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INVESTIGATION OF UNDERUTILISATION OF PUBLIC LANDS, CRITICAL FACTORS AND THEIR INTER- RELATIONSHIPS: THE CASE OF SRI LANKA

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PhD

THE HONG KONG POLYTECHNIC UNIVERSITY

2022

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Investigation of Underutilisation of Public Lands, Critical Factors and Their Inter- Relationships: The Case of Sri Lanka

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A thesis submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy

April 2022

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ABSTRACT

In general, 'Public Land', also identified as 'State Land' or 'Government Land' refers to the lands owned and governed by public authorities functioning at the central, regional or local level, or by any parastatal body. "Public land is an asset that belongs to all citizens" (Lin & Cheng, 2016, p.1). Hence, the public sector must ensure the 'public interest' in such lands. However, recent evidence (from both developed and developing countries) draw attention towards the misuse of urban public lands with development potentials.

The systematic review of the literature on urban public land revealed three key knowledge gaps. Firstly, withholding public lands and keeping them idle for prolonged periods without using them productively to fulfil the socio-economic needs of the public is found to be an ubiquitous practice in many cities. Yet, this issue has rarely been raised properly in scholarly discussions. Secondly, there have been no attempts at explicitly dismantling and analysing the utilisation (or under-utilisation) of urban public land and its development within a context of networked relationships. Thirdly, despite some discussions prevailing in the public domain, scholarly attention on Public Land Development (PLD) in developing Asian countries is inadequate.

Against this backdrop, this study aims to address the question: *why the public lands with development potentials remain underutilised in the urban areas of Sri Lanka*. The study has five research objectives: 1) To examine how the concept of 'underutilization' is defined or characterized with respect to urban public land in decision making; 2) To identify the critical factors affecting the effective utilisation of public lands in the urban context; 3) To investigate the critical factors affecting the underutilisation of urban public lands with development potentials in Sri Lanka; 4) To examine possible inter-relationships between those critical factors and how they cause (if they cause) underutilisation of public lands in Sri Lanka; and 5)

To develop a theoretical framework that can be used to assess the underutilisation of urban public land in Sri Lanka.

The study adopted a case study approach as the means to address the research question. Accordingly, multiple case studies (5 cases including a deviant case) were chosen from Colombo, Sri Lanka in order to examine underutilisation of urban public land in a real world context. The data was collected via multiple sources namely, 1) key-informant interviews, 2) documents, and 3) direct observations. The textual data obtained via these sources was analysed through coding and the thematic analysis. The network analysis was used as the key analytical tool to examine the inter-relationships between the critical factors that are affecting underutilisation, the key focus of the research inquiry. While adopting an abductive approach, the study postulated an explanatory hypothesis. The validity of the hypothesis was tested against the findings derived from Colombo using a qualitative approach.

Having completed an in-depth examination of individual cases, the cross-case synthesis of findings identified 31 critical factors that affect underutilisation of public lands in Colombo. Based on the initial screening, critical factors were classified into two categories; 1) the adverse conditions experience by the public landowners, and 2) the challenges in planning the development and consensus-building. The analysis of inter-relationships between critical factors helped identify 2 types of critical factors in terms of significance (based on the Degree Centrality of each factor within the network), that is *influential factors* and *vulnerable factors*. In the end, the critical factors were further classified into five clusters based on their inter-relationships. The clusters were; 1) Limited powers and functions of public landowners; 2) Ineffective property management; 3) Challenges in planning the development; 4) Failures in building consensus between key actors; and 5) Delays in disposing of land in the market. The

inter-relationships across clusters revealed a cyclical movement, being recognised as the '*vicious cycle of underutilisation*' that leads public lands in Colombo towards underutilisation. This *vicious cycle of underutilisation* indicates that there appears a lack of responsiveness or the elasticity of land institutions towards exogenous and endogenous conditions associated with public land. To discover such deep-rooted institutional backlogs of PLD, the study analyses the underlying 'process' of underutilisation. Finally, this study proposes a theoretical framework that can be used to assess the underlying process and institutional context of PLD in Colombo.

The findings of the study have both theoretical and practical implications. The study makes original contributions to knowledge on the PLD issues under investigation, shedding light on the concept of *underutilisation* and its conceptual lapses - a topic that has been largely overlooked in scholarly debates to date. Likewise, based on the evidence from Colombo, the study revealed the cyclical nature of underutilisation of public land. Practically, the findings provide useful insights into PLD in urban areas of Sri Lanka for urban planners and other professionals.

Key Words: *Colombo, Critical Factors, Inter-relationships, Public Land, Underutilisation*

PUBLICATIONS ARISING FROM THE RESEARCH

Refereed Journal Papers (published)

- **Singhapathirana, P. I.,** Hui, E.C.M. & Jayantha, W. M. (2022). Critical factors affecting the public land development; A systematic literature review and thematic synthesis, *Land Use Policy.* 117. https://doi.org/10.1016/j.landusepol.2022.106077

Refereed Journal Papers (under review)

- **Singhapathirana, P. I**., Hui, E.C.M. & Jayantha, W. M. (Under review). The Concept of 'Underutilisation' of Public Lands: Contemporary Usage in Urban Planning and Conceptual Lapses. *Land Use Policy*. Manuscript No: LUP-D-22-01393

ACKNOWLEDGEMENTS

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LIST OF ABBREVIATIONS AND ACRONYMS

CAQDAS   Computer Assisted Qualitative Data Analysis Software

CMC   Colombo Municipal Council

DOI   Department Of Irrigation

IDC   In-Degree Centrality

IE   Institutional Elasticity

ODC   Out-Degree Centrality

PLD   Public Land Development

SLR   Sri Lanka Railways

UDA   Urban Development Authority

CHAPTER 1

INTRODUCTION

1.1. Background

The rapid rate of urbanisation in the twenty-first century has produced profound stresses on cities and particularly, there has been severe pressure on land in every city. 'Land' is a scarce natural resource, a basic factor of production, an investment asset, a hedge against inflation and undoubtedly, a source of wealth for individuals and society. Unique features of the land, such as limited supply, limited substitutability due to uniqueness of location, immobility and public interest (Alexander, 2014; Bowman & Pagano, 2000) distinguish land from other commercial commodities (Alexander, 2014). In the process of utilising this unique resource, the relationships built by individuals with the land and others in the society are defined and regulated either by de jure or de facto property rights (Alston et al., 2018; Nicita et al., 2007). Accordingly, individuals and many other actors (i.e., public and private institutions) are entitled to ownership rights over land.

1.2. Significance of Public Land Ownership

'Public Land Ownership' is a common practice in many countries of the world due to various historical reasons (Eidelman, 2016; Peterson, 2009) and this is a continuation of the old traditions that have been going on through the ages. In general, 'Public Land', sometimes identified as 'State Land' or 'Government Land' refers to the lands owned and controlled by public authorities functioning at the central, regional or local level, or by any parastatal body. These public authorities could be a government ministry, department, local government, corporation, commission or any other public sector agency (Eidelman, 2016; Home, 2009). According to Lin and Cheng (2016), "public land is an asset that belongs to all citizens" (Lin

1

& Cheng, 2016, p.1) and the public sector is obliged to ensure the 'public interest' in such lands. Public land ownership provides the opportunity for the public sector to perform in the role of a 'developer' in the market (Simon, 1994). It is vital to ensure the efficient and equitable use of public land as it is in the public interest to make the best possible use of land.

All public lands with urban development potential are an invaluable public asset in this era of rapid urbanisation. According to the estimate of the United Nations, 60% of the world population will live in cities by 2030. Likewise, 1033 million people in the urban areas of the world lived in informal settlements by 2018, with 80% of this number being accounted for by Sub-Saharan Africa and Asia (United Nations, 2019). Studies of slums and shanties in different cities, for example those in Peru and Vietnam, suggest that a substantial proportion of these housing units has been built on public lands (Field, 2005; Minnery et al., 2013). Despite the illegality, public lands have been an alternative choice for those who cannot access the formal land markets. As Boonyabancha (2009) stated, affordable lands for the 'urban poor' in cities are generally considered scarce, yet, these communities have managed to find lands to build shelters, even though the lands are not belonged to them. Further, when planning rapidly growing cities, planners should pay attention to the provision of public open spaces within the easy reach of residents to create inclusive cities (United Nations, 2019). Moreover, while South-Asia experiences considerable deficits in infrastructure financing (Ra & Li, 2018), countries like USA, China and South -Africa readily utilise public lands for urban infrastructure financing (Peterson, 2009). Therefore, public lands with urban development potential are a significant asset for citizens and the public sector itself.

1.3.Public Land

This section will briefly discuss the key theoretical concepts such as property rights of public land, public land development, effective use of public land and its underutilisation, which are the foci of this research.

1.3.1. Property Rights of Public Land

Property rights, mostly identified as 'bundle of rights', are recognised as the social relations that are associated with the use of a scarce resource. These relationships are defined and enforced by formal and informal rules. Accordingly, property rights prescribe what individuals may or may not do with the resource (Alston et al., 2018; Nicita et al., 2007; Rodgers, 2019). Likewise, these rights are not confined to the relationship between the property and the individual who owns it but, extend to the other people around it. For example, the owner of the land gets the rights to use, sell and subdivide the land and people in the society can regulate the use of land (Alston et al., 2018).

Further, property rights are broadly classified into two categories as 1) de Jure property rights: rights are defined and enforced within the legal boundaries set by the state and 2) de facto property rights: rights are defined and enforced by the rules that may not necessarily fall within the legal boundaries set by the state (Alston et al., 2018). Property rights of government owned lands are always recognised through the legal system enforced by the state. Hence, public lands are assigned with de Jure property rights.

A recent study by Rodgers (2019) articulates succinctly how the property rights of 'public property' are more distinct and complex compared to private and common property. The public

property combines the rights of public, private and common property simultaneously. Likewise, it offers rights and obligations on both owners and the public (Rodgers, 2019). A thorough understanding of the complexity and co-existence of rights over public lands is vital for its better use. First of all, such knowledge can help to identify the possible adverse consequences of resource utilisation such as is often the case with common and public property. Secondly, recognising the co-existence of multiple rights over land can help to formulate strategies for using public lands while accommodating competing demands (Rodgers, 2019).

However, in contrast, Freyfogle (2006) emphasise the need for narrowing the gap between the division of public and private land. While reflecting on public-private land division in the United States, Freyfogle argued that there are many overlapping qualities between public and private land in terms of 1) power and legitimacy, 2) use of land, and 3) management and decision making. More importantly, the exercise of power by both types of ownership can be considered legitimate only if it serves the common good (Freyfogle, 2006, p.108).

> property is legitimate only when the governing laws promote the common good. Property becomes illegitimate—even oppressive—when property rights allow owners to frustrate the common good, whether by harming other individuals or infringing public interests. Only secondarily is property an individual right (Freyfogle, 2006, p.109).

Therefore, accommodating competing demands over lands while serving the public good is certainly a challenging task to be achieved in the process of developing public lands. These theoretical discussions support to recognise the intrinsic complexity of property rights of public lands.

Further, the traditional concept of complete and absolute rights over property has proved contentious in reality. Property rights are considered to be complete and absolute when the owners and others who are interested in the property have full knowledge about all the attributes of the property (Barzel, as cited in Nicita et al., 2007). However, acquiring full knowledge about all these attributes will never be a complete process and thus, as argued by Barzel (1997) there is an 'incompleteness' in property rights (Barzel, as cited in Nicita et al., 2007). Incompleteness may be recognized in terms of the cost of identifying the land's uses, dividing rights and enforcing rights. The idea has been further expanded due to the inability to acknowledge the rights over new uses and their externalities. Accordingly, property rights need to be understood as an "incomplete bundle of defined and undefined rights over the uses of an asset" (Nicita et al., 2007, p. 1).

This reveals that the development of public land has to deal with the intrinsic challenges relating to complexity of property rights and incomplete knowledge (on uses and externalities) that create much uncertainty and ambiguity in land development.

1.3.2. Public Land Development (PLD) and Its Objectives

Land and real estate development are two intertwined but dissimilar processes, which produce "space in the form of both buildings and sites for various activities" (Healey & Barrett, 1990, p. 90). Patsey Healey, a pioneer in development research, recognized these activities broadly as 'development processes' (Healey, 1991, 1992).

> A transformation of the physical form, bundle of rights, and material and symbolic
> value of land and buildings from one state to another, through the effort of agents with

interests and purposes in acquiring and using resources, operating rules and applying and developing ideas and values (Healey, 1992, p. 36).

Verhage and Needham (as cited in Caesar, 2016) provided a more pragmatic view of the development process and recognized 'land development' as the initial phase of the development process, which is then followed by a 'building development'. Reflecting on previous scholarly works, Caesar (2016) has described the land development process.

Typically, this phase concerns the whole process of identifying appropriate land, adjusting possible ownership constraints (land assembly), designing a marketable project, creating a legally defined development right and finally servicing it with infrastructure according to the needs (Caesar, 2016, p. 261).

In summary, land development mainly includes the activities of acquisition of appropriate land, land assembly and servicing the land to carry out the building (property) development (Gupta & Tiwari, 2022; O'Brien et al., 2020). Land development brings various stakeholders together and demands a close coordination between public and private sector (Gupta & Tiwari, 2022). There are various land development models (i.e., active land development and passive land development) however, as O'Brien et al., (2020) emphasized, involvement of the public sector in land development is often observed due to the very nature of the development process.

The term 'Public Land Development' (PLD) is used in some contexts to provide a very specific meaning. For example, in the context of Dutch cities, the term is used to signify the active engagement of the public sector in the land market. Accordingly, 'public land development' is recognised as a process in which public authorities, particularly the local governments act as

land developers, by inter alia purchasing, acquiring, servicing and releasing lands for private developments (Valtonena et al., 2017; Van der Krabben & Jacobs, 2013). In the Netherlands, local governments invest in public lands by purchasing lands several years before the development (Valtonena et al., 2017) and thereby obtain temporary land ownership through their legitimate purchasing power (Caesar, 2016).

However, the term 'Public Land Development (PLD)' as used in this study refers to the process of developing lands that are already owned by the public sector authorities, whether they are exclusively-owned land, expropriated land or purchased land from private owners. Even in the PLD that is discussed in the context of Dutch cities, ownership of land is ultimately vested in the municipalities after purchasing or acquisition and therefore, both scenarios (PLD identified in this study and the Dutch context) are similar in terms of land ownership.

Much attention has been paid to the qualities to be ensured and the objectives to be achieved in the development of public lands. According to Lin and Cheng (2016), "public land is an asset that belongs to all citizens" (Lin & Cheng, 2016, p.1) and therefore, 'public interest' needs to be protected during the development process. Drawing from the evidence available from Taiwan, this study suggests that three conditions should be met in PLD to ensure the public interest. These are 1) alienating lands at a reasonable price, 2) making the lands available for development without speculation, and 3) avoiding the generation of unwarranted profits from the land.

As the studies from Dutch cities suggest, land development in general, and public land development in particular, should serve specific purposes (Valtonena et al., 2017; Van der Krabben & Jacobs, 2013). Accordingly, local governments should 'act as land developers' only

under certain specific circumstances (Van der Krabben & Jacobs, 2013), and if they do undertake such a role, the key objectives to be achieved are: 1) to provide lands for future development, 2) to maintain control over the land and property market and 3) to guide and improve city planning. PLD can regulate the quality of development such as social housing supply and the housing mix beyond the statutory plans (Valtonena et al., 2017). Likewise, the economic ends that could be achieved include full or partial cost recovery, land value capturing and land development promotion as a source of revenue for governments (Valtonena et al., 2017; Van der Krabben & Jacobs, 2013). Ideally, these socio-economic objectives are expected to be achieved in public land development, though unfortunately PLD has also been abused as a tool of political gain and power consolidation (La Grange & Pretorius, 2014; Lin et al., 2015; Shatkin, 2014).

1.3.3. Evidence of Effective Use of Public Land

Despite all of the peculiarities and complexities discussed above, public lands are effectively utilised to achieve economic, social and spatial development outcomes in cities across the world. Many countries have recognised the value of public land ownership and development practices. Mainly, countries such as Singapore, Netherlands, Finland, Sweden, China, USA, France and Australia provide empirical evidence on how PLD could deliver positive outcomes. These outcomes can be discussed as falling under three categories, namely 1) economic outcomes, 2) social outcomes, and 3) spatial development outcomes.

Firstly, in terms of economic outcomes, studies from the countries mentioned above discuss how the public sector has exploited land development by turning it into a profitable venture and one of the primary sources of income for governments. Revenue generation, attraction of investments, financing urban infrastructure, recovering the cost of infrastructure and reducing

public debt levels are the key economic benefits offered by PLD (Adisson & Artioli, 2019; Beswick & Penny, 2018; Bonds & Pompe, 2005; Gao, 2019; Liu et al., 2008; Murakami, 2018; Valtonen et al., 2018; Van der Krabben & Jacobs, 2013).

Secondly, the countries that generated financial returns from public land development seem to put in effort into redistributing those benefits through reinvestment, particularly on social housing and public infrastructure. Studies from the Netherlands, Singapore and Sweden (Caesar, 2016; Caesar & Kopsch, 2018; Murakami, 2018; Van der Krabben & Jacobs, 2013) discuss their long tradition of providing social housing on public lands. In Singapore, the Housing and Development Board has provided public housing for over 80% of the population (Murakami, 2018). As studies have highlighted, France and Netherlands have reinvested the profits generated through PLD into the development of public facilities such as parks and schools (Adisson & Artioli, 2019; Van der Krabben & Jacobs, 2013). Ensuring the social mix in cities through social housing development, coupled with PLD, is another social outcome promoted in Sweden (Caesar & Kopsch, 2018).

Thirdly, studies emphasise the positive implications of positioning the PLD projects within the city development plans and thus, PLD has been able to support the realisation of broader spatial planning vision for the city. The realisation of long-term visions of cities like transit-oriented developments (Murakami, 2018), sustainability (Gleeson & Coiacetto, 2007, Mendes et al., 2008), and high-quality spatial developments (Valtonena et al., 2018) is well supported through the coordination of PLD with city development plans. Further, significant city development projects such as the waterfront developments in Chicago (Eidelman, 2018), and promotion of urban agriculture in Portland, Oregon (Mendes et al., 2008), that were carried out on public

lands are identified as successful projects, which ultimately contribute to the cities' broader vision of sustainability.

Accordingly, based on the land development practices in different cities, this study suggests that public lands can be claimed to be 'effective' when their development can achieve the above-discussed development outcomes.

1.4. Underutilisation of Public Land

Over the past decade, numerous issues have cropped up relating to public land ownership and recent evidence draw attention towards misuse of public lands with development potentials. Holding large extents of land in the hands of the public sector without being put to productive use has been widely recorded across many cities around the world. This has been recognised as an urban phenomenon, which needs urgent development interventions, in order to address many critical urban issues. For example, studies conducted in Canada, England, Australia, China, India and Sri Lanka provide evidence to this phenomenon that can be observed in their cities (Amborski & Petramala, 2019; Cabinet Office, 2017; Du & Peiser, 2014; Eidelman, 2016; Palm et al., 2018; Peterson & Thawakar, 2013; Pethe et al., 2012; Rajak, 2009). These types of use or misuse of lands severely undermine the value of urban public land in terms of its potential use, such as provision of affordable housing, essential public infrastructure, generation of revenue for the public sector, infrastructure financing, and so on (Du & Peiser, 2014; Eidelman, 2016; Peterson, 2009; Peterson & Thawakar, 2013; Pethe et al., 2012).

There has not been a commonly agreed term to recognise the above-mentioned conditions associated with public lands. These public lands that are put to limited use or under-used are identified by various terminologies such as 'surplus land', 'lazy land', 'vacant land' and

'underutilised land' in different cities or countries around the world. These different terminologies are often used with different meanings (intentionally or otherwise) in various contexts.

These situations have not been problematic for developing countries but they have become a critical concern for the developed countries, which are believed to have advanced systems of urban development. For example, a study carried out on public land in England revealed that the central government and local authorities in England have been holding onto large tracts of lands with development potential, described as 'Surplus or Underused Land', that can provide space for two million new homes nationally (Savills Research, 2014). There is evidence that Canada is also holding large areas of state lands in the cities. However, due to the lack of readily available information people are not aware that the public sector has been underutilising a billion dollars' worth of resources (Eidelman, 2016).

Focusing on the developing economies, public land ownership and its development have grabbed the headlines of media reports lately. For instance, surplus state lands owned by state agencies in India have been underutilised, overlooking their massive potential for serving public purposes (Gangopadhyay, 2016; Gupta, 2017). The public sector in Sri Lanka owns approximately 85% of the lands in the country, but the public land administration has proved to be highly unsatisfactory (World Bank, 2017; Zainudeen, 2016). Sri Lanka Railways is one of the state agencies which holds substantial amounts of lands and only around 10% of the lands that can be released for development have been leased out so far while large extents of land remain vacant or are occupied unlawfully (Ministry of Transport and Civil Aviation, 2018).

After recognizing different terminologies that are used to identify different forms of less-effective or less-productive use of land, this study chooses the overarching term 'underutilised lands' to identify the public lands that manifested any of the above-discussed attributes.

1.5. Scope of the Study and Problem Statement

This study focuses on the utilisation of public lands located in the urban areas of Sri Lanka. Accordingly, the justification for focusing on urban land in Sri Lanka in this study is discussed below with reference to the context of land ownership, urban development trends and the magnitude of the problem relating to underutilisation of public lands in Sri Lanka.

1.5.1. Why Sri Lanka?

Sri Lanka is a country in South-Asia, with a land extent of 65,610 km2 (6.56 million ha) and a population of 21 million. After the end of 30 years of war in 2009, Sri Lanka has been experiencing a massive physical transformation over the past decade with highway developments, railway expansions, port and airport developments, reservoir constructions and resettlement projects across the country (Rathnayake et al., 2020). Compared to other countries in the South Asian region, Sri Lanka records a lower rate of urbanisation with only 18.2% of the total population living in urban areas in 2012. However, the official definition employed in the national census and statistics report is unable to capture the real urbanisation pattern. Therefore, urbanisation figures are considered by many to be 'under-estimated' (Department of Census and Statistics, 2014) and 'hidden' in Sri Lanka (Ellis & Roberts, 2016).

Land management system in Sri Lanka has been heavily shaped by its colonial administration, mainly by the British rule. With the landmark legislation, the Crown Land Encroachment Ordinance No.12 of 1840, introduced by the British Administration, a significant extent of lands in Sri Lanka were acquired under the crown (Paranage, 2018). At present, the state owns approximately 85% of the land in Sri Lanka and therefore, it is the most dominant holder of lands (Zainudeen, 2016). This means only 15% of the lands are privately owned, which stresses the need for efficient and equitable use of public land.

Absence of up-to-date information on land use by land ownership is a great limitation found in Sri Lanka. This research uses the data produced by a study in 2001 (see Table 1.1) to identify the distribution of land uses according to ownership, since the status of 'state land' do not change despite the changes in land use. As shown in **Table 1.1,** approximately 65% of the lands in Sri Lanka identified as 'other state lands' are composed of forests, parks, protected areas and reserves. It shows that all state lands are not available for urban development. According to this data, urban state lands in Sri Lanka only account for 0.2% (13,122 ha) approximately of the total land area of Sri Lanka (World Bank, 2017).

