the statistics from Taylor Wimpey, one of the major developers for the GMV project, is adopted.

housing to 35% (Foletta, 2010). Thus, when finished in 2013, about 30% of the homes were affordable homes (Urban Land Institute, 2006).

Phase 1 are mainly high-rise apartments next to the River Thames and the ecology park. Phase 2 are low-rise apartments as well as the housing units in the southern part of the GMV project (Hawley & Hodkinson, 2001). Affordable housing does not differ much from general commercial housing units or cannot be distinguished from commercial housing from the layout (The Ten Group, 2009). The design teams are all private architects such as EPR Architects and Proctor Matthews Architects. And more detailed division of the work was made, in which, for example, Waterman Partnership was responsible for structural design and WSP was in charge of providing building services (Hawley & Hodkinson, 2001).

Due to the high standards of requirements, the GMV project cost certainly more than the average of building such a community. According to the case study of Urban Land Institute (2006), the cost of building GMV was £1,795.25 per square meters, while the average was usually £1,505 per square meters. In view of such cost, GMV has become a high-density community as the developers attempted to reduce the cost by building more compact and dense housing units (West, 2010). Those private developers, indeed, with previous experience of working in private sector, have managed to reduce both the duration by 25% and the construction cost by 30% (Countryside Properties, 2016).

#### *Phase 3, 4 and 5 (2013-2032)*

After the planning consent was achieved among the developers, the construction of Phase 3, 4 and 5 started in 2013. It is expected that at this stage of development, among the 1743 new homes, 349 homes are affordable homes. But until 2017, among the 428 homes already built, 128 were affordable homes, which is 10% above the required quota in the agreement (GMV Ltd, 2017). The homes were built in a denser fashion, but not only for saving money, but also to respond to *the 2004 London Plan* that called for higher density in the city to meet the challenges of rapid population growth (Urban Land Institute, 2006).

In phase 3, 4 and 5, the homes in GMV consist of a mixture of apartments in lower rise buildings as well as high-rise apartments. The client remained GMV Limited (Countryside and Taylor Wimpey). Bennett was the designated contractor to design and build the new homes. The architects included Jestico & Whiles, Studio 54 Architecture, and Peter Barber Architects.

#### *Ownership, Management and Maintenance*

The affordable housing units in the GMV project enjoys shared-ownership championed by policies such as *Help-to-Buy* policy and the *London Plan*, which



aimed to help low-income people buy homes. These affordable housing units are primarily managed under the Moat Housing Association, a social housing association in the UK that focuses on building affordable homes for the needy.

The shared ownership is a kind of ownership for affordable housing in which the purchaser only pays for part of the property by mortgage and still pays rent to the landlord over the remaining share of the housing unit (Homes and Communities Agency, 2016; "What is Shared Ownership?", 2016). Thus it is featured by the "part-buy" and "part-rent" nature, and it is one of the most affordable housing option in Greenwich ("Shared ownership | Moat Homes", 2018). Under this mechanism, the tenants could purchase 25%-75% stake and rent the rest (with subsidies). Besides, there is also the possibility of "staircasing", meaning that the tenant can further their share of the property after the initial payment. Once the tenant pays for the total 100% share of the property, they own the shared ownership home at the current market value (Wilson & Barton, 2018; "Moat Homes | Staircasing", 2018). The transaction of purchasing further share of the property could be administered anytime.

In this way, the cost of renting a house in the GMV is much lower than renting a house in the open market and that such mechanism provides more chances for low-income group to purchase the ownership of the housing units in which they live. Moreover, as this property can be resold to new buyers if the current tenant wants to, the burden of paying off the loan seems less stressful.

As for the community management, the community is managed as a whole and affordable housing units are not managed separately. There have been various ways of innovative management in the community in which engagement accounts for a great part of the managerial work. For example, the GMV official website is an online platform for launching ideas and discussing issues within the community; A community center built during phase 3 is expected to be the place for communication within the project. And throughout these phases regular leaflets were handed out, open events were held to keep the residents updated ("Greenwich Millennium Village | Taylor Wimpey", 2018). Based on all these kinds of ways of management and interaction, the developers are able to acquire the feedback of the residents and better make further efforts to improve the facilities and management of the community.

The maintenance work, despite already been largely reduced due to the advanced design and technology, is delivered by a team of professionals. At present, the maintenance manager manages a team of about 30 staff, including gardeners, maintenance staff, safety staff, and concierges (The Ten Group, 2009). Even with the elaborate division of work, in general, all developers work closely with each other and often hold regular meetings and workshops together.