Table 1. 1: Land use in Sri Lanka according to ownership

Land Class/Use	Area (m ha)	%
State Agricultural Land allocated to private farmers	1.38	21.0%
Private Agricultural Land	0.88	13.4%
Private Urban Land	0.05	0.8%
Urban State Land	0.01	0.2%
Other State Lands (forests, parks, protected areas, sparsely used land, reserves etc.)	4.24	64.6%
Total	**6.56**	100.0%

(Source: World Bank, 2001, as cited in World Bank, 2017)

However, data generated in 2001 (i.e., 20 years ago) does not show the current status of urbanisation and the actual use of public lands for urban development in Sri Lanka.

Recent studies provide insights into the growth of urban development during the last few decades. Thus, we can expect the conversion of previously non-urban state lands (i.e., agricultural lands, forests) into urban uses. For example, the forest cover in Sri Lanka (which is predominantly state-owned) has declined from 44% in 1956 to 25% of the total land area of Sri Lanka by 2010 (Lindström et al., 2012). Likewise, a recent study on changes in Land Use and Land Cover (LULC) in Sri Lanka, reveals a significant LULC change during the period from 2009 to 2018 (Rathnayake et al., 2020). Facilitated by the political stability in the immediate post-war period, large scale infrastructure projects, investments and resettlements have caused new developments to rise. Further, the protected areas or reserves close to the district capitals have been rather affected by urbanisation and infrastructure development (Rathnayake et al., 2020). Therefore, a reduction in forest cover and increase in urban land uses have been observed, which trend needs to be considered when using the data from 2001.

The national physical plan 2017 – 2050 for Sri Lanka has identified the areas that need to be conserved due to the fragility and environmental sensitivity. As per the plan, there are three types of 'critical and important lands' that need to be conserved due to the high sensitivity namely, 1) central highlands, 2) coastal fragile area, and 3) existing forests, wildlife areas, sanctuaries, and water bodies (NPPD, 2019, Pg.4-4). As shown in **Figure 1.1 (a),** a significant extent of lands within Sri Lanka has a high level of sensitivity. When these highly sensitive lands are reserved as conservation areas, only a limited extent of land is available for urban development (see **Figure 1.1 (b)**). In this context, there is great pressure on land with development potential.
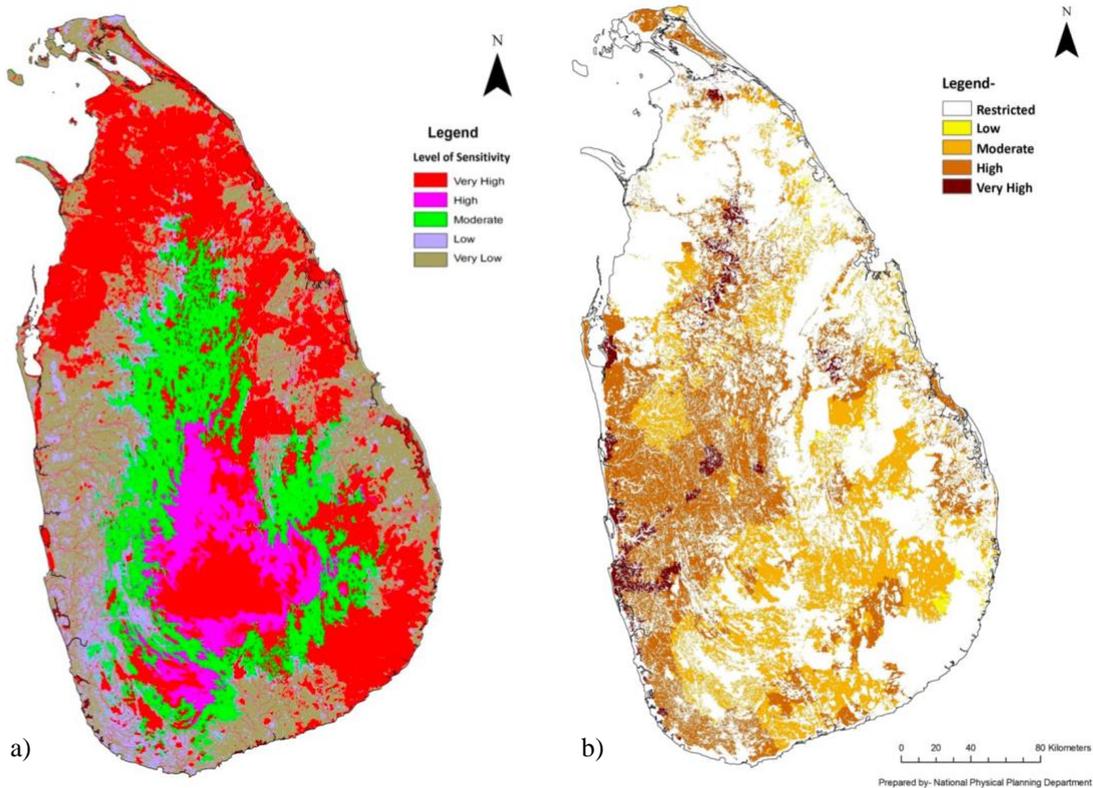
Figure 1.1 : Level of sensitivity of lands (a) and areas with development potentials (b)

(Source: NPPPD, 2019)

With the mounting pressure on land in the areas that are urbanising fast, use of public lands in the urban context needs considerable attention. Significantly, 50% of the total urban population of Sri Lanka lives in the Colombo District (Department of Census and Statistics, 2012) with Colombo being identified as one of the major urban agglomerations in South Asia (Ellis & Roberts, 2016). Colombo district is the smallest and the most populous district in Sri Lanka. Being the commercial and administrative capital of the country, Colombo offers more employment opportunities and better physical and social infrastructure, which attracts people to the city. As a result, there is immense pressure for the development of its land. According to the Land Price Index (LPI) of Sri Lanka, there is a continuous escalation of land prices in the Colombo District. By the 1st half of 2019, LPI has increased by 13.6%, compared to 2018 (Central Bank of Sri Lanka, 2019b).

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According to a study carried out by the Western Region Megapolis Planning Project in 2018 on state lands in the Western province (consists of three districts namely, Colombo, Kaluthara and Gampaha), approximately 3121 ha of state lands (either vacant or underutilised lands) are available for development. However, the recent spatial growth pattern of Colombo appears to be a low-density, horizontal expansion of the built-up area with a significant reduction in agricultural lands (Amarawickrama et al., 2015; Weerakoon, 2017). As **Figure 1.2** illustrates, infilling growth that produces high-density development has been insignificant, with urban growth occurring mainly through edge expansion of the existing urban boundaries (Weerakoon, 2017). This has been caused largely due to the increasing land prices in the city (Weerakoon, 2017).
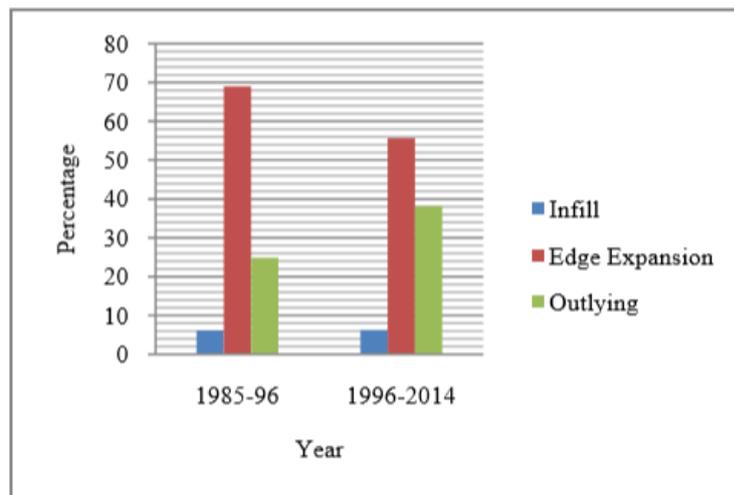
Figure 1. 2 : Types of Urban Growth in the Colombo District (Source: Weerakoon, 2017)

Therefore, careful scrutiny of the utilisation of public lands available in urban areas, particularly in Colombo, is crucial. Hence, this becomes the geographical focus of this study.

1.5.2. 'Underutilisation' of Public Land in Sri Lanka

Public land administration in Sri Lanka has been recognised as ineffective by previous studies (World Bank, 2017; Zainudeen, 2016). As Zainudeen (2016) revealed, there are many inefficiencies in land administration and particularly, public land ownership and alienation is highly unsatisfactory, resulting in many negative consequences. The process causes fragmented responsibilities, unnecessary delays, loss of important records, corruption, and mismanagement (Zainudeen, 2016). Further confirming this finding, the World Bank recognised that land administration in Sri Lanka is fragmented, unreliable, lacking in transparency and incomplete in coverage (World Bank, 2017). However, careful examination of public land management in Sri Lanka reveals far more complicated issues that go beyond routine administration.

As per the draft National Land Use Policy of Sri Lanka (n.d.), the state is supposed to serve the public interest as the 'trustee' of the land. It emphasises the need for expanding the role of the state to ensure the sustainable and productive use of the land for the sake of the present and future generations. Liberating the 'under-utilized or unutilized' public lands vested in state authorities for appropriate development is recognised as a key policy consideration (Department of Land Use Policy Planning, n.d.). Aligned with this policy, identifying the public lands with development potential is also proposed as one of the key steps to be followed in the preparation of divisional-level land use plans (LUPPD, 2013). However, how well such assessments are carried out by the public sector is uncertain.

The absence of an up-to-date, centralised database on public land and its utilisation in Sri Lanka is a very common constraint, which is also encountered in many other countries (Eidelman, 2016; Pethe et al., 2012). This makes the investigation of the problem exceedingly challenging.

However, the studies undertaken by public agencies who are either responsible for urban development planning or have public lands under their custody have recognised the underutilisation associated with public lands. Hence, by drawing evidence from multiple sources, the condition of land underutilisation can be viewed in terms of three dimensions.

First, public institutions that owned lands have been deprived of a large stream of revenue by keeping the lands vacant for an extended period; this is ironic because many of these institutions that are in an extremely weak financial position could have benefited greatly by exploiting these assets. Secondly, keeping lands vacant has allowed unauthorised occupation of land by low-income communities. This has hindered the effective utilisation of lands for providing affordable housing with security of tenure. Thirdly, claims on 'underutilisation' of land in general remains contested and tend to trigger public concerns. Following sections discuss these three dimensions with examples.

The ownership of public lands is largely fragmented among the different state agencies in Sri Lanka. For example, public agencies such as the Sri Lanka Railways (SLR), Port Authority and Department of Irrigation hold substantial amounts of lands. But large tracts of their lands located in urban areas have remained underutilised for a longer period. For instance, the Sri Lanka Railways (SLR) owns 14,129 acres of reserved lands, out of which approximately 5,364 acres (2171 ha) have been identified as lands that can be leased out for developments. However, as **Table 1.2** illustrates, only around 10% of these lands have been leased out so far by the SLR while large extents of land remain vacant or are occupied unlawfully (Ministry of Transport and Civil Aviation, 2019). Further, they have largely overlooked the rent earning capacity of their real estate. According to the Ministry, the arrears on lease amounts was recorded as Rs.493 Million by 2018 and this reflects only the amount due from other government agencies and

affiliated bodies. Lands have been leased out to 6400 users but the lease payments had been effectively collected from only 1800 (28%) users (LBO, 2017).

Table 1. 2: Utilisation of reserved lands by the Sri Lanka Railways (SLR)

Lands available for Development (ha)	Extent of Lands Leased (%)	Extent of lands Vacant or Encroached (%)
2171	10	90

(Source: Ministry of Transport and Civil Aviation, 2019)

Likewise, the lands owned by the agencies that are mandated to undertake planning and development in urban areas seem to lie idle for a long time. For example, Chalmers Granary is one of the prime lands (9 acres) in Colombo, located in close proximity to the main transport terminal in Colombo and owned by the Urban Development Authority (UDA), the apex body for urban development planning in Sri Lanka. Due to several reasons, this land lot continues to remain vacant even today.

Further, according to the estimations of the UDA (2018), there are approximately 364.2 ha of lands in the Colombo and its immediate suburbs that have been occupied by the slums and shanty dwellers. Hence, the UDA is currently undertaking an Urban Regeneration Program (URP), commenced in 2013, to provide better housing for low-income people in the city of Colombo and to liberate the encroached public lands for private investments (Ministry of Megapolis and Western Development, 2018; UDA, 2014, 2019). As shown in **Table 1.3,** by June 2019 approximately 22 ha of lands had been liberated for private investment by removing the encroachments and resettling the residents in housing apartments. However, the UDA has managed to lease out only 1 ha of the cleared lands for private development so far whereas the

rest of the lands remain vacant. The objective of recovering the cost of the housing development through private investments has not been achieved yet (UDA, 2019).

Table 1. 3: Progress of land development in Urban Regeneration program by June 2019

Total lands available for the URP program by 2019 (ha)	Land area allocated for Re-Housing (ha)	Lands allocated for investments (ha)	Leased-out lands as at June 2019 (ha)
38	16.2	21.78	1.17

(Source: UDA, 2019)

Further, land-based infrastructure financing is widely recognised as a risky yet efficient method of financing urban infrastructure delivery in many cities (Peterson, 2009). Similarly, Sri Lanka is required to explore all opportunities for self-financing mechanisms. Ironically, while holding valuable lands through many public infrastructure agencies, Sri Lanka is heavily dependent on debts for financing its infrastructure. According to the Central Bank of Sri Lanka (2016), the existing government financing arrangements are not adequate for financing the increasing infrastructure demands of the country. In the face of this adversity, the central government continues to obtain loans for infrastructure development from lending agencies despite the already huge outstanding government debts. This will further increase the debt level of the country and the repayment capacity will become a critical challenge (Central Bank, 2016). As shown in **Figure 1.3**, an increasing trend in outstanding central government debts can be observed. By 2019, the central government's debt to GDP (Gross Domestic Product) ratio had reached up to 86.8% (Central Bank, 2019a).
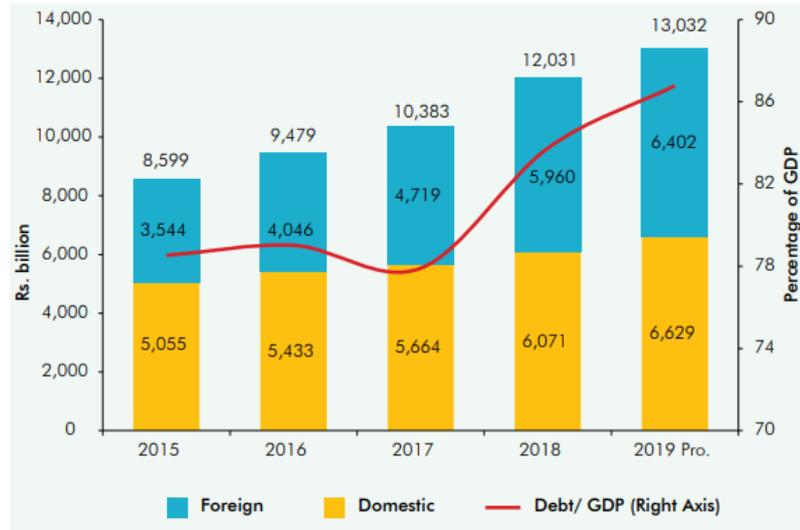
Figure 1. 3 : Outstanding Central Government Debt in Sri Lanka

(Source: Central Bank of Sri Lanka, 2019a)

To provide an example at the organisational level, the Sri Lanka Railways (SLR) has continued to show weak financial performance (Central Bank of Sri Lanka, 2018). As **Table 1.4** illustrates, a moderate increase in revenues and a large increment in expenditures have widened the financial deficit that was already large. Likewise, the lack of financial provision from the central government has forced the SLR to rely on foreign funds for capital investments (Sri Lanka Railways, 2018). The government is currently planning to modernise the railway network in Sri Lanka by launching a flagship project. The Colombo Suburban Railway Project (CSRP) will be mainly financed through a loan of USD 160 million from the Asian Development Bank (ADB) (ADB, 2019). ADB has also made recommendations to the Sri Lankan government to develop strategies for capitalising its land assets to establish new revenue sources for the future (ADB, 2019).

Table 1. 4: Financial performance of the Sri Lanka Railways

	2017	**2018**
Total Revenue (Rs. Million)	6,477.11	7,412.51
Total Expenditure (Rs. Million)	26,969.53	29,629.18

(Source: Sri Lanka Railways, 2018)

Secondly, unauthorized usage or encroachment is the most common problem with vacant public lands. This trend has been continuing for a long period in urban and suburban areas of Sri Lanka, especially in Colombo. If government lands remain vacant for long periods, it is very likely that people who cannot afford land in the city will find ways to occupy them. Given the severity of this problem, the Land Commissioner General's Department initiated a national level program in 2013 to investigate and control unauthorised occupation of public lands (Land Commissioner General's Department, 2018). As **Figure 1.4** illustrates, the Department has been carrying out evictions and litigations against unauthorized users. Yet, these actions seem to be a negligible response, compared to the inexorable expansion of encroachments.
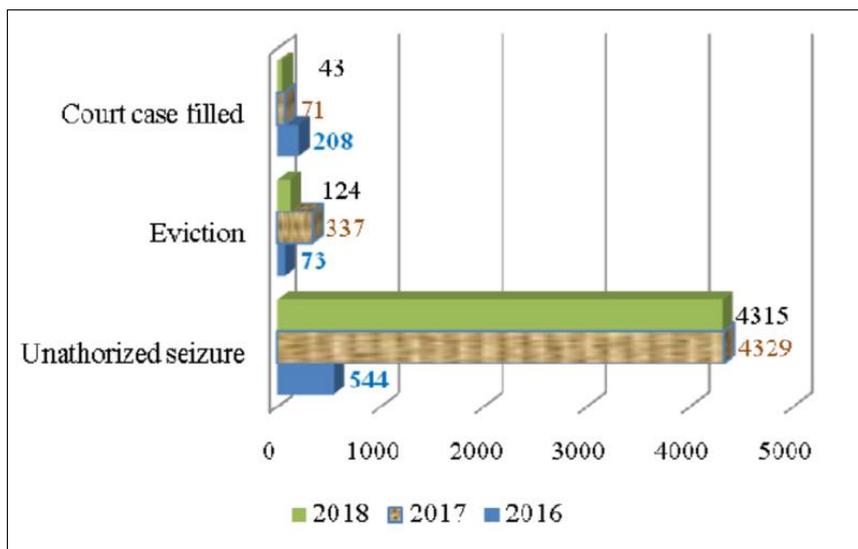
Figure 1. 4: Unauthorized Seizures of Public Lands and Control Measures - 2016–2018

(Source: Land Commissioner's Department, 2018)

According to Bowman and Pagano (2000), vacant lands signify space and opportunity. In this light, the encroachments may imply that state agencies hold lands that can otherwise be used for housing development, particularly for low-income groups in the city. For example, according to a survey conducted by the UDA in 2011, 68,812 households, accounting for approximately 53% of the total population in the city of Colombo, live in underserved settlements (i.e., slums and shanties) (UDA, 2019). These settlements are occupying public lands and private lands in an unauthorised manner. However, as indicated in **Table 1.5,** findings from a previous study suggest that 66% of the total households (50,156 households) in underserved settlements occupy public lands, either owned by a government agency or by the municipal council (Wakely, 2007). As many generations of squatters have continued to live on encroached lands, successive governments have eventually granted user rights to them. However, according to the most recent estimates made in 2012, 57% of these households do not have security of tenure (UDA, 2019).

Table 1. 5 :Distribution of Underserved Settlements in Colombo by Land Ownership

Land Ownership	No. of Settlements	Percent	No. of Households	Percent
Owner occupied	550	34	19,117	23
Municipal Land	219	14	15,148	20
GoSL state land	569	35	35,008	46
Privately owned	276	17	8,339	11
Total	1,614	100	77,612	100

(Source:Wakely, 2007).

Figure 1.5 shows the distribution of underserved settlements within the Colombo Municipality limits. Similarly, underserved settlements are found in many suburbs of Colombo, such as Wattala, Dehiwala, Ratmalana and Moratuwa. For example, in Moratuwa, approximately 1,000 families reside in underserved settlements in an area known as 'Watta'. These settlements are built on publicly owned lands after encroachment (UDA, 2019b). Therefore, this predicament has offered neither benefits for the users of the public land, nor the public agency that owns it.
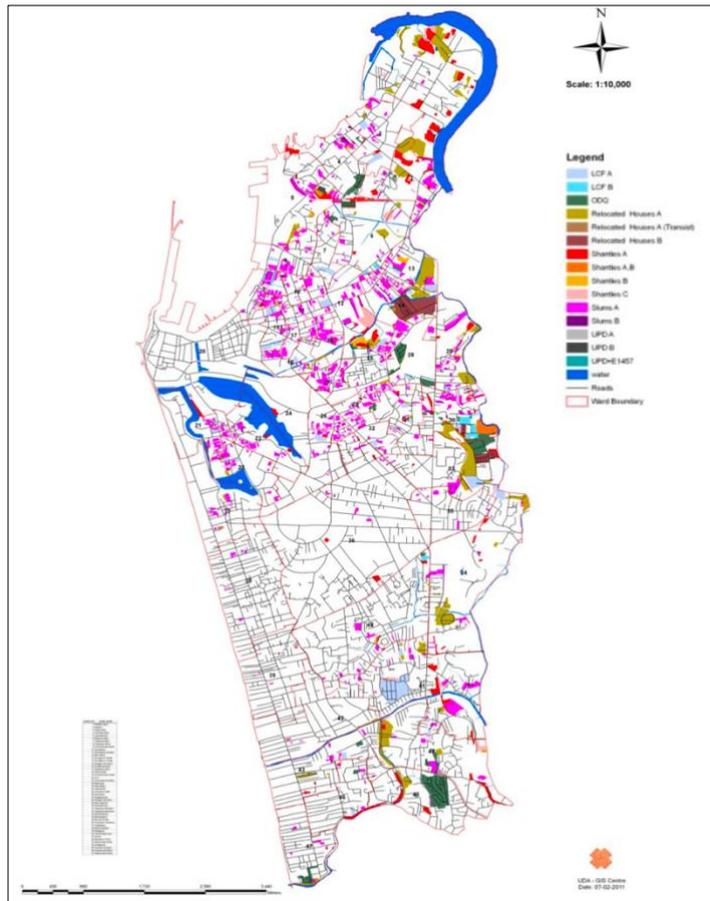
Figure 1.5 : Distribution of Underserved Settlements in the City of Colombo
(Source; UDA, 2019)

The third dimension of the problem is that despite its regular usage in the lexicon of urban planning and land management in Sri Lanka, the term 'underutilisation' remains highly contestable. There is a serious misunderstanding (and lack of consensus) among various public authorities and other stakeholders about this terminology, which severely hinders the land development attempts by responsible authorities. Recent evidence from Sri Lanka suggests that there are conflicting narratives regarding the claims of underutilisation of land in general and the corresponding development interventions. For example, the site (the land) that was once identified for an urban redevelopment project, by the Urban Development Authority in Slave Island area, Colombo in 2011. It was described as an 'urban derelict' and 'underutilised' site by the planning authority. However, the community has lived on the site for long years opposed

the proposed redevelopment, claiming that 'these are not shanties, these are good houses' (Newsfirst, 2013).

Further, the development of public land has always been a politically charged subject matter in Sri Lanka (can be the case in any other country). Any attempts of alienating public land for private sector investments tend to trigger strong public concerns. In 2019, for example, the Government of Sri Lanka decided to shelve its Millennium Challenge Corporation (MCC) agreement with the United States, which had promised to provide $67 million in donations for identifying and inventorying underutilised state lands (U.S.Embassy Sri Lanka, 2019). This happened mainly due to the strong opposition from pressure groups that were concerned about the risks of foreign land grabbing (Tennakoon, 2019).

To sum up, despite the immense development potential, public lands in the urban areas of Sri Lanka suffer from less effective forms of utilisation or underutilisation. The three dimensions discussed above, viz. 1) disregarding the income generating capacity of public lands, 2) undermining the potential of producing housing with secure tenure, and 3) vague and contested problematisation which produces disputes over development interventions indicate underutilisation related to public land.

1.6. Knowledge Gaps

The knowledge gaps identified in relation to less-effective forms of utilisation or underutilisation of public lands justify the need of this research inquiry and its objectives. Therefore, the knowledge gaps are discussed here in brief with reference to three key aspects: theories, methodologies and findings. However, since this study identified the knowledge gaps

distinctly at the end of the literature review, knowledge gaps are discussed in detail at the end of the systematic literature review in **Chapter 3.**

First of all, a systematic review of the previous scholarly work revealed that the majority of research studies have endeavoured to explore the PLD process, its operational issues, development outcomes, causative factors and institutional context using different theoretical lenses. However, withholding public lands and keeping them idle for extended periods without using them productively to fulfil the socio-economic needs of the public is found to be an ubiquitous practice in many cities. Yet, this issue has not been raised in scholarly discussions. This theoretical vacuum will be discussed in detail in **Chapter 3.**

The other key knowledge gap found at the theoretical level is the lack of conceptual clarity on the notion of underutilisation. More importantly, the absence of theoretical clarity and lack of adequate scholarly attention on the concept 'underutilisation' (and other comparable terms for that matter), in the context of land management and planning, is not confined to a single country. The discussions held among peer-researchers on this topic raised several important queries at the conceptual level that deserve careful attention. For example, the key query was, "what is underutilisation of land and how to assess it?" Follow-up question raised was, "if the land is not underutilised, does it mean the land is used to its full capacity or optimum use of it?". Further, as some have argued, the assessment of underutilisation is a subjective exercise and thus, not scientific. The existing body of knowledge on these concepts does not provide answers to these important questions.

Secondly, in terms of the methodologies used, there have been no attempts at explicitly dismantling and analysing the PLD as a complex system of networked relationships. A majority

of previous studies have examined the relationships among several aspects of PLD (i.e., Public ownership and housing, rule of law and land allocation). However, there is a dearth of relevant studies that adopt analytical frameworks for investigating the critical elements of the system, relationships among the different elements and their effects on effective land utilisation. A firm adoption of a relational approach to analyse the public land as a space in the city that integrates various forms of relationships, rather than a bounded entity (Graham & Healey, 1999) has yet to be undertaken.

Thirdly, there has been a strong research tradition related to PLD, which can provide useful insights into the comprehension of underutilisation. However, there is still a gap in their findings for PLD due to their geographical focus. European countries and some powerful Asian economies, such as Singapore and China, have been at the centre of discussion for a long period. By contrast, many developing Asian economies, such as Sri Lanka and India, have inadequately investigated their PLD matters. As PLD is a highly context-specific matter, any possible useful findings from more developed countries may not be fully generalizable for developing countries of Asia.

These knowledge gaps related to theories, methodologies and findings call for a novel inquiry into underutilised public lands in the developing countries of Asia.

1.7. Research Question and Objectives

The key research question of this study is why the public lands with development potentials remain underutilised in the urban areas of Sri Lanka. Despite the challenges confronted in PLD (i.e., financial risk, market uncertainties) many other countries (i.e., the Netherlands, Singapore, Sweden, China) are successfully mobilising their public lands for development. This study

questions whether certain conditions necessary to ensure the effective mobilisation of public lands are lacking in the PLD system of Sri Lanka. It was necessary to raise the following sub-questions in order to unpack the key research question ; 1) What are the characteristics of underutilisation with respect to urban public land ?, 2) What are the critical factors affecting the effective utilisation of public lands in the urban context ?, 3) What are the critical factors affecting the underutilisation of urban public lands in Sri Lanka ?, and 4) Are there any inter-relationships among those critical factors ?.

The five research objectives that follow are set to address the research questions.

i. To examine how the concept of 'underutilization' is defined or characterized with respect to urban public land in decision making

ii. To identify the critical factors affecting the effective utilisation of public lands in the urban context

iii. To investigate the critical factors affecting the underutilisation of urban public lands with development potentials in Sri Lanka

iv. To examine possible inter-relationships among those critical factors and how they cause (if they cause) underutilisation of public lands in Sri Lanka

v. To develop a theoretical framework that can be used to assess the underutilisation of urban public land in Sri Lanka

1.8. Significance of the Research

Significance of this research study is ensured by its theoretical and empirical implications. First, in terms of the theoretical contribution, a more critical and comprehensive examination of public land underutilisation in a developing Asian country like Sri Lanka is carried out, as knowledge on this topic is lagging in the current scholarship.

This inquiry was able to bring in new theoretical insights to the current scholarship on PLD. The study examined the concept of *underutilisation* of land, its conceptual lapses and their implications on planning decision making. Likewise, findings revealed *a vicious cycle of underutilisation*, an iterative process underlying the underutilisation of public land in Colombo. The findings on behaviour of land institutions provided new insights into *institutional elasticity* in PLD and those findings challenge the existing theoretical interpretations of the concept institutional elasticity. All of these theoretical discussions make an original contribution to the current knowledge on PLD.

Secondly, the findings derived from the study are significant due to the implications it will have on decision making related to PLD and urban planning. The conceptual lapses identified in this study relating to the concept of underutilisation will call for decision-makers to critically reflect on the usage of the concept in planning decision making. Likewise, the findings confirmed that the assessment of the underlying process of underutilisation is far more useful and crucial if the decision makers seek to assess the underlying process of underutilisation. The theoretical framework derived through the findings can be used to assess the efficacy of the PLD process and diagnose underutilisation, if any. Such assessment is necessary for informed decision making since it can support to identify the institutional backlogs (if any) in the PLD process and the institutional changes necessary to ensure the effective use of public land in urban areas. Hence, in-depth assessment of the underlying process of underutilisation can eliminate the risk of arbitrary development interventions by challenging their legitimacy and prevent the misuse of public lands by the public actor.

1.9. The Research Process

As shown in **Figure 1.6,** this research inquiry was undertaken through a series of coordinated steps (three key stages). The study was initiated with some preliminary observations on the less-productive use of public lands in Sri Lanka and some other countries. These observations urged that there should be an in-depth exploration of the topic; hence, a preliminary literature review was carried out on the topic of less-productive or underutilised lands. Simultaneously, a preliminary study was carried out by conducting a few interviews with key-informants and reviewing grey literature from different public organisations in Sri Lanka. These preliminary studies highlighted the problem of land underutilisation in the urban areas of Sri Lanka, which is the focus of this study. Having acquired an understanding of the problem of public land underutilisation, this study developed its research question and spelt out its five objectives accordingly. Following the research question and objectives, research methodology was developed with appropriate data collection and analysis methods. The case study method was utilised as the research approach with five public land development projects in Colombo being selected for a comparative study.

As shown in **Figure 1.6**, the first objective of the study was to examine how the concept of underutilization is defined or characterised with regard to the urban public land in decision making. Hence, to achieve this objective, the study reviewed literature originating from different countries on underutilisation and conducted in-depth interviews with 13 researchers (from different countries of the world) who have been involved in studies relating to PLD. This examination revealed and confirmed that withholding urban public lands without productive use has been an ubiquitous practice in many cities. Yet, this urban phenomenon and its implications have rarely been raised in scholarly discussions to date.

Primary Stage

Preliminary Literature Review

Limited-use /inappropriate use of Public Lands in Sri Lanka and Elsewhere

Preliminary Survey on Public Land Development in Sri Lanka

Output; Identification of 'underutilization' of public land in Sri Lanka

Research Question

Why the public lands with development potential remain underutilised in urban areas Sri Lanka ?

Secondary Stage

Objective 1

To examine how the concept of 'underutilization' is defined or characterized with respect to urban public land in decision making

Literature Review + In-depth Interviews with Research Professionals

Outputs

▪ The concept of *Underutilisation* and other comparable concepts
▪ Conceptual lapses of the concept of *Underutilisation* and its implications

Objective 2

To identify the critical factors affecting the effective utilisation of public lands in the urban context

Systematic Literature Review and Thematic Synthesis

Public Land Development (PLD) and the Critical Factors

Outputs

▪ Identification of critical factors of PLD
▪ Identification of Knowledge Gaps

Tertiary / Advanced Stage

Objective 3

To investigate the critical factors affecting the underutilisation of urban public lands with development potentials in Sri Lanka

Preliminary observations related to Underutilisation of Public land in Colombo

Develop an Explanatory Hypothesis

Lack of Institutional Elasticity (IE) in PLD

Data Collection and Analysis

Multiple Case studies from Colombo, Sri Lanka

Key-informant Interviews + Document + Direct Observations

Thematic analysis + Network Analysis

Outputs

▪ Five clusters of Critical Factors and the *Vicious cycle* of Underutilisation

Objective 4

To examine possible inter-relationships among those critical factors and how they cause (if they cause) underutilisation of public lands in Sri Lanka

Validation of Findings through member checking

Test the Hypothesis against the Findings

Objective 5

To develop a theoretical framework that can be used to assess the underutilisation of urban public land in Sri Lanka

Theoretical framework to assess the *Process* and the Institutional context of Underutilisation of Public Land

Output

▪ Cycle of Underutilisation as a proxy for Lack of Institutional Elasticity (IE)
▪ Modification of the concept of IE

Figure 1. 6 : Research Process

However, there is ample research on PLD that can provide valuable insights into understanding of the underutilisation of public land in cities. While there has been evidence and discussions on underutilisation of public lands in Colombo, despite the inherent complexity in PLD, many other countries (i.e., Sweden, the Netherlands and Singapore) have been successfully mobilising their public lands for development. This contrasting evidence entails an inquiry into whether certain conditions necessary to ensure the effective use of public lands are lacking in the PLD systems which have been experiencing challenges (i.e.Underutilisation). Hence, identifying the critical factors that affect the effective utilisation of public lands in the urban context was the second objective of this research study. A systematic literature review was the research method adopted to address that objective. The findings provided useful insights into the investigation of underutilisation of public land in Sri Lanka. Moreover, the literature review was instrumental in identifying the knowledge gaps in terms of theory, methodologies and the findings on the topic of PLD.

Having completed the systematic inquiry about public land utilisation, the study directed its focus on Sri Lanka. Accordingly, the third and fourth objectives were the key focus of this study. Once combined, it aimed to investigate the critical factors affecting the underutilisation, possible inter-relationships between those critical factors and how they cause underutilisation of public lands in Sri Lanka. Based on the initial findings on land underutilisation in Sri Lanka, this study proposed a novel interpretation to elucidate why the public lands with development potentials remain underutilised. Hence, while adopting an abductive research approach, the study proposed an explanatory hypothesis (Peirce, as cited in Timmermans & Travoy, 2012) or a plausible provisional explanation (Shani et al., 2020) on public land underutilisation in Sri Lanka to be tested against the findings produced by the case studies.

Following the development of explanatory hypothesis, the case studies were commenced by conducting key-informant interviews with the actors involved in the selected development projects. Data collection was further supported by document analysis and direct observations. The study was mainly based on qualitative data (derived from interviews and documents). Hence, the thematic analysis was used as one of the key methods to analyse the qualitative data. Following a relational approach towards PLD, the study aimed to examine the inter-relationship between the critical factors and their effect on underutilisation. Hence, the network analysis method was adopted to analyse the inter-relationships among the factors and their behaviour in PLD. The validity of the findings was tested through member checking. Following the validation process, the findings derived through case studies were tested against the two propositions of hypothesis. Finally, based on the findings derived from Colombo, the study proposed new theoretical insights into public land underutilisation within an institutional context.

1.10. Structure of the Thesis

Following this introductory chapter, **Chapter Two** aims to discuss how the concept of underutilisation is characterised in decision making and the conceptual flaws of the concept. **Chapter Three** discusses the findings of the systematic literature review that was carried out to accomplish the second objective of the study, which examine how the previous studies have identified the critical factors of PLD. Accordingly, the chapter discusses eleven key critical factors that determine the effective use of public lands. Further, drawing from the literature review, the chapter discusses the key knowledge gaps in PLD. **Chapter Four** offers the provisional, plausible explanation or the explanatory hypothesis (institutional elasticity and land development) to frame the problem of underutilisation of urban public lands in Sri Lanka.

Chapter Five provides a detailed account of the methodology adopted in this study including the research approach, methods of data collection and data analysis with justifications.

Chapter Six discusses the context of urban development in the city of Colombo, Sri Lanka, which is the geographical focus of this study and provides a detailed account of the selected case studies from Colombo. Particularly, the chapter discusses the critical factors affecting underutilisation of land with respect to each case study. **Chapter Seven** accounts for the inter-relationships between critical factors and how those relationships affect underutilisation by a cross-case synthesis of findings. **Chapter Eight** examines the propositions of the hypothesis against the findings derived from case studies. Also, the chapter discusses how the study developed a new theoretical framework based on the findings. **Chapter Nine** is the final chapter that summarises the key findings of the study, limitations, significance of the research and the way forward.

1.11. Chapter Summary

This chapter discussed the background of the problem of public land underutilisation, with an emphasis on Sri Lanka. It shed light on the scale and the magnitude of the problem in the Sri Lankan context. The state owns approximately 85% of the land in Sri Lanka (both in urban and rural context), and it emphasises the need for effective development and management of public land by the state. However, public land administration in Sri Lanka has not been satisfactory. Having identified 'underutilisation' of public lands in urban areas as a critical problem, development of public lands has become a priority concern in urban development planning, particularly in Colombo in recent decades. In light of this and with the knowledge gap in mind, the chapter introduced the research question of this study: *why the public lands with*

development potentials remain underutilised in the urban areas of Sri Lanka?. The findings of the study provide new theoretical implications and practical insights into public land underutilisation. These new insights will call on decision-makers to critically reflect on current institutional practices for the assessment of underutilisation in planning decision making. The next chapter will examine how the concept of underutilisation is characterised and used in decision making in relation to PLD.

CHAPTER 2

THE CONCEPT OF UNDERUTILISATION OF PUBLIC LAND

2.1. Introduction

The first objective of this study is to examine how the concept of 'underutilisation' is defined or characterised with respect to urban public lands in decision making. The inquiry carried out to achieve this objective was substantiated by identifying conceptual lapses associated with the concept and their implications. Hence, this chapter discusses 1) the methodology adopted in this inquiry, 2) the concept of underutilisation (and other comparable terms) which is employed to recognise different forms of less-effective use of public lands, 3) key conceptual lapses and their implications for PLD, and 4) the framework proposed for conceptualising underutilisation of public land.

2.2. The Need of the Inquiry and the Methodology

As stated in the previous chapter, despite the regular usage in the lexicon of urban planning and land development, the term 'underutilisation' remains ambiguous and unclear. In this context, the study aims to critically examine the characterisation of the concept and its current usage in decision making in urban development. Moreover, as there is no commonly agreed definition for underutilisation, the study proposes a preliminary framework to conceptualise underutilisation that can be used as the point of refence or a working definition for underutilisation in the context of this study.

This inquiry was initiated with a comprehensive literature review, aiming to explore how the concept of underutilisation and other comparable terms (i.e.,Surplus land) used in different countries explain the underutilisation of public land. The literature review also examined

several other concepts which are closely associated with underutilisation such as 'optimum use' and 'highest and best use'. It explored what these terms mean in the context of public lands and their relationship with underutilisation.

Secondly, semi-structured interviews were conducted with twelve research professionals (see **Table 2.1**), with extensive experience in land development and urban planning from seven different countries (Sri Lanka, the United States, the United Kingdom, the Netherlands, Canada, Australia, Taiwan). The set of participants selected using purposive and snowball sampling is comprised of research professionals who were in favour of divergent approaches towards urban planning and land development. This sampling technique was employed as a strategy to explore the contested views, if there is any on the concept of underutilisation of urban land.

Table 2. 1: Background information of the interviewees

Interviewee Id No	Country	Area of Research Expertise
RP1	UK	Urban land markets and urban development
RP 2	UK	Urban redevelopment and regeneration
RP 3	Netherlands	Planning and property development
RP 4	USA	Urban Planning & production of space
RP 5	Sri Lanka	Real estate development and urban planning
RP 6	Sri Lanka	Land economics and property valuation
RP 7	Sri Lanka	Urban design and planning
RP 8	Sri Lanka	Urban management and housing
RP 9	Canada	Land and housing development
RP 10	Canada	Urban planning and human spaces
RP 11	Australia	Affordable housing & transportation planning
RP 12	Taiwan	Land economics

Interviews were designed to examine two key aspects relating to underutilisation. Firstly, interviews aimed to inquire about the usage of the concept of underutilisation (or any other comparable concept/term) in planning decision-making in respective cities/ country and to recognise the ongoing debates around the said concept, if any. Secondly, to identify

conceptual lapses of the concept of underutilisation and its associated terms. A thematic analysis was carried out to analyse perceptions of the interviewees. The analysis identified three key themes (three conceptual lapses of the concept) and this discussion was substantiated by the findings of the literature. Having identified the conceptual caveats and their implications on decision making, the study proposes a preliminary conceptual framework to conceptualise the underutilisation of urban public land.

2.3. Understanding 'Underutilisation' and Other Comparable Terms

A literature review was conducted to examine how the notion of underutilisation and other comparable terms are used and defined in different contexts with special attention to Sri Lanka.

2.3.1. Underutilisation and other Comparable Terms

In general, a resource is considered to be 'underutilised' when the current use of the resource does not maximise its potential utility to the extent it could or should. 'Underutilisation' or 'underuse' has been a subject of scholarly inquiries in the realm of natural resource management such as with water resources (Dhawan, 1980; Mugagga & Nabaasa, 2016), agricultural lands (Ojha et al., 2017), and urban land (Abe et al., 2014; Bourne, 1996; Nguyen et al., 2017). Heller (1998, 2013) coined the concept of 'tragedy of anti-commons' to signify one form of underuse of resources that can arise due to fragmented ownership and fragmented decision making.

This inquiry focused only on public land and underutilisation associated with it. The literature review brought to light different terms used in different countries for 'underutilised lands' (Amborski & Petramala, 2019; Eidelman, 2016; Gunasekara, 2020; Ministry of Housing and

Construction, 2017; UDA, 2019a), such as 'surplus land' (Amborski & Petramala, 2019; Cabinet Office, 2017; Palm et al., 2018; Peterson & Thawakar, 2013), 'lazy lands' and 'lazy air' (Palm et al., 2018).

Focusing on Sri Lanka, official documents that are meant to guide urban development such as Colombo Commercial City Development plan 2019-2030, Moratuwa Development Plan 2019-2030, National Housing policy and many other development project proposals use this term in relation to public land. Accordingly, underutilisation of land has been recognised as a warrant for urban development interventions in cities and towns in Sri Lanka. Likewise, the term underutilisation of lands was once recognised through a legal enactment, the Revival of Underperforming Enterprises or Underutilized Assets Act of 2011. However, due to strong opposition, prompted by the negative implications of the act on investors and the business climate in Sri Lanka, the act was repealed in 2019 (Office of the Cabinet of Ministers Sri Lanka, 2019; Zainudeen, 2016).

All these terms (i.e., underutilised lands, surplus land etc.) signified fairly similar conditions related to public lands. As illustrated in **Table 2.2**, many of the studies have not provided a well-crafted definition, but these terms mainly refer to six types of attributes related to public land. All the terms imply some missing qualities that are essential for public land and emphasise the need for development intervention. Thus, these terms can be recognised practically as synonyms for underutilised land.

Table 2. 2: Underutilisation and Other Comparable Terms

City/ Country	Definition	Reference	Attributes Identified					
			Land vacancy or deteriorated/ abandoned built structures	Fragmented ownership	Incompatibility with the surrounding	Do not serve the public interest, public operator, or the economy	Not required for operational uses and No plans for development	Potential for better uses
Underutilisation								
Sri Lanka	…… underutilized areas which indicate relatively low land values due to deteriorating built environments, non-exposure and incompatible uses.	[Urban Development Authority, 2019a, p.186]	√		√			
Sri Lanka	The majority of urban land in Sri Lanka is state-owned. Ownership is fragmented across the government agencies. This is inefficient as the land allocation often goes beyond the requirement of individual agencies and land is underutilized adding little value to the government institutions or to the economy. Many of these assets are in prime locations and their underutilization is a barrier to urban development.	[Ministry of Housing and Construction, 2017, pg.38]		√		√		
Canada	.... not all public lands are so obviously tied to the public interest. Many government (and quasi-government) bodies own vast swaths of often under-utilized, vacant, or desolate property for reasons that appear purely speculative or strategic — or worse, reasons entirely unknown.	(Eidelman, 2016, P.2)	√			√		
Surplus Land								
UK	.. the land may be surplus if: 1) It is not used for current delivery or required for future delivery of the Department's operational functions and policies. 2) The Department has no formally approved strategy and timetable for bringing the land back into permanent full operational use.	[Cabinet Office, 2017, p.11]					√	

City/ Country	Definition	Reference	Land vacancy or deteriorated/ abandoned built structures	Fragmented ownership	Incompatibility with the surrounding	Do not serve the public interest, public operator or the economy	Not required for operational uses and No plans for development	Potential for better uses
Ontario	Surplus public lands refer to land, either vacant or underutilized, that is no longer needed to deliver government goods and services ….Underutilized land includes land which is in use, but that has the potential for more productive uses, such as built out sites where the building is not fully occupied, or sites with a relatively large footprint with low-density structures built on it.	[Amborski and Petramala, 2019, p.3]	√				√	√
Melbourne	Government land becomes surplus when a government entity determines that its ownership of a piece of land is no longer necessary for that entity to meet its current or future obligations or objectives.	[Palm et al., 2018, p.10]					√	
Lazy Government Land and Air								
Melbourne	…..any government site currently occupied by a land use that could be mixed with affordable and social housing but is currently not and where existing buildings are currently under four storeys.	[Palm et al., 2018, p.10]						√
Lazy Government Air								
Melbourne	……the space above government-owned land that can host affordable and social housing.	[Palm et al., 2018, p.10]						√

As Trigo (2020) discussed, over the years, the concept of 'vacant land' that guide the redevelopment in cities in England has been socially constructed using different standpoints. Reviewing the literature on the characterisation of underutilisation in planning policy in different countries further validates this argument. As illustrated in **Figure 2.1**, the comparable terms employ mainly three vantage points (yet, mutually inclusive) for framing the underutilisation of land. They are, 1) as a problematic condition associated with the land, 2) as presenting an opportunity for better use, and 3) as an untapped resource of a public institution.
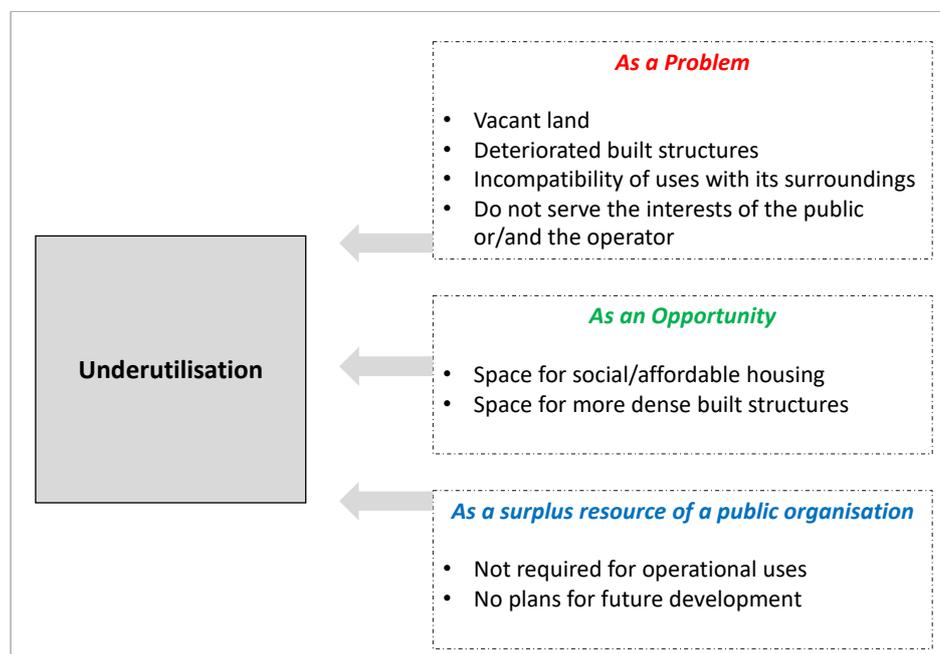
Figure 2. 1: Three vantage points of framing underutilization

A careful examination of the characterisation of underutilisation using different terminologies shows that the land is recognised as underutilised in relation to the pre-conceived ideas or expectations on 'better use' of the public land. An inquiry into the underutilisation of land will be conceptually incomplete if no attention is paid on how 'better use' might be made of the land. Thus, in order to augment the theoretical clarity of this inquiry, the literature review is extended to examine the concepts which recognise the seemingly opposite side of underutilisation.