## **5. Empirical Analysis**

This chapter builds on the IAD framework developed by Ostrom to analyze the GMV project in London described in the previous chapter. The analysis puts primary emphasis on the three kinds of exogenous variables as well as the action arena in the framework as they provide the answer to the research question; Meanwhile, the resulting patterns of interaction, evaluative criteria and outcomes would not be extensively touched upon, as they happened after the establishment of the project and thus would not help answer the research question.

### **5.1 Biophysical Conditions**

The very first exogenous variable that need to be considered when applying the IAD framework is the biophysical conditions. According to Ostrom (2005, p. 22), it refers to the physical world upon which the actions are made. As the physical condition changes, the outcome of actions may also change and that the final outcome that can be thus be different. Consequently, these conditions to some extent have a determining impact on the final outcome.

In the case of the background of GMV project described above, several key physical conditions can be identified that have affected its establishment. Firstly, as the Greenwich Peninsula used to be home to high-polluting industry, contamination was a major problem in the neighborhood and that environmental transformation was in urgent need. Building GMV project responded to the pollution problem that had been long criticized by the public. Moreover, with the growing attention on environmental protection in both the UK and worldwide, the actions in sustainability was much desired. Thus, the need for environmental recovery and urban regeneration constitutes the very first physical condition for the establishment of the GMV project.

The second attribute in the physical condition is concerned with the housing market in London. As described, favored by the industrial development, London has been enjoying a growing economy especially since the Industrial Revolution and the housing price has also been on the rise correspondingly (Robinson, 2011). As a result, the price now has been too expensive for common working-class and thus affordable housing became the option for many low-income people who wish to live in their own homes. Besides, when the regular low-income group pay more for the rent, the government would also need to pay more for their rental subsidy. Thus high rent economically impairs both the low-income group and the government budget and only benefits the private landlords. Therefore, building the GMV project that included affordable housing not only benefits low-income groups who could not afford a regular commercial housing in London, but also to some extent ease the budgetary burden in

housing benefits for the government in the long run.

Moreover, though the rent had stayed high for a long time and many found it was difficult to buy a property especially in London, the desire of homeownership still remained as the top aspiration for up to 80% of the British population (Lewis, 2016). Therefore, the need for affordable housing, the difficulty of buying a property as well as the aspiration of owning a property intertwined with and reinforced each other, nurturing the growing demand for the government action. Besides, mixing the affordable housing and regular commercial housing units in the same community was supposed to strengthen the inclusiveness and diversity of the community (Silverman, 2007). Thus, it was crucial for the government to build such project to pacify the societal mood for affordable housing and strengthen societal ties across different income groups against social segregation.

The third attribute regards the wish for celebrating the millennium and ushering in the 21st century. Countries worldwide wanted to hold festive activities and the UK was not an exception. Before the GMV project, there indeed had already been the Millennium Dome project that was tended for the celebration. However, the Dome did not live up to public expectation despite the skyrocketed-budget after the expansion by the Labour. Thus, a new project was much desired in the society in replace of the empty structure (Urban Land Institute, 2006).

Based on the discussion above, the desire for environmental transformation and sustainability, high housing price in London, the need for celebrating the millennium formed the physical need to build a sustainable and affordable housing project just like GMV.

## **5.2 Attributes of Community**

Besides the physical conditions, attributes of community also account for the impact on the action arena. The concept of community refers to the arena in which the action is located (Ostrom, 2005), which corresponds to the GMV project in this study. The attributes, often understood as shared comprehension and values within the community, is sometimes recognized as the "culture". And in this case, three types of "cultures" are identified.

The very first important "culture" that can be identified in this case is the embracement of PPP in the British society, especially among the key policy makers and actors in this case. As a pioneer of PPP, the UK has developed such cross-sector collaboration very early among other countries. And despite some voice of disputes, PPP had already been largely accepted as a viable strategy for financing public projects (Skelcher, 2010). This embracement among the policy makers of PPP has actually accelerated policy

efficiency and reduced public spending; Moreover, it also served as a tool to improve the acceptance of public policy interventions in the society in general by allowing the participation of the private developers in the delivery of public projects (McQuaid & Scherrer, 2005, p. 13).

The second "culture", in a broader sense, can be attributed to the introduction of the *New Public Management*, which shifted the conventional governance mode where the government always had the leading role to a more modern governance mode where the government "steers" rather than "rows" (Osborne & Gaebler, 1992, p. 32). With this "culture" in the public sector, the adoption of the PPP seemed a natural choice. Also, due to this cultural shift brought by the switch of the governance mode, the private participants had more say in the partnership and that the expertise and opinions of the private partners were more valued by the public sector.