2.3.2. Optimum Use and Comparable Terms

Focusing on the positive side of land utilisation, different terminologies such as 'effective', 'optimal', 'highest and best use', 'productive' and 'efficiency' are widely used in theoretical discussions. However, in this review, the concepts of 'productivity' and 'efficiency' are not explored in relation to urban public land. The concept of productivity has been widely discussed related to farming and agricultural lands that produce tangible outputs (i.e., Feng et al., 2021; Jiang, et al., 2017; Song & Pijanowski, 2014; Yao & Wang, 2022). It has limited usage in the literature related to urban land. Further, the term highest and best use of land already takes financial efficiency (input-output relationships) and maximum productivity into account. Therefore, this review only examined the terms 'effective', 'optimal' and 'highest and best use'.

i. Effective Use

In general, the term 'effective' recognises the ability to produce the intended results and the term will provide a precise meaning in a context where the development objectives or expected outcomes are clearly defined. Thus, evaluating effectiveness will be a relatively straight-forward exercise and can be adapted to public land development. For example, studies by Lin and Cheng (2016), Valtonena et al. (2018), and van der Krabben and Jacobs (2013) specifically identify several objectives to be achieved in land development, particularly by public sector actors. Further, scholarly studies on public land development provide evidence of successful development initiatives from countries like Sweden, the Netherlands, Singapore, France and the United States (Adisson & Artioli. 2019; Caesar, 2016; Caesar & Kopsch, 2018; Mendes et al., 2008; Murakami, 2018; van der Krabben & Jacobs, 2013). Those practices can set the benchmark for land development in other cities (if appropriately contextualised).

Evidence shows that PLD has to achieve three broad goals: 1) to contribute to achieve the long-term vision of the city through quality spatial planning within it (sustainability); 2) to provide space for accommodating public infrastructure and affordable housing for citizens (equity and redistribution of gains); and 3) to generate revenue, recover public infrastructure cost and ensure the return on investment to public operator/s and private partner/s (economic growth). Accordingly, public land can be claimed to be in 'effective' use if the development has achieved these goals.

ii.   Optimum Use:

As per the Oxford English Dictionary, the meaning of the term 'optimum' or 'optimal' is identified as 'producing the best possible results'. However, the term 'optimisation' of land does not carry a single and commonly agreed meaning. As de Vries and Voß (2018) rightly argued, there are different value systems such as social value and economic value attached to the land, and each value system has a distinct logic for optimal use. For example, in respect of social values, there are different actors (i.e., individuals, epistemic communities, public entities and crowd) who attach different values to the land (See **Table 2.3**). Thus, integration and reconciliation of multiple values with different optimisation logic plays a key role in land management (de Vries & Voß, 2018).

Table 2. 3: Examples of social value types created by different actors

Value types	Examples of value systems
Individual stakeholder oriented	Tenure security, safety, right to the city/right to village life, Stability in neighbourhood, quality of life
Epistemic community oriented	Socio-cultural opportunities, social cohesion indicators, type of boundary conflicts
Public administration and public service oriented	Social equity, economic equality, equal access to services, access to and functionality of technical infrastructure
Crowd oriented	Public interests, convenience of public services, equity in access to opportunities, spatial identity

(Source: de Vries and Voß, 2018, p. 388)

Various types of values, particularly the values recognized by different epistemic communities, such as urban planners, urban designers and valuers, became very much evident during the interviews. Section 5 (conceptual lapses) of this paper sheds light on these diverse values and vantage points towards the land that are conflicting at times.

iii.   Highest and Best Use (HBU)

HBU is a key concept associated with real estate and property valuation (Dotzour, 1990; Fanning, 2018; Lennhoff, 2004). From the real estate appraisal perspective, the HBU of land should manifest four qualities. Specifically, it must 1) be physically possible, 2) be legally permissible, 3) be financially feasible, and 4) yield the highest return (Ribera et al., 2020). **Table 2.4** shows some of the definitions of HBU proposed by previous studies. Not surprisingly, the concept consistently emphasises the highest financial return as a key attribute of HBU as this idea is from the outset based on the premise of property valuation.

Table 2. 4: Definitions of the Highest and Best Use (HBU) of land

Definition	Reference
Land resources are at their highest and best use when they are used in such a manner as to provide the optimum return to their operators or to society	(Barlowe, 1972, cited in Boschken, 1977, p. 495)
The reasonably probable and legal use of vacant land or an improved property that is physically possible, appropriately supported, financially feasible and that results in the highest value.	(The Dictionary of Real Estate Appraisal, cited in Ribera et al, 2020, p. 168)
The probable use of land or improved property - specific with respect to users and timing of the use – that is adequately supported and results in the highest present value	(Lennhoff et al., 2004, p. 48)

Though HBU is theorised and used in different disciplines, conflicting ideas can be found across disciplines. As Dotzour (1990) argued, these contradictions arise due to the two different

ways of analysing it. From the appraisal point of view, HBU analysis follows a site-specific approach and focuses on individual profit maximisation. In contrast, according to the urban land economic perspective, the HBU of land is identified within the context of urban structure (Dotzour, 1990).

However, the latest studies adopt a type of HBU analysis for public assets that is conceptually different from the traditional approach. Rather than following a prescribed definition or procedure, these studies adopt flexible approaches in which the HBU of a site is assessed through multiple criteria. For example, studies conducted on the HBU of heritage building sites in Italy by Morano et al. (2016), Ribera et al. (2020) and Spina (2016) have adopted multi-criteria analysis as the decision-making tool. This enables the capture of the diverse values and interests of different stakeholders into decision making by using contextualised criteria (Morano et al., 2016; Ribera et al., 2020; Spina, 2016). Further, as Ribera et al. (2020) emphasised, public operators should not focus exclusively on revenue maximisation. Non-monetary concerns, such as delivering the benefits of a property to the community, are identified as a prerequisite to achieve the 'most suitable use' (Ribera et al., 2020, p. 168).

2.4. Conceptual Lapses and their Implications

The interviews conducted with research professionals revealed that there are ongoing discussions and debates around the concept of underutilization (and other comparable terms) in their cities. Based on the interviews, three key conceptual lapses related to land underutilization were identified and they were further substantiated by the literature as follows:

2.4.1. Prioritising Economic Value in Underutilisation

As many researchers perceived, the concept of underutilisation of land is 'laden with assumptions'. The concept is used as a tool to facilitate or justify the development interventions made by the decision-makers on those lands. The concept 'underutilisation' emphasises the importance of economic value over the other values such as social and environmental values attached to the land. While drawing examples from some vacant lands in London, one of the interviewees (RP2) stated that the transformation of vacant lands into 'new places' was guided by a growth-led agenda that served the market 'demand', but it did not necessarily address the 'needs' of the local communities who have lived around these sites. Reflecting on state land development in Sri Lanka, a participant (RP5) noted, that everybody tends to prioritise economic viability when making planning decisions, and if that is not possible, they often tend to leave it (public lands) as it is. Thus, unless a public land with less productive use is developed for generating financial returns, the land may remain unnoticed despite the other potential values that land inherits.

As an interviewee (RP7) stated, the functionality of most of the small and medium towns in Sri Lanka is evolved around public uses such as public markets, bus terminals, public administrative offices, and hospitals. Rather than recognizing the significance of these uses in terms of the functionality of the town, the conventional development practices tend to identify these uses as an underutilization of prime lands and propose shifting such uses into other places.

Further, some interviewees used corroborative theories to explain the reasons behind the prioritisation of economic value. Land and property were perceived as a 'commodity', 'financial instrument' or an 'investment vehicle' within the market, and governed by the 'hegemony of neo-liberal ideas', which is recognised as the key underlying factor behind why

economic value is prioritised. A participant (RP5) emphasised, 'there is a certain degree of tyranny associated with economic development', which is what we would expect from a market economy. Likewise, 'arguments (put forward by the market) tend to be stronger and more hegemonic'. Hence, it is difficult to refute such arguments especially, because the public sector decision-making bodies are not equipped with the appropriate tools and methodologies to prove otherwise (RP7) . Further, as quoted below, a participant (RP1) highlighted how the lack of debates on land utilisation allowed the claims of underutilisation by powerful voices to go unchallenged.

> A key problem is that not many people come forward to debate what underutilisation means. Very often people who tend to discuss or debate this issue are powerful land brokers, high-ups in the state, and powerful investors, and they obviously define underutilisation in financial terms, and that will lead to unhealthy decisions. ……hence, the land underutilisation needs to be opened for a broader discussion (RP1).

Reverting to the literature, the driving forces behind land commodification in the market are well-articulated in the seminal work by David Harvey (2005) on Neo-liberalism. This is an economic regime that endorses the privatisation of land assets and the exercise of individual property rights over land. As land becomes a commodity in the market, a perpetual tug of war occurs between two values – the use value and exchange value; generates conflicts because two different values are assigned to the same land in the market (Pivo, 1984; Zhang & Fang, 2012). The conflicts between economic growth, social justice and environmental protection are nothing new. As Campbell (2012, 2016) argues, 'the property conflict' that arises because of the diverging interests between economic growth and equity continues to be one of the fundamental conflicts and a leitmotif in urban planning.

2.4.2. A Contested Goal and Binary Thinking

One of the conceptual queries/entanglements found at the inception of this study and thus discussed in the interviews is that, if a land is not optimally utilised, does it mean that land is underutilised and vice versa. In-depth discussions held with the interviewees provided some valuable insights into this matter. It was understood that the relationship between these concepts is not so simple and straightforward as it may seem.

The findings that are drawn from discussions identify both negative and positive implications with respect to the association of these seemingly opposite conditions, particularly between underutilisation and HBU. Considering the positive implications, some of the participants perceived that HBU of land should be set up as a goal to be achieved in land development and planning, even though achieving the ideal condition may be challenging. Hence, achieving that goal will presumably solve the problem of underutilisation of land.

However, as others argued, the goal (HBU) itself is found to be a highly contested one. HBU that values land through an economic lens is recognised as a 'dangerous slope'. Further, despite the steps prescribed for analysis, HBU of land is also recognised as a concept that encompasses both 'subjective and objective elements'. This results in the HBU analysis being open to 'different interpretations' due to biases and also the outcomes desired by the person who undertakes the analysis.

As some participants have argued, the economic viability of a development intervention 'goes hand-in-hand' with its attention on other aspects (at least at the surface level) such as aesthetic appeal and environmental sustainability. However, unless identified and prescribed by the existing planning framework or development plans, realising the non-economic values attached to a plot of land (i.e. its character, identity of a site or community preferences) may not be

always guaranteed as some of the attributes can be easily overlooked in the assessment of HBU. These divided perspectives reveal that justifying the transformation of underutilised land by using the concept of HBU as the main goal can be somewhat contentious.

Further, the association of these concepts and their immediate division into contrasting binary states as either underutilised or fulfiling HBU is recognised as one of the key limitations. Binary thinking makes us understand things in terms of two polar opposites such as black and white, male and female, normal and abnormal (Robbins, 2015). Such dichotomous classification can severely constrain the ability to understand the complexity of our social realities (Robbins, 2015). As one of the interviewees (RP 7) argued, the binary thinking constrains our view and compel us to judge the use of a land as either optimally utilized or underutilized instead of observing the function of the land for what it is. Therefore, the key inference is that the binary thinking applied to land may run the risk of oversimplifying the complexities associated with land and its function within the city.

2.4.3. Subjectivity of Underutilisation and Conflicting Claims

In making an assessment of underutilisation, subjectivity of the concept is recognised as a key caveat. As one of the interviewees (RP2) noted, 'underutilisation can mean anything to anyone'. However, while recognising this subjectivity as a limitation, it is acknowledged that city planning always has to deal with subjective realities, constructed by diverse interest groups in the city. Likewise, among the multiple values attached to the land, social value in particular is inherently subjective and fluid in contrast to economic values that can be captured through objective measurements (de Vries & Voß, 2018).

Several interconnected questions raised by participants during discussions are, 'who is the public', 'what is the public interest' and 'whose interests are underutilised'?. While trying to answer these questions, one participant (RP1) stated, '…there are multiple publics and probably multiple lands as well, in the sense that different agencies would have different relationships to land…'. Accordingly, the inherent subjectivity attached to underutilisation is widely recognised.

Likewise, 'underutilisation' is perceived as a dynamic concept that is subject to change over time with the changing relationships of actors with lands and their context. Therefore, it will be rather challenging, and almost impossible to develop a static definition or an assessment framework for this evolving understanding of the term underutilisation.

These conceptual lapses call for critical reflection on the negative implications of using this concept in planning decision making and land management. These conceptual caveats emphasised the need for reclaiming the meaning of this concept. As one of the interviewees (RP1) stated,

> These terms are laden with power relations, different meanings, and various theories behind them. Any word that we choose is going to have those problems. … All terms are loaded in different ways. Whatever the term we use it will have different consequences. ... Accepting the term underutilisation as it is can be highly problematic, with all the assumptions built into it. … the term can be analysed, interpreted and reclaimed as something else.

While embracing this perspective, this study will continue to use the term 'underutilisation' as a generic term that recognises a set of conditions related to urban public lands and particularly, as an entry point for in-depth investigations of public land development in Sri Lanka.

2.5. A Preliminary Framework for Conceptualising Underutilisation

Having identified the conceptual caveats pertaining to underutilisation, this study proposes a preliminary framework to conceptualise the underutilisation of urban public lands in this research study. Conceptualisation is a process that confers theoretical meaning to concepts used to capture different phenomena (Mueller, 2004). This conceptual framework is used as a magnifying lens to examine the multiple dimensions of underutilisation with respect to public land.

The conceptualisation is grounded on the following principles:

- P1: Land is not merely a physical entity, commodity or a financial asset, but an agglomeration of relationships between multiple actors and multiple values that function at multiple scales.

- P2: Underutilisation and Value optimisation are inevitably intertwined. This association can be recognised as merging into a continuum.

- P3: The above continuum only refers to individual 'value optimisation', but not the 'optimum use of land'. There is a difference between 'value optimisation' and 'optimum use of land'. As indicated in **Table 2.5**, the optimisation of an individual value will not necessarily lead to 'optimum use of land'. As argued by de Vries and Voß (2018), reconciliation and integration of different values of a land need 'a re-formulation of optimization measures' (p. 390). In other words, integration of all value attributes of a land (as a whole) is greater than individual value attributes.

Table 2. 5: 'Value Optimisation' vs. 'Optimum Use of Land'

Value Optimisation (Individual values)	Optimum Use of Land (Integration of individual values)
The ability to fully realise a value assigned/ perceived by a particular actor in respect of a land at a given point of time. i.e. the highest rate of return is an optimisation of economic value; a great sense of security or belonging is an optimisation of social value.	Integration, negotiation, and reconciliation of multiple values assigned to a land. It means optimal mix and new equilibrium for competing values.

- P4: The logic of optimisation and underutilisation will be different from one value system to another.
- P5: Underutilisation is a relative phenomenon that is valid only at a given point of time.

Based on these principles, this study suggests that any investigation on underutilisation of land (irrespective of its ownership) should be able to answer the following four fundamental questions – 1) In what context is the land underutilised? 2) What values are unrealised? 3) Whose values are unrealised? and 4) For how long is a land underutilised? Based on these four questions, four key dimensions of underutilisation are identified in **Table 2.6.** An in-depth analysis of these four dimensions should be able to provide a more precise, transparent, contextualised and inclusive account of underutilisation, if there is any.

Table 2.6: Questions about Underutilisation and its Key Dimensions

	Questions to be Answered	Key Dimensions
1	In *what* context is the land underutilised?	Development context: City needs and Potential
2.	*What* values are unrealised?	Associated values (economic, social, environmental, etc.)
3	*Whose* values are unrealised?	Associated actors
4	For *how* long?	Time span

Accordingly, at this stage of the research study, the 'underutilisation' of public lands is recognised as,

A situation experienced at a given point in time, in which single or multiple actors who have a direct or indirect association or interest in some land (for whom), failing to fully realise the value/s (existing and/or potential) assigned by the actors to that land (what), for a prolonged period (how long), in a context where there are socio-economic-environmental pressures created by lack of access to land and yet, have the potential for better realisation of values to fulfil their interests (where).

This conceptualisation is schematically illustrated in **Figure 2.2.**
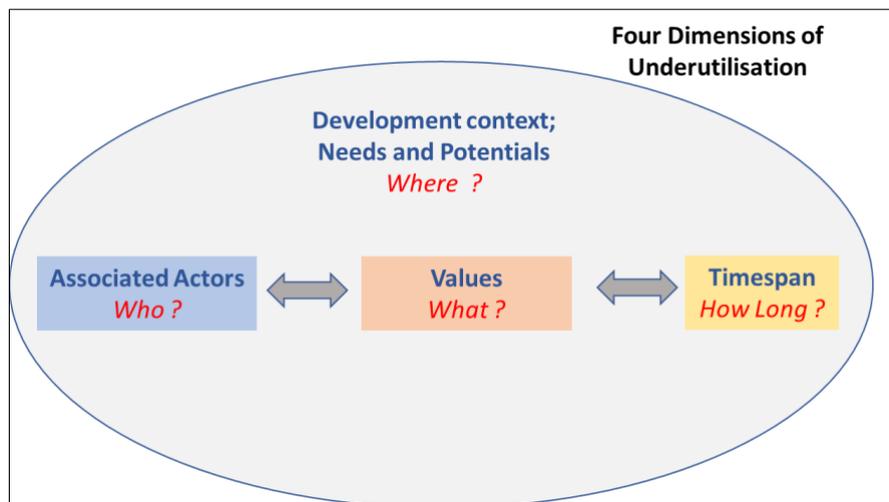
Figure 2.2: Key Dimensions of Underutilisation

The four key dimensions of underutilisation are discussed below.

2.5.1. Development Context: Problems, Needs and Potentials

Having vacant or abandoned lands in a city may not be a problem or an opportunity unless there are development pressures on land or potential that can be tapped via land. Therefore, land managers or urban planners who intend to evaluate the effective use of public land need to be sensitised to the development context mainly in two ways. First of all, evidence-based

assessment of development problems (i.e., land encroachments, increasing land price), socio-economic needs (i.e., access to affordable housing), and development potentials (i.e., opportunities for investments and new businesses, potential for high-density development) of the city are required. Secondly, in line with the long-term development vision of the city, it is necessary to examine how the local area and the land under consideration are expected to contribute to those needs and realise their potential. This examination will specifically recognise the role of the local area and the land at macro-scale i.e. regional and national scale, and the values assigned for such land by the development context. This will provide necessary inputs for informed decision making that can eliminate the risk of arbitrarily estimating the value of land and justifying site-scale developments, divorced from its context.

2.5.2. Associated Values

There are multiple values attached to the land and recognising such values is at the core of land management (de Vries & Voß, 2018). These values such as social and economic values can be recognised as distinct 'value systems' with conflicting rationales, which have been established through different concepts, theories and models (de Vries & Voß, 2018).

We suggest that underutilisation be assessed from the perspective of individual values assigned by different actors on land and how those values are enjoyed or realised by them. In-depth investigation of the different types of values (i.e. economic, social and environmental values) and the scale (i.e. national or local scale) by which the values are measured need to be recognised. For example, social values such as the identity and sense of belonging will be very much site-specific, whereas the equity with respect to access to the land will be a prioritised value in regional level planning. Every value associated with land matters in the analysis should not prioritise any single value over the others.

It is therefore necessary to discuss how to determine the level of realisation of each value assigned to land. As illustrated in **Figure 2.3**, this study recognises different levels or forms of value realisation along a continuum, ranging from unclaimed values to optimised values. However, there might be other forms of value realisation of land and so it will be necessary to discover them through empirical studies.

Realisation of Values				
Unclaimed Values/Expectations	**Incomplete Realisation**	**Partial Realisation**	**Near-Optimisation**	**Value Optimisation**
Actors do not express any interest and no any attempts to capture/enjoy the values	Actors express their interests, strive to capture/enjoy the value, but not fully supported or empowered	Partial realisation of values assigned by the actors but, with many unfulfilled expectations	The values assigned are successfully realised by the actors, yet identify certain unfulfilled expectations	Fully realise the values assigned by the actors

Figure 2.3: Continuum of Value Realisation (proposed by the author)

When developing this generic conceptual framework, it is impossible to provide an exhaustive list of values associated with a land or property as the values are specific to each land and location. However, **Table 2.7** provides an example by identifying a set of values attached to public lands from the vantage point of urban planners and land managers. These values and their expressions were identified and synthesised from the literature on public lands development. The example illustrates each value using only two forms of value realisation identified in the above continuum.

Table 2. 7: An Example of the Types of Values and Forms of Value Realisation

Type of Value	Expression of Value	Attributes of Value Realisation	
		Unclaimed Values	Value Optimisation
Economic Values	**1.Generating financial returns for public sector operators/ agencies (i.e., local government, public infrastructure agencies) or private sector** [Reference; Adisson & Artioli, 2019; Gao, 2019; Gleeson & Coiacetto, 2007; Liu et al., 2008; Valtonen et al., 2018; Van der Krabben & Jacobs, 2013]	i)Do not generate revenue for the public sector operator, ii) No measures for value capturing, iii) No self-financing mechanism, iv) Rely on debt financing.	i) Development cost recovery, ii) Generate profits from public investment, iii) Land value capturing, iv) Reinvestment on public infrastructure, v)Using self-financing strategies for implementation
	2. Achieving a higher spatial productivity of the physical development (Producing more space via higher number of floors, plot coverage, permissible uses etc.) [Reference; Amborski & Petramala, 2019; Palm et al., 2018]	i) Land is vacant for a long period ii) Abandoned site with dilapidated structures iii) Land is utilised, but there is more space (land and air rights) for more productive spatial development.	i) Productive utilisation of land and air rights for physical development
	3.Availability of a property or/and asset management plan	i) Deteriorated structures resulted by Inadequate property maintenance ii) Encroachments iii) Absence of approved plan/idea to use the land for operational functions or any other development	i) Availability of a comprehensive property or asset management strategy If land is currently used, ii)Availability of scheduled maintenance and upgrading. If land is not in use, iii) Availability of approved plan with a timeline for a new development
Social Values	**4. Using public lands for supplying affordable housing and other public infrastructure** [Reference; Adisson & Artioli, 2019; Caesar, 2016; Murakami, 2018; van der Krabben & Jacobs, 2013]	i) Do Not supply public infrastructure and affordable housing in quantity and quality, and ii) Produce negative externalities (lack of safety, sanitation) to the local community	i) Provide space for affordable housing ii) Provide space for other public infrastructure (i.e., public open spaces, community halls)

Type of Value	Expression of Value	Attributes of Value Realisation	
		Unclaimed Values	**Value Optimisation**
Social Values	**5. Provide secure tenure for the users of land through clearly defined, assigned, and enforced property rights** [References; de Vries & Voß, 2018; Ehrenberg, 2006; Rodgers, 2019; UN Habitat, 2014]	i)Absence of clearly assigned and enforced property rights. ii) Disputes or conflicts over the property rights	i) Clearly defined, assigned, and enforced property rights over the land ii) No disputes over property rights
	6.Maintaining the aesthetic appeal and design quality of physical development [Reference; Gleeson & Coiacetto, 2007; Morano et al., 2016; Ribera et al. 2020; Spina, 2016]	i)Do not recognise the identity / character of the property/ site ii)Do not maintaining the design quality iii) Do not preserve the historical value	i) Maintain the high design/ aesthetic quality ii) Preserve the identity/ character of the property / location iii) Preserve historic values
	7. Creating externalities to the neighbourhood /surrounding environment [References; Alexander, 2014; Kim et al., 2018]	i) Creating negative externalities to its immediate surrounding (i.e., safety issues due to abandoned sites, create negative reputation for neighbourhood)	i) Generate positive externalities to its neighbourhood (i.e., increase land values, attract investments)
Environmental Values	**8.Conservation of the natural environment and landscape (i.e., forest cover, natural water flow,) where necessary** [References; Kim et al., 2018]	i) Producing negative impact on natural environment (ex; water pollution, soil degradation)	i)Conserve the natural environment ii) Support urban green infrastructure network (i.e., Storm water management)
	9. Contribution of the land use to the long-term planning vision of the city (how well the use of land contributes to, and alignment with the long-term planning vision of the city) [Reference; Mendes et al., 2008; Murakami, 2018; Van der Krabben & Jacobs, 2013]	i) Do not support or not in-line with the planning vision of the city	i)Land use is fully contributing to and aligned with the planning vision of the city (i.e., Transit oriented development, Environmental sustainability)

2.5.3. Associated Actors

Multiple values are assigned to land by multiple actors who then expect to realise these values. Examination of this aspect can answer the question of whose values are undermined or not realised and who will be adversely affected by it.

Case-specific analysis and identification of the array of actors involved, and observing how they function at different scales with diverse interests are prerequisites to gain a comprehensive understanding of urban land usage. For example, de Vries and Voß (2018) identify four groups of actors with diverse interests, who create and act upon the social value of land. They are, namely, 1) individuals, 2) epistemic communities, 3) public entities entitled to public service provisions, and 4) crowds. This study suggests adopting this broader classification for analysing actors associated with other values of land.

Apart from individuals, an analysis of the relationships between epistemic communities, public entities and crowds and the land is crucial as these actors are expected to represent collective interests over private interests. As Freyfogle (2006) argued, exercising the power vested in public agencies in the form of state land ownership is only legitimate if it serves the common good. Likewise, Lin and Cheng (2016, p. 1) emphasise that 'public land is an asset that belongs to all citizens' and so it should serve the public interest. However, it is crucial to recognise what constitutes the 'public' and the 'public interest' in relation to public land. In general, the term 'public interest' signifies the interests or ethical standards associated with a community or the society, which are to be pursued collectively, and given priority over the solely private interests or benefits of an individual. It will comprise a number of matters of public interest and create pressure for the appropriate amendment of public policies (Gillespie et al., 2019; Johnston, 2016 ; King et al., 2009)

2.5.4. Timespan

Compared to the other three dimensions, the timespan of underutilisation is relatively a straightforward aspect, which relates to how long the land has been underutilised. There are two key aspects to be considered here. First of all, the timespan of withholding lands can vary from short-term idling of land to prolonged vacancy, and secondly, it may occur under different circumstances. Investigating both aspects is important in this inquiry mainly for two reasons. One is that different timespans of underutilisation may have different degrees of impact, thus indicating the magnitude of the consequences of underutilisation. The other reason is, if conceptualising underutilisation is used as a diagnostic tool, recognising the circumstances behind the holding of the land is necessary to determine the appropriate coping mechanisms.

Land development is recognised as an inherently long-term exercise. There is a high transaction cost involved in land development, including the cost of acquiring information and cost of institutional coordination (Buitelaar, 2004). However, there is no objective measurement to distinguish between the 'normal' time and 'unnecessary' delays. It can only be assessed in comparison to the generally accepted time frame required for a certain type of land development within a given development context and/or the legally stipulated period for developing a land for a certain purpose. Holding of land either by private developers or public owners beyond such a time frame can be considered as underutilisation.

For example, exceptional market conditions such as market recession will result in the lands idling without timely development. During the great financial crisis of the 1970s and 2007-2009, municipalities in the Netherlands were unable to sell their land plots and, thus, experienced huge financial losses (Van Der Krabben & Jacob, 2013; Valtonena et al., 2017).

Further, speculation on undeveloped lands, driven by the public landowners and private developers is evident in many cities. A study on undeveloped public lands in Taipei showed that approximately 89% of the lands auctioned for development remained unutilised for more than three years in the hands of private developers. This did not benefit the public interest in any way (Lin & Cheng, 2016). The profit-seeking behaviour of private developers caused them to treat land as a lucrative asset and hence wait for the ideal time to carry out the development (Du & Peiser, 2014; Hui et al., 2014; Lin & Cheng, 2016). Local governments in China too have been hoarding substantial extents of public lands in the hope of generating higher revenue later on (Du & Peiser, 2014).

Apart from the lands in which the process of development has already started, many public lands in some cities remain vacant and forgotten for prolonged periods. Therefore, recognising this variation in the development schedules will be useful for decision-makers.

2.6. Chapter Summary

This chapter mainly discussed how the concept of underutilisation is characterised in regard to public lands including its conceptual lapses. As the literature review revealed, underutilisation of public land is discussed using three vantage points. They are, 1) as a problematic condition associated with the land, 2) as presenting an opportunity for better use, and 3) as an untapped resource of a public institution. Based on the in-depth interviews conducted with research experts, the study identified three key conceptual lapses related to the concept of land underutilisation, namely ; 1) prioritising the economic value of land over the other values, 2) conceptualising underutilisation in relation to highest and best use of land, and 3) subjectivity in the assessment of underutilisation. The study suggested a preliminary framework to conceptualise underutilisation of land in the context of this research study. The next chapter will discuss the findings of the systematic literature review that was conducted to achieve the

second objective of the study; that is, to examine how the previous scholarship has assessed the critical factors affecting the PLD.

CHAPTER THREE

A SYSTEMATIC REVIEW AND THEMATIC SYNTHESIS

3.1.Introduction

This chapter discusses how this study address the second objective of the study ; to identify the critical factors affecting the effective utilisation of public lands in the urban context. The chapter is structured as follows. First, the chapter discusses the methodology used to retrieve the materials for the systematic review. Second, it discusses the findings under three subsections; 1) the composition of retrieved research articles, 2) various forms of public land ownerships, and 3) critical factors affecting the public land development. Finally, the research summaries the findings and identify the knowledge gaps in PLD related research.

3.1.1 Why a Systematic Literature Review on PLD ?

Systematic review of literature to identify the critical factors affecting the effective utilisation of urban public land was necessary due to several reasons. Firstly, underutilisation of public land has not been raised in scholarly discussions to date however, there is ample research on PLD that can provide valuable insights to understand the underutilisation of public land in cities. Secondly, while there has been evidence on underutilisation of public lands in Colombo, many other countries (i.e., Sweden, the Netherlands and Singapore) have been successfully mobilising their public lands for development. This contrasting evidence entails an inquiry into whether certain conditions necessary to ensure the effective use of public lands are lacking in the PLD systems which have been experiencing challenges. The land development approach adopted in every country is heavily rooted in that country's context (Hartmann and Spit, 2015). Much research attention has been focused on public land ownership, its development, and the

unique factors that shape the development approaches. However, a systematic review of the most critical and common factors affecting the utilisation of public land across countries that can either facilitate or hinder the effective utilisation of public lands is still missing in the research studies. The absence of such a systematic analysis has resulted in the shared realities of public land development being overlooked. It hinders the opportunity for mutual learning and undermines the possibility of grasping theoretical insights regarding the subject.

In light of this, this systematic review is carried out, whose objectives are two-fold; 1) to identify the critical factors affecting the effective utilisation of public lands, and 2) to identify the knowledge gaps related to PLD.

3.2. Materials and Methodology

A systematic review and a thematic synthesis were conducted to investigate the critical factors affecting the effective utilisation of public land. This review values every type of evidence equally and thus, both qualitative and quantitative studies were used. A thematic synthesis was adopted to consolidate the findings. Firstly, the characteristics of the individual studies (the country in focus, number of cases, method of analysis, the scale of analysis and use of theories), and findings related to critical factors which either hinder or enable the effective utilisation of public lands were identified. Secondly, evidence was tabulated and classified into thematic groups.

Scientific studies on public land ownership and its development were retrieved from the research database known as Elsevier's Scopus using a systematic approach. The study was confined to those research articles published in peer-reviewed journals from the 2000 to 2019 period. **Figure 3.1** illustrates the three-step method used for retrieving the articles.

1st Step- Initial Search and Exclusion

Selection Criteria

C1: Language - English only

C2: Document Types - Articles

C3: Source Type - Journal

C4: Time Period - 2000 to 2019

Number of Articles = 2154

Initial Search with the Phrases

"Public Land" OR "State Land" OR "Government Land" OR "Municipal Land" OR "Public Land Ownership" OR "State Land Ownership" OR "Public Land Development" OR "State Land Development" OR "Public Land Supply" OR "State Land Supply"

2nd Step

Selection Criteria

C5 : Relevance to the topic

Number of Articles = 1728

Excluded the subject areas which are irrelevant to the topic

(i.e., Nursing, Chemistry, Medicine, Mathematics, Energy, Veterinary, Computer science, Psychology etc.)

3rd Step

Selection Criteria

C5 : Relevance to the topic

Total Number of Articles = 44

4 Subject Areas (n = 470)

- All 470 articles retrieved
- Excluded after reviewing the abstracts and/or the full paper

Retrieved Articles = 31

2 Subject Areas (n = 1258)

(Agriculture & Biological Science and Environmental Science)

- Articles from 5 selected Journals which focus on Urban Planning and City Development were retrieved (n= 98)
- Excluded after reviewing the abstracts and/or the full paper

Retrieved Articles= 13

Figure 3. 1: Methodology of retrieving articles

In the first step, research articles were searched using broad phrases. Public land was identified by the use of different terms such as 'state lands', and 'municipal lands' as used in different countries and therefore, broader search terms were combined to search the relevant literature. The initial search provided 2412 articles, and those results were refined using the following four criteria. Accordingly, 2154 articles were retrieved at the end of the first step.

▪ C1 - Language: Published in English

▪ C2 - Document type: Articles

▪ C3 - Source Type: Only Journals

▪ C4 - Period: 2000–2019

At the second step, the results were refined considering the 5th criteria – relevance to the topic. Articles from unrelated subject areas, such as nursing, chemistry, medicine, mathematics, energy, engineering, veterinary, etc. were excluded. At the end of the exclusion process, 1728 articles were left as the residue. However, many of those articles were still beyond the scope of the topic and thus, required further refining. The 3rd step narrowed the results under six subject areas, out of which four subject areas (470 articles) seemed to be apparently within the scope of the topic. Again, after the initial screening, the remaining two subject areas (Agriculture & Biological Science and Environmental Science) were deemed to be not directly related to the topic. Accordingly, only five sources (journals) that focused on land development and city planning were selected from the above two subject areas, and as a result, 98 articles were retrieved. By combining the findings from two searches, a total of 568 articles were retrieved. Finally, after reviewing the abstracts and the full papers under the 5th criteria, the articles that were beyond the scope of the study were excluded. At the end of the process, 44 articles comprised the literature for the systematic review.

It is essential to explain how a large number of articles (n= 568) were excluded at the final step of the selection process. The articles that discussed public land ownership or development merely as one of the findings of a distinct analysis, such as on land use, human settlement patterns, urban expansion, informal housing and watersheds were excluded. Likewise, focus on public land developments, carried out for non-urban uses, was one of the main reasons for exclusion. For example, public land grabbing for commercial agriculture, and bio-fuel production and its implications for farmers have been crucial concerns in Africa and Brazil (Hall, 2011; Oliveira, 2013), but they have been excluded from this review.

3.3. Results

The results of the systematic review are discussed under three headings: 1) the composition of retrieved research articles, 2) various forms of public landownership, and 2) critical factors affecting public land development.

3.3.1. Composition of Retrieved Research Articles

Geographically, there is a clear concentration of studies conducted in China, Netherlands and two Nordic countries (Sweden and Finland). Notably, only one South Asian country, viz. India is found in the selected articles. Even though not shown in **Figure 3.2**, there is one article from each of these countries; Kyrgyzstan, France, Colombia, Australia, Israel, the United Kingdom, Botswana, and Indonesia.
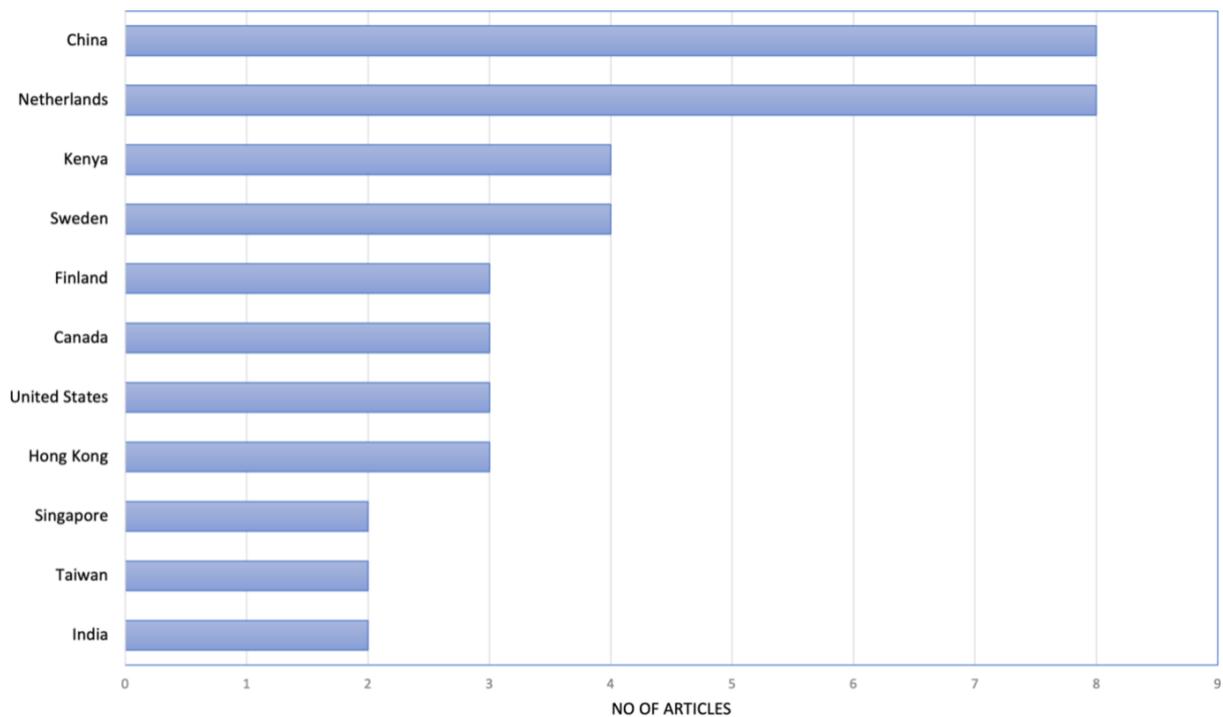
Figure 3. 2: Distribution of studies by country

As seen in **Figure 3.3**, the majority of articles (n= 36) focused on a single country, and only eight research studies have carried out a comparative analysis of different countries with a

maximum of three countries in one research. Concerning the methodology of the research, studies have used qualitative approaches (n=27), quantitative approaches (n=14) and only three studies have used a mixed approach. Analysis of PLD was carried out at different scales, and the majority of studies (n=30) have focused on a parochial scale (City or Municipal level). The studies that focused on regional/ provincial scale or national scale have been either a quantitative analysis or a national level policy analysis. Interestingly, none of the articles has focused only on theoretical debates, and each study is grounded empirically. Theoretical lenses such as neo-liberalism and entrepreneurial governance (Beswick & Penny, 2018; Hyötyläinen & Haila, 2018; Kang & Korthals Altes, 2015; Olsson, 2018), institutional theories (Buitelaar & Bregman, 2016; Eidelman, 2018; Pethe et al, 2012;), politics and power relations (Hsing, 2006; Klopp, 2000; Shatkin, 2016), and classical and neo-classical economic theories (Du & Peiser, 2014; Gao, 2019; Murakami, 2018; Rubin & Felsenstein, 2017), are used in the analysis of these studies.
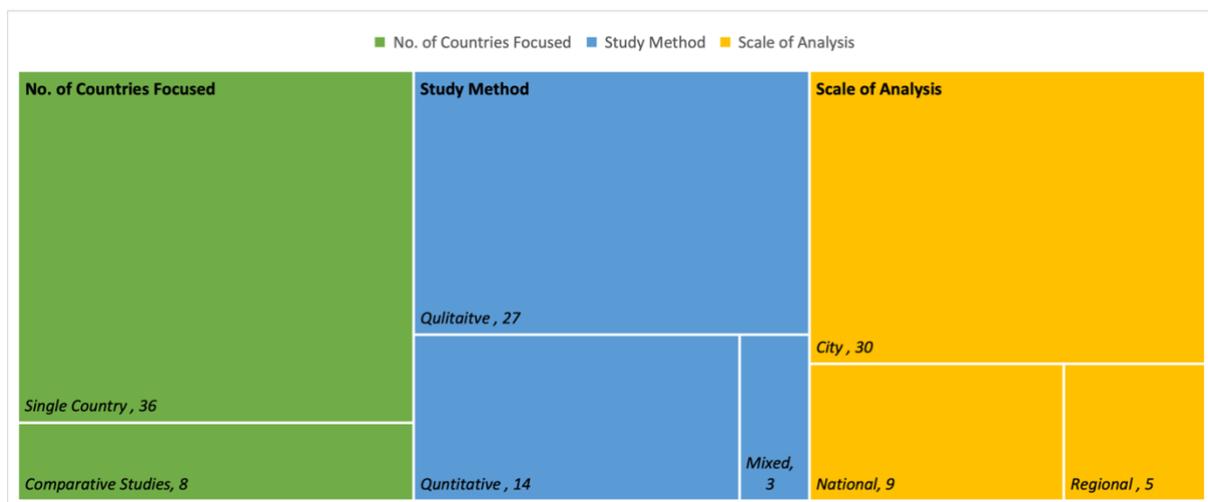
Figure 3. 3: Composition of selected articles

3.3.2. Various Forms of Public Land Ownerships

Ownership of a property indicates the possession of a bundle of rights over the use of a property (Nicita et al., 2007). The articles which were retrieved for the systematic review examine the PLD of 19 different countries. Based on the review, various forms of ownership and public property rights were identified across these countries as follows.

Firstly, one of the most prominent forms of public land ownership is that the public sector functions as the ultimate owner of the land and hence, the government has greater authority over the lands of the city/country. For example, all lands in Singapore, Hong Kong and urban areas in China are publicly-owned and the private sector receives only the *user rights* for a specified period via the public land leasehold system (Gao, 2019; Hsing, 2006; Huang & Du, 2017; Lai et al., 2017; Liu et al., 2008; Murakami, 2018; Tong, 2019). Likewise, ownership of public land and its development have also become a tool of political gain and power consolidation particularly, in China and Singapore (Hsing, 2006; La Grange & Pretorius, 2014; Liu et al., 2008; Shatkin, 2014).

Secondly, in European countries such as Sweden and Finland, a significant amount of land is owned by the public sector. Hence, municipalities provide lands for delivering public services (i.e., schools, libraries, parks etc.) and also allocate lands for the private sector by selling or leasing (Caesar, 2016; Hyötyläinen & Haila, 2018; Valtonen et al., 2018). Likewise, public land ownership which is held under municipalities is prominent in the Netherlands and it is also identified as a country with a long-standing tradition of PLD (Buitelaar & De Kam, 2012; Van der Krabben & Jacobs, 2013). However, the Dutch municipalities hold only the temporary ownership of lands since the municipalities sell lands when it is ready for development (Caesar, 2016).

Thirdly, in countries such as the United State of America (USA), land development is predominantly a market-led function (Van der Krabben & Jacobs, 2013). Public lands in the USA, namely, federal lands and state-owned lands (39% of the total land area), are mainly serving for non-urban uses such as recreation, forest and wildlife services, timber harvesting and gas drilling (Nelson, 2018; Vincent et al., 2017). Public lands that are used for urban development are managed via different systems. For example, public authorities maintain *Land Banks* that acquire different types of lands particularly, lands located in future development corridors, vacant or abandoned lands, and later, lands will be released for appropriate development (Van der Krabben & Jacobs, 2013). Likewise, there are *Trusts (*i.e., land trusts, school trusts), a legal mechanism that holds and protect public lands for public purposes *(*Bonds & Pompe, 2005).

Fourthly, studies from African countries such as Kenya and Botswana provide evidence on legal pluralism in land tenure. Along with public (and private) land ownership, customary or tribal land ownerships co-exist in these countries (Kalabamu, 2006; Manji, 2012; Southall, 2005). Further, unlike Swede, Netherlands and China, Kenya used to have highly centralised land administration and by the land reforms in 2010, the powers for public land management was decentralised for local public entities (Bassett, 2020).

Literature review showed that public land ownership is a common phenomenon. However, the nature of property rights varies from one country to another. Further, property rights of public land in a country appeared to be closely linked with the political ideology that is embraced by the particular country and shape the development approach (i.e., state-led development, market-led development etc.) that the country adopts.