While the first two "cultures" discussed above had been accumulating over the years with the development of the physical conditions in the UK, the last "culture" that can be identified in this case was more of trendy and instant fashion. That is, the need to celebrate millennium. This "culture" could actually be identified around the world by the end of the 20th century, when festive celebrations and constructions were observed worldwide, such as the concerts and fireworks in Tokyo, or a brand-new Times Square Ball made of Waterford Crystal. As for the UK, there was also the Millennium Dome built for the millennium celebration. But in view of the failure of the Dome, there was such urgent desire not only among the public but also among the government officials to build another site for national branding (Werther, 2011). Thus different from the biophysical condition of a new site for celebration, here this "culture" can be more intuitively understood as a kind of social emotion to mark the achievements of the country.

Within this "culture", "aligned interests" could be identified in two ways. Firstly, the consensus between the British citizens and the government officials to mark the achievement of this country, which helped to facilitate the decision-making process and made the establishment of a new project a natural decision (Leeper & Slothuus, 2014, p. 8); Secondly, there was also "aligned interest" that lie between the government as well as the private developers. Both the wish to mark the national achievements from the government side and the wish to demonstrate professional expertise for future branding from the private side helped facilitate their partnership.

In short, though these "cultures" are not necessary factors that directly led to the establishment of PPP in the project, they certainly contributed to the attention of the affordable housing, promoted the choice of PPP as the mechanism by which the project was established and made the participation of the private actors possible. These "cultures", though vary in their history and development process, at a certain point of

time, all contributed to the call and supported building the GMV project at the end of the 20th century.

### 5.3 Rules

As explained in the literature review section, rules in the IAD framework can be identified in seven kinds, each serving for different purposes. In the case of GMV, the rules in this case are mainly physical policies issued by the government regarding affordable housing and PPP.

First of all, in the two *Housing Green Papers* which specified the goal of future housing development and the certain conditions for the housing construction, *position rules* as well as *boundary rules* can be identified. This is because in the *Housing Green Paper Quality and Choice – A Decent Home for All* in 2000, clear-cut technical standards of "decent homes" were set out, which to some extent set the criteria for private developers who wished to enter the action arena. Meanwhile, it also set the position of the private developers of what they should do, although there was not any limit of number on entering the action arena. In the second Housing Green Paper *Homes for the Future: More Affordable, More Sustainable* released in 2007, the goal of sustainability was also put forward as part of the requirement of being "decent", which this can be regarded as *choice rules*, since it set out a more specific rules of sustainability for qualified home-builders who were already in the given position to build "decent homes".

*Aggregation rules* can be recognized in the specific partnership structure between EP and its private partners, in which the private developers had more say in deciding the specific or technical process. For example, the private developer such as EPR Architects and Proctor Matthews Architects were in charge of the designing in phase 1 and 2, and Bennett was designated as the contractor to build the homes in the phase 3, 4 and 5. As can be seen, these private developers had more control over the specific decision-making procedures of the project instead of the government, which conventionally had ultimate control.

And the three major policies regarding affordable housing, namely *Right-to-Housing* policy, *Help-to-Buy* policy and *the London Plan* can be regarded as *scope rules*. This is because all of these three policies mentioned concrete targets of achieving certain amount of affordable housing within a period of time, so that those contracted developers were able to plan their work and adjust their action to meet expected outcome.

*Information rules* can be found in all these policies discussed above, as different policies delivered different messages to the private developers, such as what kind of final outcome is expected in *the London Plan*, what kind of technique standards are

required in the two housing green papers, or how PPP should operate under the new governance mode of NPM. All these policies served as channels for the participants, particularly those private participants, to acquire information so that they could communicate in the action arena.

Lastly, the *payoff rules* can be found in the specific PPP contracts between the EP and several private developers. Though the profitability of the GMV project would take many years to reveal, it is still possible to know that the project has a profit-sharing mechanism in which both EP and private developers are able to derive profit from a revenue above a certain fixed threshold (Urban Land Institute, 2006, p. 8). Such a profit-sharing mechanism, on the one hand, enabled EP to recover its original financial investment by the commercial value created by the GMV project as a whole and achieve its original intent of regenerating the land; On the other hand, it also enabled the private developers to gain from the remainder of the net profit and brand their own construction capabilities for future projects.

## **5.4 Action Arena**

*Action Arena*, as explained in the literature review, is a broad concept that can be of different levels of scales. Jointly affected by the three major exogenous variables discussed above, the action arena is a set of variables that delineate the boundary of analysis. Therefore, it is fundamental to demarcate the action arena in the first place when apply the IAD framework. The action arena for this research can be defined as the the GMV project in which PPP was applied. As the GMV case is located solely in the London, its action arena is based on the local scale.

### **5.4.1 Action Situations**

Action situations, to be specific, refer to the situations in which the participants acted. In view of the number of participants and government agencies as well as relatively a lengthy timeline of the GMV case, it is a "multiple action situations" linked and intertwined in both a consequential and simultaneous way (Shubik, 1986). Via the time span extended for decades in the GMV project, multiple action situations took place.

### **5.4.2 Participants**

In the GMV project, the participants consist of both public actors and private actors. Public actors are mainly government agencies and political parties that either had direct or indirect participation in the GMV, while the private actors are made up of all the private developers that had direct participation in building the GMV.

### *Public actors*

*EP* played the fundamental role in being the very first actor to take into account the regeneration of Greenwich Peninsular and to prioritize it on the agenda as major development issues that needed government attention. In the GMV project, it had two functions: first, similar to the role of a conventional government agency, it made the initial investment of purchasing the land and doing all other preliminary work for private developers on behalf of the government under certain concession and compromise; Second, different from conventional government practice, it was a co-developer together with the GMVL, which makes it only responsible for inspecting the construction process and making final decision on the project delivery instead of building the project on its own. Therefore, for *EP*, partnering with private developers would not only help the regeneration with the expertise and efficiency from the private sector, but could also reduce the workload and the same amount investment that might bring potentially better project delivery in the end.

*The Labour Party* was also one of the key public actors in pushing forward this project. From the perspective of traditional public choice theory, which takes economic principles as economists, the decision-making process in political parties are often driven by self-interest (Butler, 2012). And this was reflected in the action of the Labour Party. From the expansion of the Millennium Dome, the Labour did so not only for celebrating the millennium in the country but more for self-interest of highlighting their own political achievements, which explains why only 7% of the budget was spent on the Dome and much more was spent on other administrative work (Carling & Seely, 1998). Though great attention and costs was paid to the Millennium Dome, it ended in tremendous failure. With no flagship construction for the millennium to take pride in, the Labour quickly switched to push forward the GMV project, which was supposed to be another historic site of London. But this time, the action was taken with more caution, as can be observed by the fact that the Labour supported not directly to the GMV project, but to the environmental sustainability and urban generation, which the GMV is featured by, to pander to voter preferences.

Such action of the Labour Party can not be separated from its leader Tony Blair at that time, who took a lead in expanding the Millennium Dome and supporting the GMV. From his election campaign to the actual leadership position in the Labour Party, he had been constantly put forward new ideas and aimed for reforms to mark the achievements of his own as well as of the New Labour (White, 1996). The GMV project, could thus also be regarded as one of these moves to widen his public appeal. For example, in his speech of expanding the Dome, the Party leader was very proud of and wanted to showcase the achievements of the New Labour and gain more support from the public. But due to the failure of the Dome, another new project was in critical need to take place to distract public attention and reinforce the evanescent appeal for the "New Labour". Thus from the perspective of the Labour Party, the construction of the GMV

was more a political action to re-establish its prestige and trust from the public.

*The British and London governments* also helped push the project forward by mainly acting in a supportive role for PPP and affordable housing. Though they did not have direct participation in the GMV project, the three major policies of affordable housing, the new governance mode of NPM as well as the two green housing papers served as the policy foundation and rationale for the GMV project to work. Moreover, the then-Deputy Prime Minister of England John Prescott, who was also a Labour member, had the leading and direct role by initiating the competition among the developers for the regeneration of the Greenwich peninsular and setting out task forces that led to new thoughts on the innovative and sustainable ways of making use of public space. Such action aimed not only to ease the pressure of lack of affordable housing in London, or guarantee the official support of the government for the PPP in the project, but also opened the possibility of the participation of the private actors in the construction of the GMV project.

#### *Private actors*

Private developers in this case include those in charge of the design, mater-planning and the construction of the GMV project, namely the founders of the GMVL, Countryside and Taylor Wimpey, as well as individual contracted developers including EPR Architects and Proctor Matthews Architects, Waterman Partnership, Jestico & Whiles, Studio 54 Architecture, and Peter Barber Architects.

Primarily, these actors might have participated in the open bid to build the GMV project because of its profitability due to their nature as private actor. The GMV project, with its advantaged location and featured designs, was an ideal choice for commercial housing (Grant, 2006, p. 61). And in view of the financing mechanism, apart from the original investment from the EP, all the rest of the revenue from the project would all be private profit, which could be highly attractive to those developers as the project had a promising future in the blueprint. Moreover, with substantial support from the government and the close collaboration among all participants, the success of the GMV project would be a unique opportunity for those developers to showcase their capabilities and brand their reputation among the public, which would be greatly beneficial for their future development in the housing market.