3.4. Critical Factors Affecting Public Land Development

Articles retrieved for this review had critically analysed a diverse range of issues, successful outcomes and the causative factors related to public land development with empirical evidence. Drawing from this evidence, this study identifies 38 factors which are critical for effective PLD and subsequently classified under 11 critical factors as shown in **Table 3.1**. These factors could determine the success and failures of the development process and the 11 factors are discussed below. The factors are prioritised based on the frequency with which they came up during the literature review.

1   Table 3. 1: Critical Factors affecting Public Land Development (PLD)

No	Critical Factors in PLD	References
1	**Land Allocation Strategy**	**[2, 3, 8, 13, 15, 16, 18, 20, 22, 23, 25, 27, 28, 29, 31, 34, 35, 36, 39, 41]**
i	Transparency and rule of law in land allocation	[3, 22, 25, 29, 36, 41]
ii.	Comprehensive, efficient, and City/Nation-wide land allocation strategy	[13, 15, 16, 20. 31, 35]
iii.	Competitive and reasonable price for land	[2,18, 22, 27, 28]
iv.	Transparent and equitable developer selection	[8, 28, 39]
v.	Sufficient quantity in supply	[23, 34]
vi.	Appropriate allocation among land uses	[18]
2	**Revenue Generation and Managing Financial Risk**	**[1, 4, 6, 7, 12, 13, 14, 15, 16, 24, 26, 28, 38, 39, 40, 43]**
i	Revenue generation and cost recovery	[1, 6, 13, 16, 26, 28, 39, 40]
ii.	Manging financial losses & cost overruns	[4, 7, 15, 24, 38, 43]
iii.	Project completion within the schedule and scope	[12, 15, 24]
iv.	Land value capturing	[14, 39, 40]
3	**Delivery of Housing and Public Infrastructure**	**[1, 4, 6, 8, 9, 13, 15, 16, 19, 21, 22, 26, 31, 38, 40]**
i	Provision of social housing and affordable housing	[3, 6, 12, 13, 16, 18, 27 4, 6, 8, 15, 16, 19, 21, 26, 31]
ii.	Provision of public infrastructure	[1, 19, 36 22, 26, 40]
iii.	Maintaining a housing mix	[7, 34 9, 38]
iv.	Land-based infrastructure financing system	[1113]
4.	**Balance Between Profit Generation and Accountability**	**[3, 4, 8, 16, 17, 22, 24, 30, 32, 38, 40, 42, 43]**
i	Balancing between economic gains/ profits vs. sustainability/planning goals	[4, 8, 16, 17, 24, 32, 38, 40, 42, 43]
ii	Public consultation & participatory decision making	[3, 22, 24, 30, 32]
5	**Local Agent/s with Devolved Power and their Interests**	**[1, 3, 5, 8, 9, 13, 22, 28, 32, 38, 39, 40, 43]**
i	Decentralised power for PLD and housing Supply	[1, 8, 9, 13, 32, 38, 39, 40, 43]
ii.	Fiscal and administrative decentralisation to local governments	[3, 22, 28, 40]
iii.	Allocation of land management responsibilities to local stakeholders	[5]

No	Critical Factors in PLD	References
6	**Institutional Rules & Procedures**	**[1, 6, 9, 10, 15, 19, 27, 31, 34, 37, 38, 40]**
i	Rules for preventing speculation	[10, 15, 27, 34]
ii.	Facilitation of public investments	[38, 40]
iii.	Introducing developer obligations and lease conditions	[6, 9,15, 19]
iv.	Eminent domain powers	[31, 40]
v.	Standard procedures for project management	[1]
vi.	Guidelines for mediation and arbitration	[37]
7	**Inter and Intra Agency Coordination**	**[1, 3, 6, 12, 17, 22, 24, 29, 36, 42]**
i	Coordination among state agencies	[1, , 3, 6, 17, 22, 24, 42]
ii.	Consensus building for consolidating fragmented property rights	[12, 17]
iii.	Ethical & professional conduct	[29, 36]
8	**Politics and Power Relations**	**[3,10, 12, 17, 18, 25, 29, 30, 36, 44]**
i	Legitimate use of power	[, 3,10, 17, 18, 25, 29, 36, 44]
ii.	Political leadership	[12, 30]
9	**Integration of Land Development and Spatial Planning**	**[6, 16, 30, 31, 34, 39, 40]**
i	Coordination between land development and city planning	[31, 39, 40]
ii.	Quality of development environment (Design, appearance etc.)	[16, 39, 40]
iii.	Recognising the changing socio-economic needs and the market signals	[6, 16, 34]
iv.	Commitment to sustainability	[16, 30]
10	**Managing Unauthorised Uses and Resettlement**	**[17, 23, 25, 26, 33, 35, 44]**
i	Avoiding encroachment of public lands	[23, 33, 44]
ii.	Avoiding displacement, well- planned resettlement and dispute resolution	[17, 25, 26, 35]
11	**Land Information Management**	**[5, 11, 22, 26, 30, 33]**
i	Availability of up to date and reliable information	[11, 22, 26, 30]
ii.	Dissemination of information	[5, 22, 33]

2

References: [1] Adisson and Artioli, 2019, [2] Agarwal et al., 2017, [3] Bassett, 2020, [4] Beswick and Penny, 2018, [5] Bonds and Pompe, 2005, [6] Buitelaar and De Kam, 2012 [7] Buitelaar and Bregman, 2016, [8] Caesar, 2016, [9] Caesar and Kopsch, 2018, [10] Du and Peiser, 2014, [11] Eidelman, 2016, [12] Eidelman, 2018, [13] Gao, 2019, [14] Gielen and Lenferink, 2018 [15] Gilbert, 2009, [16] Gleeson and Coiacetto, 2007, [17] Hsing, 2006, [18] Huang and Du, 2017, [19] Hui, 2004, [20] Hui et al., 2014, [21] Hyötyläinen and Haila, 2018, [22] Kaganova et al., 2008, [23] Kalabamu, 2006, [24] Kang and Korthals Altes, 2015, [25] Klopp, 2000, [26] La Grange and Pretorius, 2014, [27] Lin and Cheng, 2016, [28] Liu et al., 2008, [29] Manji, 2012, [30] Mendes et al., 2008, [31] Murakami, 2018, [32] Olsson, 2018, [33] Pethe et al., 2012, [34] Rubin and Felsenstein, 2017, [35] Shatkin, 2016, [36] Southall, 2005, [37] Tong et al., 2019, [38] Valtonen et al., 2017, [39] Valtonen et al., 2018, [40] Van der Krabben and Jacobs, 2013, [41] Wang et al., 2019, [42] Woestenburg et al., 2019, [43] Woestenburg et al., 2018, [44] Wu, 2019.

3.4.1. Land Allocation Strategy

The need for an effective, transparent and comprehensive land allocation strategy is the most widely discussed factor by the majority of studies. As **Table 3.1** shows, it combines several other critical concerns of land allocation. Ensuring the transparency and rule of law in land allocation (Bassett, 2020; Kaganova et al., 2008; Klopp, 2000; Manji, 2012; Southall, 2005; Wang, 2019), establishing a comprehensive and overarching strategy for alienation (Gao, 2019; Gilbert, 2009; Gleeson & Coiacetto, 2007; Murakami, 2018; Shatkin, 2016), fixing a competitive and reasonable price for land (Agarwal et al., 2017, Huang, 2017; Kaganova et al., 2008; Lin & Cheng, 2016; Liu et al., 2008), transparency in developer selection (Caesar, 2016; Liu et al., 2008; Valtonen et al., 2018), supplying the adequate quantity (Kalabamu, 2006; Rubin & Felsenstein, 2017) and appropriate allocation among land uses (Huang, 2017) are the other critical elements to be combined for an effective land allocation strategy.

For example, the government land sales program, the land allocation strategy in Singapore is employed as the key instrument for achieving the long-term vision of the city (Murakami, 2018). The land leasing system in China is the strategy for allocating the public land for private uses in all urban areas in China.

Absence of transparency and the rule of law in land allocation creates many negative implications. Alienation of lands for development is widely recognized as a process that is corrupted, illegal and irregular in countries such as Kenya and India (Bassett, 2020; Kaganova et al., 2008; Klopp, 2000; Manji, 2012; Pethe et al., 2012; Southall, 2005; Wang et al., 2019). Further, public lands are grabbed by private companies and by individuals who wield some power (Bassett, 2020; Klopp, 2000) and often leased by the public sector below the market price (Huang & Du, 2017; Lin & Cheng, 2016; Liu et al., 2008). Auctioning public lands below

market price considered a drain on public finance in Taiwan (Lin & Cheng, 2016). Hence, a reasonable and competitive price for public land is critical in land allocation.

The direct selection of developers through negotiations rather than calling for competitive bidding had made the selection process less transparent and inequitable in countries such as Sweden and China (Caesar,2016; Liu et al., 2008; Valtonen et al., 2018). Supplying the public land in adequate quantity, especially for the urban poor is crucial to overcome the housing issues in cities and calls for expanding the elasticity of public land supply (Kalabamu, 2006; Rubin & Felsenstein, 2017).

Further, misallocation of lands among different land uses can lead to distortion of land prices. For example, in China, the local governments had leased the land for industrial uses at low prices with the expectation of long-term profits. This leasing had resulted in an escalation in the prices of lands set aside for residential uses (Huang, 2017). Therefore, a land allocation strategy which alienates land for the right land uses, at the right time, in the right quantity, at the right price using the right method is crucial for a PLD process.

3.4.2. Revenue Generation and Risk Management

The financial risk imposed on the public sector is identified as one of the basic concomitants of the public sector embracing the developer role. Hence, generating financial returns and managing financial risk are critical factors in PLD. As Table 3.1 illustrates, the need for developing strategies for revenue generation and cost recovery (Adisson & Artioli, 2019; Buitelaar & De Kam, 2012; Gao, 2019; Gleeson & Coiacetto, 2007; Liu et al., 2008; Valtonen et al., 2018; Van der Krabben & Jacobs, 2013), minimising financial losses/cost overruns (Beswick & Penny, 2018; Buitelaar & Bregman, 2016; Gilbert, 2009; Kang & Korthals Altes,

2015; Valtonen et al., 2017; Woestenburg et al., 2018), project completion within the schedule and scope (Eidelman, 2018; Gilbert, 2009; Kang & Korthals Altes, 2015) and land value capturing (Gielen & Lenferink, 2018; Valtonen et al., 2018; Van der Krabben & Jacobs, 2013) are recognised as the critical factors in PLD.

In many PLDs, local governments are directly involved in investments and the revenue generation and cost recovery become necessary. In France and Italy, PLD is recognised as a public austerity strategy which aims to gain revenue to reduce public debts (Adisson & Artioli, 2019). In London, financialising the function of municipalities are demanded by the top-down austerity policies and the fiscal constraints are imposed by the central government (Beswick & Penny, 2018). In such conditions, revenue generation is considered a prime objective to achieve.

Full cost recovery has become challenging due to the higher cost of projects (Van der Krabben & Jacobs, 2013). As some studies have argued, despite the presence of risk-sharing mechanisms, the public sector tends to carry a higher risk when it engages in land development (Valtonen et al., 2017). For example, external market conditions such as economic recessions have resulted in substantial financial losses for local bodies in the Netherlands and Finland during the great financial crisis that occurred during the period 2007– 2009 (Valtonen et al., 2017). Further, the projects tend to suffer cost overruns due to the delays that always seem to occur during the development process (Kang & Korthals Altes, 2015). Therefore, the preparedness of the public sector to confront this inevitable financial challenge is crucial for effective utilisation of public lands.

3.4.3. Delivery of Affordable Housing and Public Infrastructure

Capturing the social value of public land and ensuring the redistribution of economic gains of PLD are another critical concern. Provision of social housing and/or affordable housing in the city (Beswick & Penny, 2018; Buitelaar & De Kam, 2012; Caesar, 2016; Gleeson & Coiacetto, 2007; Hyötyläinen & Haila, 2018; Murakami,2018), the provision of public infrastructure (Adisson & Artioli, 2019; Kaganova et al., 2008; Van der Krabben & Jacobs, 2013), maintaining a housing mix (Caesar & Kopsch, 2018; Valtonen et al., 2017), and adopting land-based infrastructure financing mechanisms (Gao, 2019), are the other key factors associated with it.

For example, the need for ensuring the redistribution of economic gains through social housing and public infrastructure provision is recognised in France (Adisson & Artioli, 2019). Cross subsidizing social housing provision through PLD has been a strategy in London as well (Beswick & Penny, 2018). Ensuring the housing mix, the delivery of housing products with different types, size and tenure arrangements (i.e., rent and freehold ownership), is a key concern in Finland and Sweden to accommodate a socially integrated population in cities (Caesar & Kopsch, 2018; Valtonen et al., 2017).

However, this does not seem to be the case in every city. Inadequate availability of land at a fair price is one of the significant issues (Adisson & Artioli, 2019; Gilbert, 2009; Gleeson & Coiacetto, 2007; Hyötyläinen & Haila, 2018), and higher prices of alienated lands have resulted in forming gated communities, an inequitable form of spatial development (Hyötyläinen & Haila, 2018). Weak institutional coordination and failure to use the power of local government to bind obligations on developers to deliver social housing are identified as some of the institutional constraints (Gilbert, 2009). Further, external market shocks such as economic

recessions and the subsequent pressure on local governments to generate revenue have compelled them to capitalise on the economic value of land by escalating the prices (Hyötyläinen & Haila, 2018).

3.4.4. The Balance Between the Profit Generation and Planning Goals

In the PLD related research, the phrase, 'Two-hats dilemma', recognised by Needham (2007, cited in Caeser, 2016; Krabben & Jacobs, 2013) encapsulates the dilemma faced by the public sector in choosing between two contradictory objectives of ensuring a good return on investment and planning goal. Researchers identify this dilemma from another perspective as the conflict between financialisation of land or need for financial returns against sustainability, legitimacy and planning goals (Beswick and Penny, 2018; Caesar, 2016; Gleeson & Coiacetto, 2007; Hsing, 2006; Kang & Korthals Altes, 2015; Olsson, 2018; Valtonen et al., 2017; Van der Krabben & Jacobs, 2013; Woestenburg et al., 2018; Woestenburg et al., 2019). In this situation, profitmaking is prioritized and thus, the PLD process undermines the accountability and the legitimacy of the public sector (Kang & Korthals Altes, 2015). In the majority of countries, local governments are responsible for city planning, hence there is pressure on them to mobilise finance for local planning (i.e., infrastructure provision) while they concurrently own vast areas of land. These circumstances compel the local governments to play dual roles as both planner and developer.

Public consultation and participatory decision making are significant for ensuring the accountability of the PLD process (Bassett, 2020; Kaganova et al., 2008; Kang & Korthals Altes, 2015; Mendes et al., 2008; Olsson, 2018;). Overlooking such aspects would further degrade the ability of the public agency to recognise the needs and aspirations of the local communities. Therefore, the public sector needs to take proactive measures for synchronising

the entrepreneurial behaviour and the obligations towards the public which has always been challenging in PLD (Kang & Korthals Altes, 2015).

3.4.5. Local Agent/s with Devolved Power and Autonomy

Presence of a designated agent for PLD at the local level, empowered with devolved responsibilities and necessary fiscal powers can be identified as a paramount for guiding the PLD in a city. In the majority of cases, the local government lead the development process and in some places, for example in Singapore, the city-state has national-level bodies such as the Urban Redevelopment Authority (URA) and Housing Development Board (HDB) for planning and development (Murakami, 2018).

As studies suggest, local government can be a strong mobiliser of PLD, provided that they have decentralised responsibilities for planning and housing development (Adisson & Artioli, 2019; Caesar, 2016; Caesar & Kopsch, 2018; Gao, 2019; Olsson, 2018; Valtonen et al., 2017; Valtonen et al., 2018; Van der Krabben & Jacobs, 2013; Woestenburg et al., 2018), and more importantly, fiscal and functional decentralisation (Bassett, 2020; Kaganova et al., 2008; Liu et al., 2008; Van der Krabben & Jacobs, 2013) to the local governments. For example, local authorities in countries such as Netherland, Sweden and China have strong roles to play as they are equipped with fiscal powers and autonomy over housing and planning in their localities (Caesar, 2016; Valtonena et al., 2017).

Further, decentralisation of land development can happen in different forms and the local agent may not be necessarily the municipality. Allocation of land development responsibilities to local stakeholders rather than holding at a central authority is recognised as crucial for public land management in the USA (Bonds & Pompe, 2005). Such subsidiarity can promote bottom-

up approaches and provide alternative means to address the problem of asymmetric information in PLD.

3.4.6. Institutional Procedures, Rules and Regulations

Availability of appropriate institutional procedures, rules, regulations and policies is another critical factor which cut across all the phases of the PLD process. Every single critical factor discussed so far are highly affected by the institutional environment however, apart from such relationships, studies highlight a variety of specific institutional procedures and tools which are significant in the PLD process.

As land is a lucrative property, the importance of implementing necessary rules and regulations for avoiding land speculation has been recognised (Du & Peiser, 2014; Gilbert, 2009; Hui et al., 2014; Lin & Cheng, 2016; Rubin & Felsenstein, 2017). The studies identified two key land speculators: the developer and the public sector itself. Holding on to the valuable lands in demand and refusing to release them to the market may arguably have negative implications on the prices of land and housing (Hui, 2004; Hui et al., 2014). Holding the lands in land banks by developers (Hui et al., 2014, Lin & Cheng, 2016) and local governments for extended periods (Du & Peiser, 2014) happens mainly due to the expectation of higher land prices. The ineffective implementation or the absence of institutional tools such as taxes for penalising speculation have encouraged this behaviour both among developers and public sector actors (Du & Peiser, 2014; Lin & Cheng, 2016).

Facilitation of the public sector investments on land through supporting financial policies such as providing loans for municipalities is recognised in Netherland (Valtonen et al., 2017; Van der Krabben & Jacobs, 2013;). Further, imposing developer obligations to provide social

housing and to maintain a housing mix in the city can be identified as useful tools (Buitelaar & De Kam, 2012; Caesar & Kopsch, 2018; Gilbert, 2009;). Eminent domain powers vested upon municipalities through legal enactments have enabled them to acquire the lands necessary for city developments (Murakami, 2018; Van der Krabben & Jacobs, 2013). Likewise, following standard project management procedures in PLD (Adisson & Artioli, 2019), forming agencies for mediation and arbitration (mainly between public agents and private developers) are also recognised as crucial institutional procedures in PLD.

3.4.7. Inter and Intra Agency Coordination

Effective coordination of activities within a single public agency (intra-agency) and between public agencies, including private actors (inter-agency) are critical concerns in PLD. The need of coordination among and within public agencies (Adisson & Artioli, 2019; Bassett, 2019; Hsing, 2006; Kaganova et al., 2008; Kang & Korthals Altes, 2015; Woestenburg et al., 2019) is also associated with the factors such as building consensus for consolidating fragmented property rights (Eidelman, 2018; Hsing, 2006; Kang & Korthals Altes, 2015), and maintaining ethical and professional conduct (Manji, 2012; Southall, 2005).

There are ample of evidence on how ineffective coordination hinders the PLD process. Mainly the fragmentation of land ownership and responsibilities among a large number of agencies (Kaganova et al., 2008), conflicting agendas and competition among state actors for public land (Hsing, 2006) have been observed. Lack of information on property ownership and the mind-set of considering land as power have exacerbated the situation (Hsing, 2006). Moreover, the absence of critical debates about the feasibility of new development projects within the municipalities has also been recognised as a problem in the Netherlands, for which organisational duality within the municipality has been blamed (Kang & Korthals Altes, 2015).

The development projects have been subject to significant delays and deviations from the original plans due to the challenges of building consensus for consolidating public lands (Eidelman, 2018; Gilbert, 2009; Kang & Korthals Altes, 2015). For instance, largely fragmented land ownership among agencies and difficulties in building consensus for amalgamation have caused delays in urban development projects in Canada (Eidelman, 2018). Long dragged on negotiations with actors (i.e., developers, property owners), technical issues, and sluggish institutional procedures have had significant negative implications on-time schedule and costs of the projects.

3.4.8. Politics and Power Relations

Political leadership and the power of the public actors generated through land ownerships are critical factors affecting the PLD process. However, only the visionary political leadership and the legitimate use of power can ensure the effective PLD process. As the comparative study of waterfront development by Eidelman (2018) suggests, Chicago and Vancouver managed to succeed with the progressive political leadership, whereas Toronto failed to execute the development as planned. With findings from Portland, the USA also emphasises how the capability of local political leadership supported the successful implementation of the urban agriculture project on public lands (Mendes et al, 2008).

Evidence shows how the misuse of power by the state has negatively affected the success of a PLD. For example, considering land as patronage for power has led to corruption and illegal land allocations in Kenya (Bassett, 2019; Klopp, 2000; Manji, 2012; Southall, 2005). In China, territorial power generated by the local governments through the monopoly over land has created a struggle with land masters (Hsing, 2006). Misallocation of land among land uses (Huang & Du, 2017), hoarding public lands (Du & Peiser, 2014), and selling land at cheaper

prices due to regional competition (Liu et al, 2008) have been caused by the misuse of public land monopoly. As China is a country with a unitary political system, local officials aim to improve their political position by promoting local economic development via PLD (Liu et al., 2008). Further, resolving process of the usurpation of public lands in Taiwan shows how the judicial system manipulated by political forces has treated the powerful (i.e., cooperations, institutions and unions) and the powerless people responsible for the usurpation unequally (Wu, 2019).

3.4.9. Integration of Land Development and Spatial Planning

Strong vertical integration that aligns PLD projects with long-term spatial planning vision of the city is recognised as one of the critical factors. For example, Dutch cities are recognised as 'planners paradise' and the achievement of the planning goals of Dutch cities are credited to their PLD strategy (Van der Krabben & Jacobs, 2013). Similarly, the land sales program in Singapore provides land for private developments and site scale development is closely aligned with the strategic-spatial vision of the city (Murakami, 2018). As Van der Krabben and Jacobs (2013) revealed, the public land banking system in the USA has been able to effectively control the pace and growth directions and prevent pre-mature land development. Further, as land banking is focusing on the vacant, abandoned properties in cities, it is recognised as an effective urban renewal method.

Another important concern is the quality of the development environment which is associated with the design and appearance of physical development (Gleeson & Coiacetto, 2007; Valtonen et al., 2018; Van der Krabben & Jacobs, 2013). In Netherlands, local governments have been able to deliver good quality planning and have earned the acceptance of the public. The

cooperation of citizens has made the acquisition of land for future development a less cumbersome exercise for municipalities (Van der Krabben & Jacobs, 2013).

Recognising the changing socio-economic environment and needs are vital to formulating effective land alienation and development strategies (Gleeson & Coiacetto, 2007; Rubin & Felsenstein, 2017). For example, a study from Israel (Rubin & Felsenstein, 2017) shows how the lack of coordination between the market needs and the public sector land supply strategies hinder the effective housing delivery at the times of increasing demand. Further, commitment to environmental sustainability has enabled the cities to experiment with innovative development projects such as urban agriculture in public lands (Gleeson & Coiacetto, 2007; Mendes et al., 2008).

3.4.10. Managing Unauthorized Uses and Resettlement

When cities have an abundance of public lands that are unoccupied by the responsible agencies, these lands are often occupied by low-income groups who will almost imperceptibly take them over for their housing purposes. Later, once the public sector decides to use the lands for development, these settlers will most likely be evicted and resettled. This eviction process, which sometimes involves force, results in dispossession of the residents and is often accompanied by violent clashes (Hsing, 2006; Kalabamu, 2006; Klopp, 2000; Pethe et al., 2012; Shatkin, 2016). Inability of the state to provide land to the poor, reservation of land for development purposes and escalating land prices have caused illegal settlements to emerge (Kalabamu, 2006; Pethe et al., 2012). However, the power that local governments have over land has allowed them to acquire the lands from the poor forcefully. As encroachments can lead to complex issues which negatively affect both people who occupy lands and the public sector, there need to be well-designed strategies to avoid such condition in cities.

Generally, the low income groups in cities are blamed for illegal use of public lands. However, interestingly, a study from Taiwan reveals that the usurpation of public lands by the elites, influential individuals and the public sector entities themselves is also prevalent (Wu, 2019). The displacement induced by PLD is not necessarily limited to unauthorised uses. As per the evidence from Hong Kong, urban renewal projects implemented on public land in high-density and rundown urban areas can lead to displacement (La Grange & Pretorius, 2014). Hence, minimising displacement and formulating comprehensive strategies for resettlement, if necessary, have a bearing on the effectiveness of PLD.

3.4.11. Information Management

Information is the key to informed decision making in any discipline. However, information is recognised as a major bottleneck for PLD in many countries and emphasise the need of having an up to date, transparent, well- shared information on public lands in our cities. Information management related to PLD comprises mainly two key attributes; 1) availability of up to date and reliable information (Eidelman, 2016; Kaganova et al., 2008; Mendes et al., 2008), and 2) information dissemination (Bonds & Pompe, 2005; Kaganova et al., 2008; Pethe et al., 2012). A study from the USA provides an example of adopting an innovative method for generating information. The project has built local partnerships with local universities to produce public land inventories to identify the potential public lands for urban agriculture when the information is not readily available (Mendes et al., 2008).

Inability to generate and share information has caused many inefficiencies. For example, a study from India discusses how the absence of strategies for maintaining centralized data, inter-organizational information networks and the absence of penalties for not maintaining records on public lands negatively affect PLD in cities (Pethe et al., 2012). Ambiguities related to

property rights (La Grange & Pretorius, 2014), inefficient use of lands, institutional disputes are mostly resulted due to lack of information (Pethe et al., 2012).

As found in the systematic review, the above discussed eleven critical factors and their associated factors will determine the success or the failures of PLD.

3.5. Synthesis of Critical Factors and Identifying Knowledge Gaps

3.5.1. Synthesis of Critical Factors

This systematic review analyses how the PLD related scholarship examined the critical factors affecting the PLD process during the last two decades (2000–2019). Based on the review, this study identified eleven critical factors however, role and significance of critical factors might be different from one city or project to another. As per the findings, PLDs are carried out to achieve diverse outcomes. As **Figure 3.4** illustrates, these outcomes are broadly classified into three interconnected categories as 1) generate financial returns for the landowner and partners, 2) provision of housing and public infrastructure with quality and quantity, and 3) contribution to long term planning vision of the city. In the best-case scenario, these three outcomes may reinforce each other. For example, a PLD that is supported by the development plan of the city will be able to execute a financially viable development and the revenue will be reinvested to provide public infrastructure. However, the critical factors determine the ability to deliver (or not deliver) the desired outcomes and hence, the effectiveness of the PLD.
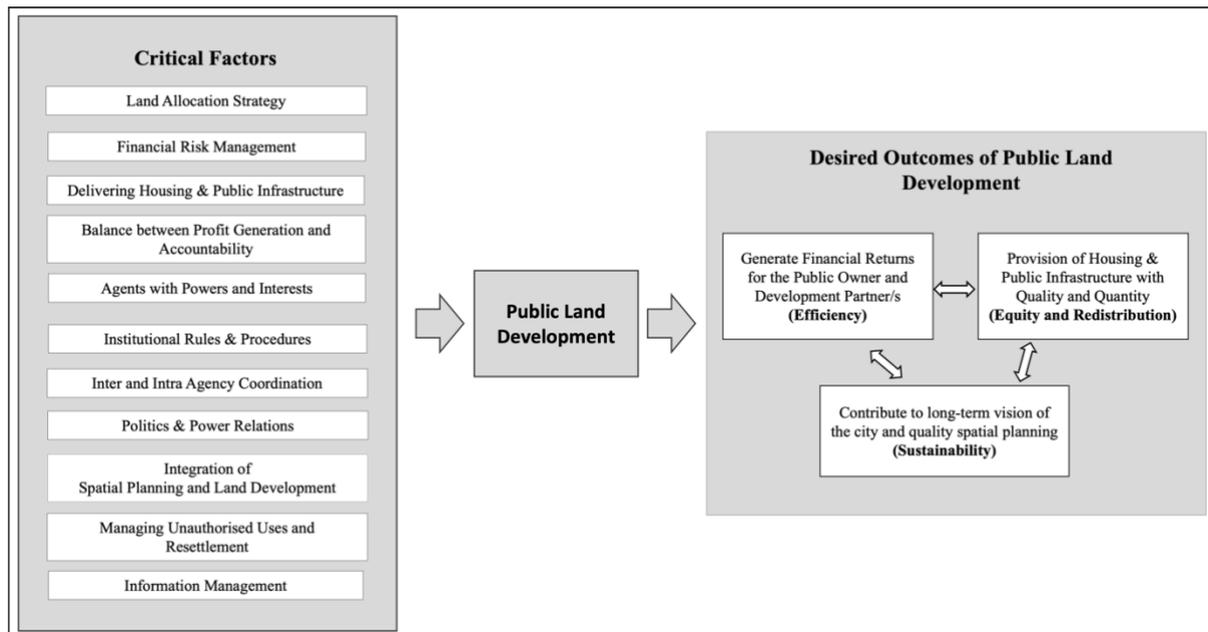
Figure 3. 4: Critical factors and effective PLD (Source: Developed by authors)

3.5.2. Identifying Knowledge Gaps

Key knowledge gaps identified can be discussed related to three key aspects such as; 1) theories, 2) methodologies and 3) findings.

First, a key knowledge gap found at the theoretical level is, the majority of previous research studies have endeavoured to explore the PLD process, its operational issues, causative factors, development outcomes and institutional context using different theoretical lenses. However, as discussed in the introduction, withholding public lands and keeping them idle for prolonged periods without using them productively to fulfil the socio-economic needs of the public is found to be an ubiquitous practice in many cities. Yet, this issue has not been raised in scholarly discussions. Out of the articles retrieved for systematic review, only a very few studies (i.e., Du and Peiser, 2014; Eidelman, 2016) have discussed this problem of withholding public lands by the state and its implications. Lack of up-to-date data on public land, underestimating the role of the public landowners in the land market and/or not questioning the long-standing

tradition of public land ownership may have contributed to the lack of theoretical debate on the problem.

Secondly, in terms of the methodologies used, there have been no attempts at explicitly dismantling and analysing the public land and its development as a system of networked relationships. A majority of previous studies have examined the relationships among selected aspects of PLD (i.e., public ownership and housing, rule of law and land allocation) by using qualitative and quantitative research methodologies. However, there is a dearth of studies that adopt analytical frameworks for investigating the critical elements of PLD, relationships among the different elements, distinct types of relationships (i.e., cyclical and/or acyclical) and their effects on effective utilisation of public land. A firm adoption of a relational approach to analyse the public land as a space in the city that integrates various forms of relationships, rather than a bounded entity (Graham & Healey, 1999) has yet to be undertaken.

Thirdly, there is a knowledge gap in terms of findings for PLD due to their geographical focus. As illustrated in **Figure 3.2**, European countries and some powerful Asian economies such as Singapore and China have been at the centre of discussion for a long period. Despite the discussions prevailing in the public domain, scholarly attention on PLD in the developing Asian countries is inadequate. The nature of public land ownership, contemporary practices in PLD and problems associated with PLD, such as underutilisation in developing Asian countries, is a key research area to be exploited. This systematic review recognised the shared realities of PLD and hence, it offers an opportunity for inferential generalisation. Findings derived from studies of other countries of the world might be applicable to Asia to a certain degree, yet developing countries in Asia will possibly have their peculiarities in PLD. Thus, the knowledge that originates from developing Asia will have vital implications on land development theory

and practice. These knowledge gaps related to theories, methodologies and findings call for further inquiry.

3.6. Chapter Summary

This systematic review is an attempt to critically analyse the scholarly works published during the past two decades on the development of publicly-owned land in the context of urban development. Findings revealed a set of critical factors that are widely discussed related to PLD across different countries. Despite the differences in the context of urban development in terms of property rights, the economic regime of the country (i.e., Neoliberal vs Communist), and trends of urbanisation, many countries appeared to have some commonalities in terms of the critical factors affecting PLD. Hence, identifying critical factors helped to establish a shared knowledge that can be possibly used by decision-makers and researchers who are engaged in PLD. These critical factors are useful for evaluating the PLD system of a city and to identify inefficiencies (i.e.Underutilisation) associated with PLD, if any. More importantly, the study recognises the existing knowledge gaps in PLD research and provides directions for future studies on land development. The next chapter will examine how this study develops a workable hypothesis that can explain the underutilisation of public land in Sri Lanka.

CHAPTER 4

DEVELOPING AN EXPLANATORY HYPOTHESIS

4.1. Introduction

While commencing the in-depth empirical study in Sri Lanka, this study intended to develop an explanatory hypothesis that could address the research question of the study i.e. why the public lands with development potentials remain underutilised in the urban areas of Sri Lanka. As the current studies do not fully explain the underutilisation of public lands, based on the preliminary observation in Colombo, this study developed a hypothesis on underutilisation of public lands in Sri Lanka. Hence, firstly this chapter discusses the need for developing a hypothesis and its underlying rationale. Secondly, the study reviews the existing literature on institutional elasticity, the key concept used in the hypothesis to explicate underutilisation of public land. Finally, the chapter discusses the key propositions of the hypothesis.

4.2. Why an Explanatory Hypothesis?

The study developed a provisional plausible explanation which could also be called an 'explanatory hypothesis' (Shani et al., 2020; Peirce, as cited in Timmermans & Travoy, 2012) on public land underutilisation for three key reasons.

First, the systematic literature review revealed that the existing studies related to PLD largely focus on the PLD process, its operational issues, causative factors, development outcomes and institutional context. Thus, the eleven critical factors (including the thirty-nine sub-factors) identified through the literature review are mainly related to either the operational phase or the outputs delivered by the PLD. In contrast, this study focuses on the problem of withholding public lands and keeping them idle for prolonged periods without using them productively to

fulfil the socio-economic needs of the public. Thus, the critical factors identified by the literature review related to PLD are partially useful for explaining the underutilisation of public land in Sri Lanka. For example, factors such as *maintaining a housing mix*, *ensuring the quality of development environment* and *commitment to sustainability* are critical factors related to the output of PLD. Hence, these factors are less helpful in explaining the underutilisation of public land.

The second reason is that this study carried out a preliminary investigation on the use of urban public lands in Sri Lanka and the ongoing discussions on underutilisation of urban public lands. As recognised through the preliminary studies, factors such as *assessment of underutilisation*, *resource mobilisation* and *scaling-up of the interventions* seemed to be significant bottlenecks in the PLD process. Yet, these have not been recognised as critical factors in the existing PLD literature. Further, these preliminary studies revealed certain behaviours of public sector actors that are worthy of an in-depth investigation. Therefore, developing a provisional explanatory hypothesis would allow new insights into the process to make it a testable proposition (Shani et al., 2020; Timmermans & Travory, 2012). Thirdly, semi-structured interviews were used as one of the main data collection methods in this study. Developing a hypothesis allowed to incorporate the preliminary observations of the researcher into the interview guide to delve deeper into specific aspects, and to stimulate productive discussions during interviews. Having considered these three aspects, a provisional explanatory hypothesis was developed for this study.

4.3. Developing the Hypothesis

Based on initial observations made on public land development in Sri Lanka and the previous scholarly works, this study proposes that underutilisation of public land is largely a result of the poor response of land institutions towards the changing socio-economic environment of the city. Hence, based on institutional theories, the study identifies this response of land institutions in Sri Lanka as the lack of 'institutional elasticity'. This provisional theoretical proposition, the meaning of institutional elasticity in the context of public land development, its key attributes, and how this proposition can be tested are discussed below.

4.3.1. Theoretical Background: The Institutional Elasticity

The elasticity of supply is one of the fundamental theories in economics, which has been applied by researchers in their attempts to examine the efficiency of public land ownership and development. For example, as Rajak (2009) argued, withholding public lands and not putting them to any use is one of the main causes of land market inefficiencies. According to his findings, the elasticity of the public land supply is greatly affected by institutional inefficiencies. A study by Rubin and Felsenstein (2017) on the supply of public land in Israel supports this argument and recommends that the public land supply needs to be more elastic.

However, this study, while modifying the above argument, suggests that the underutilisation of public lands in Sri Lanka occurs as a consequence of the lack of 'institutional elasticity', which is conceptually quite distinct from 'supply elasticity'. This proposition can be justified on the following grounds. The land supply, in general, is considered less elastic compared to other normal market goods. However, the point that must be emphasised is that while the supply of public lands remains sparse and slow, private lands keep transforming into

developments at a much faster pace through market mechanisms (Rubin & Felsenstein, 2017). The key distinguishable attribute between the two types of lands (public vs private) is the difference in the institutional structures that govern their use. Therefore, framing the problem of land underutilisation in terms of the lack of responsiveness or sensitivity of the land institutions is more accurate and points directly towards the root cause of the problem. Further, price elasticity is discussed in relation to normal market goods. However, since land and property, in general, and public property, in particular, are special goods (Alexander, 2014; Rodgers, 2019), analysing the use of such goods needs a more distinctive approach.

Hence, the study sought to explore how the concept of Institutional Elasticity (IE) has been examined by previous scientific studies. The institutional and organisational studies provide a long-established body of knowledge on behaviour of institutions. According to North, 'institutions are the humanly devised constraints that structure political, economic and social interaction' *(*North, 1991, p.97*)*. As Scott (2003) suggested, institutions consist of regulative, normative and cultural-cognitive elements. By the formal rules, norms and beliefs, these institutions govern the behavior of actors and ensure stability in society (North, 1999, Scott, 2003).

However, IE was found to be a less-explored concept in theory. The limited literature available on the concept of IE has been employed to study the role of institutional structures involved in the advancement of Information Technology (IT), economic development (Kondo & Watanabe, 2003; Watanabe & Kondo, 2003) and IT-driven business ventures (Watanabe et al., 2017). These studies had been undertaken mainly by a group of Japanese scholars who made use of different quantitative analysis methods. These studies revealed how the flexibility or elasticity of institutions might contribute to both the success and failure of business ventures as the case

may be and even to the economic development of different countries. Their findings show that there are cyclical relationships between institutional conditions and other external changes (i.e., advancements in IT or emerging business ventures). For example, the absence of receptivity of institutions towards IT innovations during the 1990s in Japan produced a 'vicious cycle' of lack of institutional elasticity and economic stagnation. In a marked contrast, the US provided evidence of a 'virtuous cycle' of institutional elasticity and economic development (Kondo & Watanabe, 2003; Watanabe & Kondo, 2003).

Hence, in this study, the term 'institutional elasticity' as applied to public land development refers to the responsiveness of the 'land institutions'. Here the land institutions refer to agents (i.e., organizations, individuals), regulative structures (i.e., laws, policies, regulations), normative and cognitive structures (norms, believes, ideas, values, practices) that govern the relationship between public land and people. As observed in the context of Colombo, changing conditions of the external socio-economic environment signify the emerging urban problems, development needs and potentials of the city.

Hence, the study recognizes the Institutional Elasticity (IE) in PLD as *the responsiveness of land institutions to the changing conditions of the external socio-economic environment within which they operate.*

4.3.2. Institutional Elasticity and Underutilisation of Public Lands

After considering the evidence retrieved from the systematic literature review, the study reached the following conjecture; the countries that are successfully mobilising their urban public lands for development at scale are equipped with land institutions that are responsive to their socio-economic environment *i.e.* emerging problems, development needs and potentials

of the city. Hence, effective utilisation of public lands for development can be attributed to the elasticity of land institutions, which are produced and reproduced through an iterative process. The phenomenon is recognised as an iterative process since the effective PLDs in these countries are not limited to a single project but they are implemented repetitively by public organisations for an extended period at the city scale.

Hence, the study proposes the first proposition of the hypothesis :

Proposition 1: *Underutilisation of public lands with development potential can be attributed to the lack of elasticity in the land institutions, which are produced and reproduced through an iterative process (a vicious cycle).*

The next question to address at this juncture was what constitute the IE in PLD. Accordingly, based on the evidence derived from the literature review and the preliminary observations in Colombo, the study suggested the following.

The four '*critical dimensions*' of IE in PLD are, 1) Local agent with devolved power, 2) Assessment of city needs and underutilisation, 3) Resource mobilisation, and 4) Scaling-up the intervention. There are cyclical relationships among the four key mandatory attributes and further, these four attributes are essentially affected by several other critical factors (i.e., fiscal decentralisation, access to financial resources and so on). Sustaining the cyclical inter-relationships between critical dimensions may make the land institutions more elastic or responsive to the ever-changing needs and potential in urban areas. Except for the newly proposed critical dimension by this study, namely the *scaling-up interventions*, the other three critical dimensions are aligned with the critical factors identified by means of the systematic literature review, as discussed in the previous chapter.

These four (4) critical dimensions are discussed below.

i) Presence of development agent/s with devolved power at the local level or in other terms, decentralisation of land development functions is the first critical dimension of institutional elasticity. Many research studies have emphasised the significance of decentralisation in PLD. Devolution is implemented through the decentralisation of functional responsibilities related to land management, housing and infrastructure development to local stakeholders together with fiscal decentralisation (Adisson & Artioli, 2019; Caesar, 2016; Caesar & Kopsch, 2018; Gao, 2019; Olsson, 2018; Valtonen et al., 2017, 2018; Van der Krabben & Jacobs, 2013; Woestenburg et al., 2018). The role of the local agents with devolved powers is crucial as they will be the initiators and mobilisers of the PLD process.

ii) Identification of the development potential of public lands and the emerging socio-economic needs of the society together constitute the second critical dimension of IE. This is one of the key functions of land mobilisers at the local level. More importantly, assessment of the level of underutilisation of public lands, if any, and assessment of their potential for generating economic returns, meeting affordable housing needs and/or public infrastructure needs is crucial. The ability to capture the information about these aspects will persuade the public agents to plan for appropriate development and to mobilise the necessary resources to achieve the desired development.

iii) The third critical dimension is the mobilisation of resources for PLD, which is crucial to carry forward the development process. Resource mobilisation generally focuses on how the resources are accessed, coordinated and mobilised to achieve the predetermined goals (Eyck, 2010; Shaked, 2017). As Eyck (2010) stated, resources will generally be

available, but they may not be evenly distributed or effectively utilised. Availability of strategies for mobilising the resources is mandatory for building up the institutional elasticity. According to Healey (1992), the material resources required for the development process are identified as land, property rights, labour, finance, information, and expertise. Apart from the material resources, PLD requires a wide range of non-material resources such as moral resources, cultural resources, and social-organisational resources. If the mobiliser manages to successfully mobilise all these resources, public lands can be effectively developed. However, the successful implementation of a single development project may not be adequate to make an institution more elastic. As such, it will not be able to resolve the issue of underutilisation of public land in the long term.

iv) Scaling-up the interventions is the fourth critical dimension of institutional elasticity. Scaling-up refers to the deliberate act of increasing the impact of an intervention or a best practice from a smaller scale to a larger scale (Thomas et al., 2017; WHO, 2010; World Bank, 2003). In the context of PLD, scaling up signifies the planned efforts at expanding the PLD from a single successful project to a sustained, city-wide strategy or institutionally mainstreamed strategy that even goes beyond the local boundaries. Scaling-up can be achieved mainly through organisational growth, by means of 'horizontal expansion' and 'vertical expansion'. These are brought about by making changes in the institution and its policy context (World Bank, 2003). Scaling-up involves formulating strategies to identify successful interventions, practising them as and when required, eliminating bottlenecks, and monitoring progress (Thomas et al., 2017).

If a PLD system of the country in general or a public organisation that undertakes PLD in particular, can sustain these mandatory attributes and the cyclical relationships among those

attributes, it will be able to initiate a cyclical process that makes the land institutions more responsive to the socio-economic environment of the city.

Hence, the study proposes the second proposition of the hypothesis :

Proposition 2: 'Institutional Elasticity' (IE) in PLD constitutes four critical dimensions, namely: 1) Local agent with devolved power, 2) Assessment of development context and utilisation of public land, 3) Resource mobilisation, 4) Scaling-up the development interventions and the cyclical relationships among the critical dimensions.
Hence, underutilisation of public lands in Colombo is attributed to a vicious cycle of lack of IE.

As shown in **Figure 4.1**, *the vicious cycle of lack of IE* is visually illustrated as part of the hypothesis. The visualisation illustrates the relationships between the lack of IE and underutilisation of public land. Further, as **Figure 4.1** illustrates, critical dimensions of the IE are affected by several other critical factors.
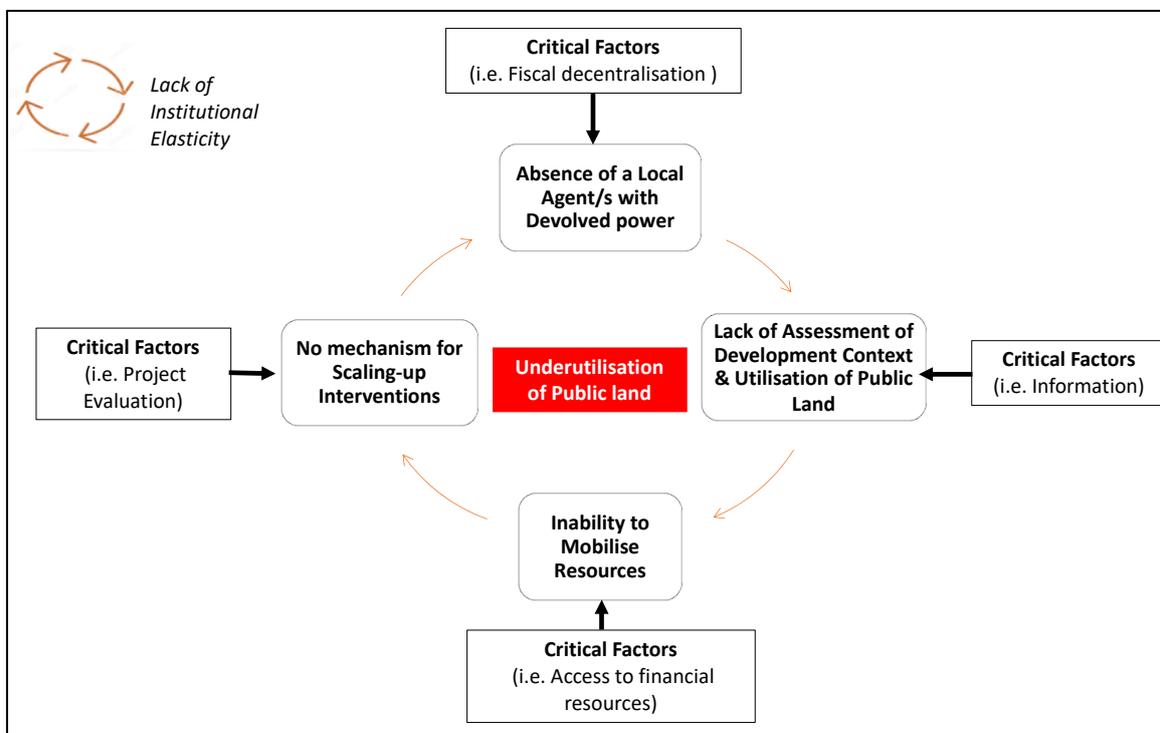
Figure 4. 1: The Lack of Institutional Elasticity and Underutilisation of Public Land

Research studies relying on abductive approach, propose preconceptions about the phenomena under investigation in the form of preliminary analytical framework that can be evolved with empirical findings (Dubois & Gadde, 2002). By the same token, the proposition on the cycle of IE is further developed into preliminary analytical framework by identifying the critical factors that affect four critical dimensions of IE. This factor identification is based on the list of critical factors derived from the systematic literature review and the preliminary investigations conducted in Colombo. **Table 4.1** shows the four critical dimension and twenty-five (25) critical factors of IE.