Furthermore, drawing insights from the *Motivation Crowding Theory*, in the GMV project, the researcher has also found that these private developers took much initiative in architectural design, interactive community management as well as choosing the proper way of achieving sustainability. This was because within the partnership with EP, they enjoyed much freedom in bringing their own advantages and making decisions with the support from EP and other government agencies. Therefore, the partnership mechanism to some extent 'crowded in' motivation for the active participation and



better performance of the private developers, enabling the private developers to exert their strengths, and thus leading the GMV project to a success. This also accounted for why certain private participants were actively involved.

## **5.5 Patterns of Interaction**

The GMV project, as described above, could be regarded as a PFI. Namely, in the GMV project there was a long-term contract between the public and private participants in which the primary investment was made solely by the government while the private parties were responsible for the design, construction and maintenance. And a SPV, GMVL, was specially established for its operation, serving as a formal channel for the private developers to interact with the EP.

In general, the patterns of interaction in the GMV project can be viewed as "high positive" as in the IAD framework in which most "constraints" pushed the project to develop in a positive direction though certain barriers existed. In the case details, we could know that though certain difficulties were met by the partners at the beginning of the project, these were soon overcome. In this process, the government agency EP played a more proactive than the private developers not only in initiating the project, but also in dealing with the disputes and pushing the project forward. Thus in the following stages, the interaction public and private partners was able to develop in a more efficient and positive manner, which take up a bigger percentage for the interaction.

Drawing on the lessons from the beginning, the following processes also became more positive and efficient. For example, the two sides had fewer debates over the labor division, which was done in a more detailed manner. And regarding the management and maintenance, which was undertaken by the private developers, the EP was only in charge of the supervision of the project rather than the actual construction process. The communication and collaboration between the two sides also became closer after the problems were resolved, which made the critical information available to all parties and served as one of the key enabling factors for effective and positive interaction (Munim, 2011). In the end, the whole partnership was much formalized and supportive, which not only led to the successful delivery of the first stage of the project, but also aroused the motivation of the private developers, which may explain part of the reason why more private partners were involved in the bid wishing to participate in the construction of the second stage.

From these case details, it also was telling that the EP, though had an initiative role, did not attend to all the details of the construction but left them to private developers with trust, who were then able to showcase their strengths. And the patterns of interaction, can indeed be shifted from a negative beginning to a highly positive one as long as concrete efforts are made.

## **5.6 Evaluative Criteria**

In this case, the evaluative process was not extensively elaborated because firstly, they are not the most relevant to the establishment of the GMV project. And secondly, detailed criteria from the EP were difficult to access. But in view of the fact that the work process became more standardized and more private developers were accommodated in the second stage of the project, it might be safe to say that certain evaluation was done and the feed-back was achieved in the first Phase 1 and 2 so that the Phase 3, 4 and 5 had a slightly different setting for better performance and project delivery. The adjustments of these elements in the two stages of the GMV project could be regarded as a result of the evaluative criteria.

## **5.7 Chapter Summary**

In sum, this chapter applied the IAD framework to systematically identify and examine the key variables that have facilitated the establishment of GMV. For the exogenous variables in this framework, previous social and political background in London and the UK at large served as the biophysical conditions that urged the need for the project establishment; The social values nurtured by the desire for affordable housing and the embracement of PPP among policy-makers served as the attributes of the community further promoted the desire especially among the public for such project; And the policies issued before and during the discussion of the project functioned as the rules, laying the procedural foundation and making such practice legally possible.

Under the action arena, the participants, especially those public participants, played a key role in pushing forward the progress of the project. While the public participants did so mostly out of their political interest, the private participants had more interest in gaining profit from the project due to its advantaged location, flexibility in performing the task and the possibility of branding the reputation and capabilities of themselves in the future market. The patterns of interaction among these actors are considered as "highly-positive" despite the disputes regarding the division of work and communication in the beginning.

Based on the discussion above, a simplified figure of the IAD framework regarding the specific elements of the GMV project could be drawn below by figure 5.1. In general, the IAD framework suited well for the empirical analysis of the GMV project, as most of the case details can be identified in different sections of the framework and arranged in an institutionalized manner. And the analytical results also coincide with the expectations made at the beginning of the study. But two points need to be noted here. First of all, in the empirical analysis rather than the theoretical development, there was factors that stayed in the "grey area" and could be categorized into different sections of the framework depending on the interpretation of the researcher. For example, though

the housing market of London is viewed as an exogenous factor in this study, the growing desire for housing ownership fostered out of this fact, on the other hand, might be viewed as another "cultural factor" that can be categorized in the "attributes of the community" for another researcher.

Secondly, though the framework provided a comprehensive overview of the factors that facilitated to form an action arena with actors taking actions inside, the specific patterns of interaction among these actors cannot be demonstrated by the figure, which could only be put in a narrative form in the empirical analysis.

## **6. Discussion and Conclusion**

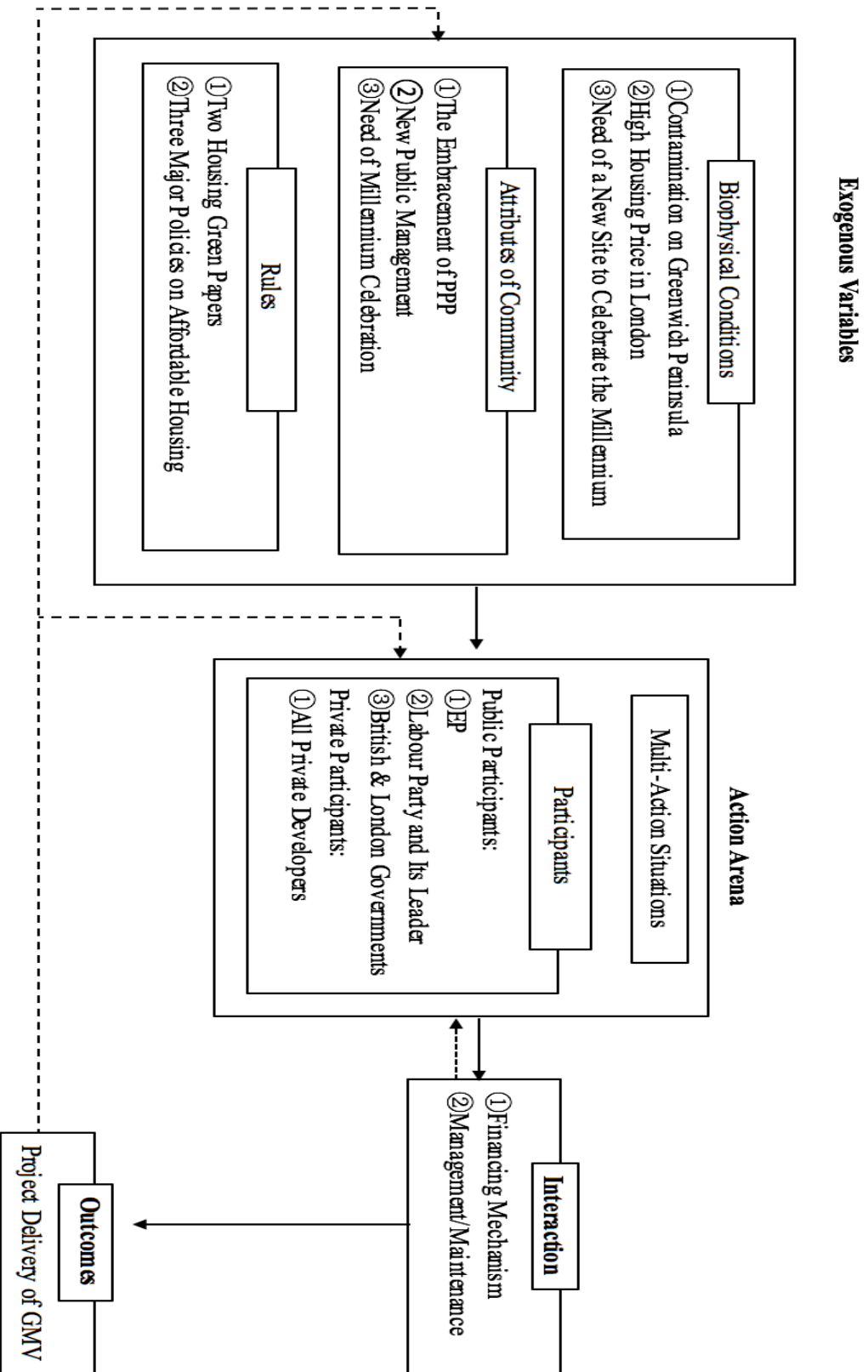
One of the most important aspects of the conclusion chapter is to review, summarize as well as reflect on the research and also provide insights for future research (Bunton, 2005). This chapter, therefore, would start by providing a theoretical explanation to the research question according to the analysis of this study. It then reviews the strengths and limitations of the research. And finally, it proposes recommendations for future policy-making and PPP-financed affordable housing projects based on both the literature reviewed and the empirical findings drawn from this single-case study.

### **6.1 Answer to Research Question**

The research question raised in the first chapter of the research is: *Which factors facilitated the establishment of the Greenwich Millennium Village project in terms of PPP and affordable housing?*

According to the findings in chapter 5, three kinds of variables have contributed to the establishment of the GMV project. The first kind of variables are the exogenous variables, including biophysical conditions that mainly refer to the environmental protection and the need for millennium celebration, the attributes of community, referring to the widely-accepted PPP among British policy makers that facilitated this process, and the rules, namely the policies issued that supported PPP and affordable housing; The second kind of variable is the action arena, including both action situations and participants. The action situations are "multiple" given the simultaneous and consequential reactions among variables and actors during the preparation and construction of the GMV project. And the participants comprise of both public and private actors, who took a leading role in precipitating the project. And the third kind of variable is the pattern of interaction, which is highly beneficial for rapid development of the project.

Figure 5.1 A Simplified IAD Framework of GMV Project



The results of the analysis, by and large, tally with the primary expectation that multiple levels of variables in the IAD framework have contributed to establishment of the GMV project. However, what was unexpected was that the significance of contribution differs among these variables. As can be drawn from the analysis, the biophysical conditions in London in 1990s primarily served as the foundation on which the project was accepted and enabled to operate on the legal basis, and the pattern of interaction, which can be said as "highly-positive" in this case, enabled both the public and private actors to play their own strengths and aroused their incentives for better project delivery. Though these variables all provided support for the project, they are not necessarily the most direct ones that led to its establishment.

The main facilitators, in this case, are the public and private actors, and especially the public ones. It was them made the first step to think about the urban generation and took the initiative in starting the bid to build the GMV project, which was the most decisive role in setting up the project. Among these public actors, the Labour Party and its leader Tony Blair played active roles in expanding the original Millennium Dome and supporting the establishment of GMV project; Labour member John Prescott, on behalf of the local London government, promoted the establishment by laying the legal and policy foundation which offered supportive environment for PPP and added to the attention of affordable housing; Finally, EP played the most fundamental and direct role in taking the lead to launch the GMV project; As for the private actors, though it seemed there should have been more profit in the commercial housing market, participating in this project enabled them to earn the residual revenue from the sales other than the original investment made by EP. Moreover, undertaking this landmark project in inner London helped demonstrate their professional capabilities and extend branding in future market. Thus, these actors, though having different motives, share the aligned interests with each and thus are the major driving force that led to the establishment of the GMV project.

In short, to answer the question of origin of the GMV project in terms of PPP and affordable housing, it can be said that its establishment took the full advantage of the timely opportunity in London at the end of the 20th century that it enjoyed the support from social emotion of the general public, the capabilities and expertise of private developers. But above all, it was the political interests as well as the desire for public welfare of the public actors that drove the project to develop.

## **6.2 Strengths and Limitations of the Research**

The strengths of the study are three-fold. First of all, an important aspect of this study is that though the GMV project is not a new object of study, this study takes a brand-new perspective combining PPP and affordable housing to explore the rationale behind its establishment. This is an under-developed yet indeed, quite important perspective in order to gain a more holistic understanding of why the project was established besides the technical factors such as architecture or low-carbon emission and draw insights for

future policy-making in PPP as well as affordable housing, which has been largely neglected in the past researches. By carefully examining the GMV project in terms of PPP and affordable housing, therefore, this study fills in the knowledge gap in the academia and contributes to practical policy-making process in the future.

The second strength of this research is that it employs an extensive theoretical framework, the IAD framework, which has been developed over decades, to resolve the research question. This has enabled the researcher to take a comprehensive perspective considering not only the development of the project alone, but also the role of different variables and their interactions before and during the establishment of the GMV project.

The third strength of the study lies in the overall research design. As stated above, this study is a qualitative study that employs a single case study to particularly examine the factors behind the establishment of the GMV. The research design is well-targeted and the case selection fits perfectly its research aims. Thus by conducting this research, the research is able to draw a conclusion that provides direct answer to the research question and may gain insights from this in-depth study.

However, this research is also not immune to general limitations that could be encountered in both qualitative and single case study. Firstly, due to the sole research focus on the GMV project and the fact that the GMV project was established under a unique context when the UK was at political election at the turning point of a new millennium, the findings of the research can not be easily generalized to other PPP-financed affordable housing projects. Thus, caution needs to be taken when applying the lessons learned from the UK GMV project to other projects.

Secondly, the availability of information imposes challenges for this study. As the UK Greenwich Millennium Village is such a long-term project that can be traced back to decades ago, there was not so much detailed public information available from last century, thus most of the data come from secondary sources, which makes it difficult to peel off the subjectivity from other authors. This study tries to overcome this difficulty by drawing information from a variety of secondary sources.

Lastly, as is often the case with qualitative study, this study requires a long period of time to finish. Due to the complexity of PPP and affordable housing, both of which are broad topics, this study can be done in a rather concise way. Given the more time, it might be able to explore in more aspects and to include the whole process of the PPP to see its impact on the society. This might be the work for future research.

### **6.3 Conclusion and Recommendations**

By conducting such an in-depth research over a single-case study, the researcher primarily tries to resolve the research puzzles and explore the potential factors that

facilitated the establishment of the GMV project by the end of the 20th century. Given the answer to the research question stated above, this research has primarily accomplished its aims to understand the inter-relationship among the various variables that led to the establishment of the project. The findings of the research suggest that though various factors contributed to the establishment of a PPP project, more initiative is at the hands of the public sector. Indeed, regardless of the motivation of the public actors, either for urban regeneration or for political interests, their initiatives in taking further steps led to the participation of more private actors and the establishment of PPP. Moreover, when there are problems in the partnership or during the process of interaction between the two sides, the government should also be counted upon to take a leading role in resolving them.

The research also sheds light on the theory of PPP in general. As discussed in the literature review, the very cornerstone for the development of PPP lies in its merits to bring the expertise and financial resources from the private sector to the public sector and help the government deliver more quality public goods, regardless of its conceptualization. Particularly in this case, the study of the GMV project also tells us that PPP, under certain circumstances, can also be regarded as "Faustian bargain", which efficiency gains are achieved at substantial democratic costs for the benefits of certain political actors (Flinders, 2005, p. 21). Thus it makes "electoral sense" for these policy makers to support large-scale projects even they are time and money-consuming (Shaw, 2004, p. 73). In this GMV case, though certain efficiency and quality improvements of affordable housing provision have been achieved, more immediate and short-term benefits for the certain politicians, such as the Labour Party members represented by Tony Blair and John Prescott.

In terms of affordable housing, it should be acknowledged that though the challenges in affordable housing could not be solved by building more affordable housing alone, they can be certainly eased by increasing provision (Anenberg & Kung, 2018). And though the number of affordable housing in the GMV did not account for much in the total number of affordable housing set by *the London Plan*, it certainly worked as a successful example and role model for the future communities to combine both regular commercial housing and affordable housing and apply PPP to achieve this setting (Foletta, 2010).

Two policy recommendations are proposed in this research. Firstly, the private actors may gain more permission to play a bigger role and be shouldered with more responsibilities in PPP projects. Though this research has found that the private developers were involved in the GMV project still primarily out of their own interest, such incentive does not necessarily lead to conflicts with public entities. On the contrary, though the interests of the private sector are mainly profit-driven instead of welfare-driven, the public sector is able to regulate such conflict in the PPP relationship and take advantage of the common interests to push forward the project delivery (Miraftab, 2004, p. 1).

The second policy recommendation concerns affordable housing. Though there have been concerns over the application of PPP in providing affordable housing, such as poor performance, information transparency, and affordability (Ibem, 2018), the GMV project served as a good example which showed that such problems can be resolved properly depending on the overall management, timely communication and division of work. Though the specific factors that led to the success of the GMV project may be difficult to replicate, it is not difficult to recognize that there is great potential lying in the cross-sector collaboration between the public and private sectors. Therefore, policy-makers could be more confident in applying PPP to support affordable housing projects, in terms of financing, construction, as well as management and maintenance. With proper guidelines and interaction with the government, it is possible to let PPP play a bigger role in providing more affordable housing (Susilawati & Armitage, 2004).

As for the recommendations for future research, there are also two points to make. Firstly, though this study did a careful examination of the preparatory process before the project establishment, it did not have the opportunity to delve deeper to the project to track the whole process from establishment to its complete delivery due to the limited time scope and data available. Thus, it might be helpful for future research to continue on this perspective to give a more holistic review of the whole project and draw more insights from its successful experience. Moreover, by the time when the GMV project is completely finished and delivered, it would also be interesting and relevant to consider the overall social impact of such project.

Secondly, though this study barely touched upon the later stages in the IAD framework, such as the evaluative criteria in this case and changing conditions for interaction, these variables can also be important components for a PPP project to work efficiently and let all parties to play to their full strengths. Thus, in the future research, it might be helpful to collect more data and explore, for example, how the evaluative criteria led to the changes to accommodate or adjust the actors in this case, which should be practical and relevant to extend to future PPP project management.



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