Table 4. 1: Critical Dimensions and Critical Factors of Institutional Elasticity in PLD

No	Critical Dimensions of IE	Critical Factors Affecting IE
1	Local Agent with Devolved Power for PLD	Powers to undertake PLD (for real estate development and/or public infrastructure supply)
2		Powers to generate revenue from public land
3		Powers to incur expenses on PLD
4	Assessment of the Development Context and Utilisation of Public Land	Identify issues associated with public lands in the city
5		Assessment of the future market potentials of the city
6		Assessment of need for housing and other public infrastructure in the city
7		Consultations of actors associated with lands and incorporating their concerns into planning
8		Alignment of PLD strategies with, and contribution to planning vision of the city
9	Mobilisation of Resources (Material and Non-Material resources)	Generation of up-to-date data and information on public land
10		Dissemination of information related to public lands
11		Strategies to minimise unauthorised use of public land
12		Strategies for resettlement and compensation (if any)
13		Building consensus for consolidating fragmented lands
14		Efficient and transparent strategy for land disposal
15		Strategies for financial management
16		Strategies to attract public and private sector investments on land
17		Access to required skills & expertise for land development (human resource)
18		Coordination among public agencies associated with PLD
19		Strategies for dispute resolution: mediation and arbitration
20		Adopting standard procedures for project management
21		Availability of political leadership and support
22		Legitimate use of power by the public organisations & politicians
23	Scaling-up Interventions	Periodic evaluations: Identification of successful interventions, bottlenecks, and failures
24		Introduce changes/ improvements to organizational practices & procedures
25		Make amendments to policies and laws as necessary

This preliminary framework provides the guidance for the researcher on 'what' to study during the empirical study phase. However, it is important to emphasise that these factors are used only as a guiding framework during the process of data collection. This framework does not intend to constrain either the data collection or the data analysis of the study.

Testing the hypothesis is the next important procedure to be discussed in this process. The hypothesis testing in qualitative research follows diverse procedures that are different from quantitative research. The next chapter will discuss how this research study plans to test the hypothesis.

4.4. Chapter Summary

This chapter proposed a provisional explanatory hypothesis to describe the phenomenon of public land underutilisation in Sri Lanka. The hypothesis postulated two propositions in the form of statements and propositions are supplemented by visual illustration. The hypothesis borrowed the concept of IE from institutional studies and the concept was adopted in to PLD. After completing the data collection and analysis, the validity of two propositions of hypothesis will be tested against the findings. The next chapter will bring the focus towards the methodology of the study.

CHAPTER 5
RESEARCH METHODOLOGY

5.1. Introduction

This chapter discusses how this study developed the most appropriate methodology for the research inquiry in order to address the research question and the objectives. The chapter explains the epistemological stance of the research, approach of the research study, methods of data collection, and methods of analysis with the rationale for adopting the particular methods in this study.

5.2. Epistemological Stance of the Research

The positivist approach in scientific research is adopted to discover objective and neutral realities (Feilzer, 2010; Henn et al., 2006; Savin-Baden & Major, 2013) and a similar approach is not in consonance with the research question of this study. To begin with, this study examines a unique resource: public land. A single plot of land can possess multiple values (i.e., economic value, social value, environmental value) that are assigned to it by different actors (de Vries & Voß, 2018). Hence, 'land' and its utilisation can mean different things to different actors (i.e., individuals, organisations) who are associated with it. Thus, the study does not delve into the matter of discovering uncontested knowledge, ideas or answers relating to the underutilisation of public land in Sri Lanka. Rather, the study follows the interpretive perspective that recognises how a social phenomenon constructs subjective meanings and multiple realities for different people associated with it (Creswell & Miller, 2000; Crotty, 1998; Feilzer, 2010; Henn et al., 2006).

Likewise, one of the fundamental attributes of the phenomenon under investigation in this study, namely public land and its utilisation, is that it is governed by socially constructed institutional structures such as property rights, laws, organisational procedures, policies, and norms. As Healey (1992) argued, development process in general is governed by the *rules* (i.e., organisational and political regulations), as well as the *ideas* and *interests* of different actors. Further, the hypothesis postulated in the study employs institutional theory to frame the underutilisation of public land. Therefore, this research inquiry is claimed to follow a post-structuralist approach that emphasises the constructive nature of ideas, the significance of changing institutions, and the roles of socio/political actors in social inquiry (Larsson, 2018).

Based on the relationships constructed over theory, conceptualisation and empirical analysis, this study used an abductive reasoning approach. This approach is an interplay between induction and deduction (Locke, 2010). The abductive approach allows bring in creative and innovative ideas (based on observations; induction) to a research inquiry to test its validity using empirical data (Locke, 2010; Shani et al., 2020; Timmermans & Tavory, 2012). Hence, abductive reasoning is recognised as the process of developing theories and new hypotheses to explain a puzzling situation (Charmaz, 2017; Timmermans & Tavory, 2012).

The process followed by this research based on abductive reasoning is illustrated in **Figure 5.1.** At the inception of the study, the researcher carried out a preliminary survey on utilisation of urban public land in Colombo by conducting informal interviews, field observations and reviewing grey literature. Hence, by integrating the initial observations in Colombo, with a plausible theoretical explanation, the study developed a new proposition on underutilisation of urban public land in Colombo. Such a hypothesis is recognised as an 'explanatory hypothesis'

(Peirce, as cited in Timmermans & Tavory, 2012) and as a 'plausible explanation about a puzzling phenomenon' (Shani et al., 2020, p. 65).
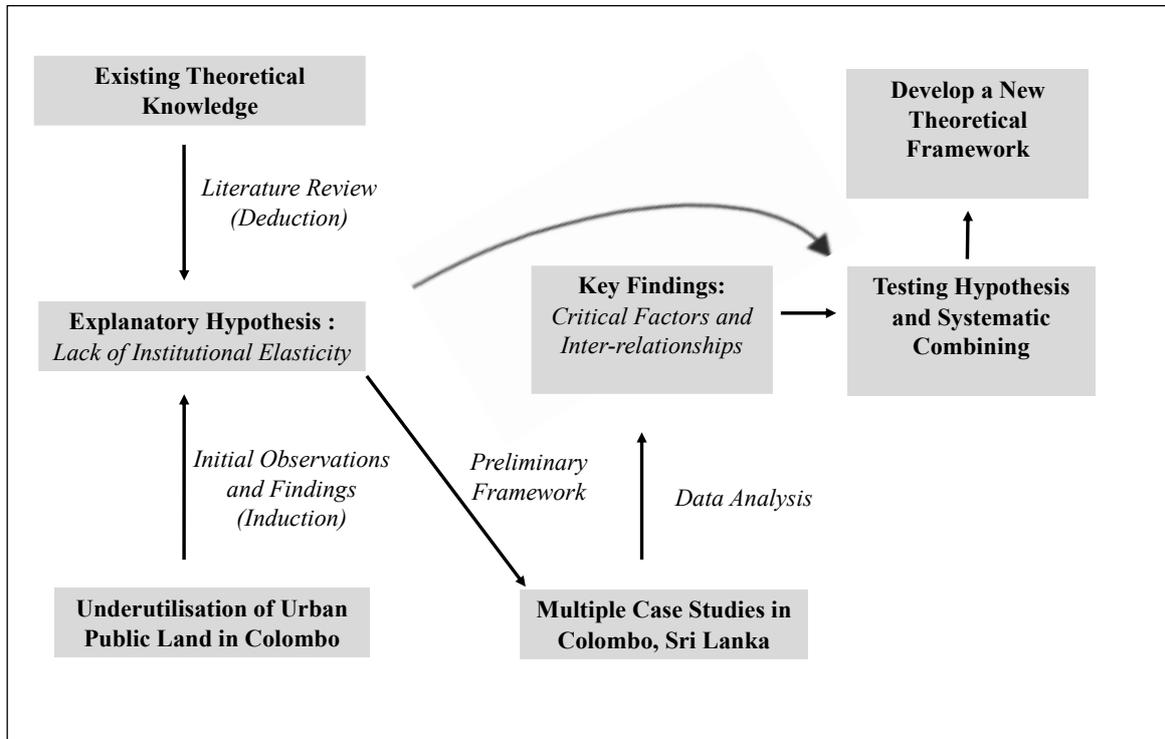
Figure 5. 1: The process followed in abductive reasoning

In abductive research, the hypothesis is then employed as a 'preliminary framework' that directs the data collection during in-depth studies (Dubois & Gadde, 2002). After completing the data collection and analysis, proposed conjectures are tested against empirical findings (Charmaz, 2017; Rashid et al., 2019; Timmermans & Tavory, 2012), and will accordingly be accepted, rejected, or modified as necessary. Following the hypothesis testing, the study will proceed towards constructing a new theoretical framework by systematically combining the findings of the case studies with the proven propositions of the hypothesis.

5.3. Case Study Approach – Why Case Study?

The research question of this study is 'why the public lands with development potentials remain underutilised in the urban areas of Sri Lanka'. Hence, the study seeks to investigate underutilisation in a real-life context. Accordingly, the case study approach was recognised as the most appropriate research approach for this study for several reasons.

Firstly, as Yin (2018) suggested, the case study approach is most suitable for studies that raise questions of 'how' and 'why' as part of the research investigation. This research study is centred on the 'why' research question and thus, the case study approach was recognised as the most appropriate for this purpose. Secondly, a case study proves valuable for a research inquiry when it is necessary to pay particular attention to the context of a problem (Yin, as cited in Creswell, 2007). Because, the case study research examines a selected problem through single or multiple cases 'within a bounded system' using in-depth data collection (Creswell, 2007, p. 73). The urban land development practices and policies adopted by every country is unique to that country's context (Hartmann & Spit, 2015). Hence, understanding the context of underutilisation associated with public land development was a prerequisite for this study. A 'thick description', the term referring to the provision of an in-depth analysis of the contextual backdrop of the case, is a fundamental attribute in case study research (Dawson, 2010). Thirdly, case study research has been used for various purposes such as theory testing, theory building, hypothesis testing and hypothesis building (Ebneyamini et al., 2018; Yin, 2018). In the context of Sri Lanka, there is a lack of readily accessible data on public land ownership and the status of land development at a local and regional scale, mainly due to the fragmented land ownership and ineffective land administration (World Bank, 2017; Zainudeen, 2016). However, the lack of data and information should not hinder any scientific inquiries and new knowledge creation on this crucial urban phenomenon. Despite the lack of readily available data, multiple case

studies provide the opportunity to extract and derive evidence from multiple places and sources. In these circumstances, a case study becomes useful to generate knowledge on underutilisation of public land through an inside-out approach based on scattered evidence.

Therefore, this study identified several public lands located in the City of Colombo that had recently been marked by the planning authorities as 'underutilised' and listed for planning intervention. These were the lands chosen as case studies, which were then subjected to an in-depth examination.

5.3.1. Case Selection: Sampling Strategy

Multiple case studies are used in this research to illustrate the problem of land underutilisation. A single case study may not be able to provide a holistic view of the complexity of the PLD process and related issues. A study of multiple cases will help to unravel different dimensions of the issue and thus, facilitate the researcher to examine distinct situations or similarities across cases (Cresswell, 2003; Proverbs & Gameson, 2008).

The sampling strategy in case studies takes into account the number of cases and the units of analysis (Fletcher & Plakoyiannaki, 2010). Quantitative studies which aim for statistical generalisation prefer to select a large number of cases for examination. However, qualitative researchers aim only for theocratical generalisation (Yin, 2018). Therefore, qualitative case studies opt for not exceeding four or five cases because using more cases may lead to the risk of conducting a less rigorous analysis in a single case (Cresswell, 2003).

Purposive sampling is the most used and recommended sampling method in case studies as it supports the selection of appropriate cases that can provide greater learning about the problem under investigation (Cresswell, 2003; Fletcher & Plakoyiannaki, 2010; Wicks, 2010). Further,

the selection of a 'deviant case', also referred to as 'negative case' and 'disconfirming case', is a sampling technique that is considered one of the best ways to improve the credibility of findings (Fletcher & Plakoyiannaki, 2010; Wicks, 2010). Instead of choosing only the cases that support the initial claims of the researcher, inclusion of deviant cases can contribute to a more comprehensive and trustworthy analysis (Wicks, 2010).

This study selected five comparative cases to proceed with the multiple case study approach. Selected cases were comprised of PLD projects taking place in the City of Colombo. Four of the cases (development projects) were at different phases of the development process. One completed PLD project was purposely selected as the deviant case. Using the ongoing, stalled and completed projects provided an opportunity to compare and contrast the findings. The other important aspect in sampling is the unit of analysis that defines the key entity being analysed in the study or in other terms, 'what and who is being studied' (Fletcher & Plakoyiannaki, 2010, p. 3). In this study, the selected development projects are the units of analysis. The data collection was mainly done through individuals and the analysis cut across multiple levels, from the organisational to institutional level.

Following the research question, the study developed five specific objectives and appropriate research methods were chosen for addressing each objective. The following section discusses the methods employed for data collection and data analysis in detail.

5.4. Methods of Data Collection

5.4.1. Literature Review

As with any other research, this study commenced with a traditional literature review to understand the key concepts (i.e., public land and its property rights, underutilisation) and the

nature of PLD through the previous scholarship. However, following this initial phase, the study used the literature review as a method of data collection to address two of its objectives. Firstly, as discussed in **Chapter 2,** a literature review was carried out *to examine how the concept of 'underutilization' is defined or characterized with respect to urban public land in decision making*. The literature review also helped to identify several other concepts which are closely associated with underutilisation such as 'optimum use' and their relationship with underutilization of public land.

Secondly, the study used a systematic literature review as a distinct research method to address the second objective of this research study: *to identify the critical factors affecting the effective utilisation of public lands in the urban context.* The systematic review is designed to answer a defined research question through an explicit methodology by critically appraising the previous studies and synthesising the findings (Briner & Denyer, 2012; Wilson, 2013). It is also highly useful for identifying the knowledge gaps in the topic under investigation (Briner & Denyer, 2012). Therefore, a systematic literature review is recognised as a basic yet important research methodology (Snyder, 2019; Wilson, 2013). A well-structured literature review provides a stronger foundation for a research study and supports theory development. In light of this, this systematic review was carried out, and the methodology adopted for this systematic review including a discussion of the selection of materials and their analysis was presented in detail in **Chapter 3.**

5.4.2. Data Triangulation

Case studies utilise multiple sources of information to capture different dimensions and provide a holistic assessment of the case/s (Creswell, 2007; Proverbs & Gameson, 2008; Yin, 2018).

By the same token, this study collected data from multiple sources, namely, 1) interviews, 2) documents, and 3) observations. This process is recognised as *Data Triangulation.*

Data triangulation is a procedure that involves collecting data from multiple sources such as interviews, documents and observations (Creswell & Miller, 2000; Flick, 2017). Triangulation was originally identified as a validation procedure. Lately, apart from validation, it is recognised as a strategy that can provide an in-depth and wider understanding of the phenomenon under investigation (Creswell & Miller, 2000; Flick, 2017; Lewis et al., 2013). Corroborating evidence collected from multiple sources supports to strengthens the validity of the findings, which is not the case when relying on a single source of data (Creswell & Miller, 2000; Yin, 2018).

This study used data triangulation for both substantiating and verifying the evidence related to cases. Depending on interviews as the only source of information could have been challenging since it raises concerns over the reliability of data. Particularly, difficulty in recollecting facts or incomplete knowledge of participants can compromise the reliability of data collected from interviews (Roulston & Choi, 2018). Further, this study recognised that the institutional obligations of the participants as government servants may also influence their responses. Therefore, to ensure that the overall findings provide a more accurate account of the cases selected, multiple data collection methods such as documents (public and semi-public documents) and direct observations were used along with interviews.

For example, document analysis helped to uncover important facts about the cases (i.e., conflicts, litigations, demands of key actors associated with selected land) and guided the researcher to raise questions on those specific aspects, as certain details might not be disclosed

by the interviewees voluntarily. Thus, triangulation proved to be an effective tool for conducting in-depth investigations through corroborating and validating findings specific to each case.

Further, noticing any contradictory evidence in the data can better reveal the practical complexities and ensure the credibility of the research process (Creswell & Miller, 2000). For example, as per the documentary evidence found in Colombo related to a case study, one of the public landowners has provided the consent to hand over their land to another public agency for development. However, interviews conducted with key actors from the same agency (public landowner) showed discontentment and regret over the decision of alienating land (discussed in detail in **Chapter 6).**

5.4.3. Key-informant Interviews

Considering the nature of the research objectives, the key-informant interview was recognised to be one of the most appropriate methods of data collection to address Objective 1, Objective 3, and Objective 4 of this study.

The interview is a widely used data collection method that produces knowledge through conversation and collaboration between the participants and interviewer (Barlow, 2010; Roulston & Choi, 2018). There are different types of interviews such as structured, semi-structured and unstructured (Barlow, 2010). The semi-structured interview was deemed to be the best type for this study as it requires all the participants to answer the same questions yet provides a better opportunity to record the unique experiences of each of the participants (Barlow, 2010). The interview guide (see Appendix 1 and II) is the main tool used in conducting the semi-structured interviews. It includes pre-designed questions yet provides the flexibility to be adapted to the conversation according to the responses of the participants

through follow-up questions or probing (Barlow, 2010; Morgan & Guevara, 2008; Roulston & Choi, 2018). This study employed interviews as a research method to address three of the objectives of this study. Hence, the target groups of the interviews were different (see **Table 5.1**).

Stage I: Interviews for Objective 1

Interviews conducted at the first stage of the study aimed to address the first objective: *how the concept of underutilisation of public land is identified or characterised in planning decision making*. Interviews aimed to acquire data on the perceptions of experts on the above and the study selected research professionals (n=12) from seven different countries, possessing experience in land development and urban planning. These interviewees were selected using the convenience sampling approach. This sample was comprised of research professionals who were in favour of divergent approaches towards urban planning and land development. This selection technique was employed as a strategy to explore the contested views, if there is any on the concept of underutilisation of urban land.

Stage II; Interviews for Objective 3 & 4

The stage II of interviews aims to address the following research objectives; *To investigate the critical factors affecting the underutilisation of urban public lands in Sri Lanka (objective 3), and* to examine possible inter-relationships among those critical factors and how they cause underutilisation of public lands in Sri Lanka *(objective 4).* Hence, in this stage, key-informant interviews were used as the key methods of data collection due to the following reasons.

Mainly, public agencies involved in PLD generally include the progress and outcomes of the development projects in their periodic reports. However, the precise nature of challenges confronted, their effects on planning decisions and the unique experiences of the officers in connection with the PLD process are rarely detailed in public documents. Likewise, such information is hard to obtain from the responses of a representative survey (Parsons, 2008). Therefore, conducting in-depth interviews with the key informants, who are recognised as

experts in that field in their organisation (Parsons, 2008) is the key to acquiring a deeper understanding of the root causes of land underutilisation. The target group comprised senior officers from the public agencies who were involved in public land development, particularly with the five selected cases. The objective was to collect data on the critical factors underlying the underutilisation of public lands with respect to the selected case studies. The sample consisted of 20 participants, who were selected using the purposive sampling and snowball sampling methods. Eventually, the study conducted a total of 32 in-depth interviews, which lasted from 45 minutes to 1 hour each.

Table 5. 1: Background information of the interviewees

Interviews	No of Participants
Stage I: Interviews on the Concept of Underutilisation (with researchers from 7 countries)	12
Stage II Interviews with key-informants related to case studies	20
Total	32
Key informant Interviews – Stage II	
By Institution	
Sri Lanka Railway	5
Urban Development Authority	7
Department of Irrigation	3
Colombo Municipal Council	4
Other	1
By Professional Background	
Urban Planners	3
Valuer cum Urban Planners	3
Valuers	2
Engineers	6
Surveyors	2
Administrative Officer	1
Other	3
By Years of Experience (at the selected Organisation)	
More than 30 yrs	4
20 - 30 years	6
10 - 20 years	6
5- 10 yrs	3
Less than 5 yrs	1

It should be noted that the sample includes only the key- informants from public sector organisations but not from the private sector. None of the selected case studies has reached the stage of involving private stakeholders in the development process and hence, were not included any private sector stakeholders (i.e., developers and investors) in the sample.

5.4.4. Documents

Documents are considered a useful source of data for research, mainly because these records were produced during the daily routines for various purposes and are unaffected by the research inquiry. Hence, documents are considered an authentic source of information for research (Olson, 2010). There are different types of documents such as public, semi-public and private documents. Both primary and secondary documents can be utilised in research (Olson, 2010).

This study mainly used secondary documents, which are recognised as documents produced by people not related to the research (Olson, 2010). These documents comprised both public documents (i.e., legal enactments, annual progress reports, newspaper articles) and semi-public records (i.e., minutes of meetings). The documents containing records of important decisions and key events related to the selected cases were collected and analysed.

It is important to explain why newspaper articles were selected as a source of data and also about the nature of the information this research expected to find in newspapers. Firstly, newspaper articles provide rich information that could help the researcher to gather facts about the development of the selected cases over a period of time, whereas this information could not be accessed from any other source. This was confirmed during this study, as nearly all information on the critical events that occurred, such as introduction to new legal enactments, protests against developments, and court cases pertaining to the cases were reported in the local

newspapers. An evaluation of the effectiveness of the newspaper as a data source on collective events was made by Earl et al. (2004, p. 72), who argued that the 'hard news' reports published on the 'who, what, when, where, and why of the protest events' are accurate. This was found to be true in this study as well since the hard data were validated by means of the triangulation process. Newspapers have also reported on the points of view of key stakeholders associated with the selected cases as they play a highly influential role in the land development process. For example, in-depth interviews provided to newspapers by former senior-level managers (e.g., Chairman, Subject ministers) and leaders of trade unions have revealed both their points of view and other matters related to the cases. Therefore, this research recognised newspaper articles as a valuable type of data source.

Further, there was a need to be cautious of the biased information often found in documents (Bell & Waters, 2018). However, biases in documents do not necessarily make the evidence untrustworthy, and further, they can serve as useful evidence to critically judge the point of view of the individual or organisation that published it (Bell & Waters, 2018).

5.4.5. Direct Observations

As case study research is carried out in a real-world context, it provides the opportunity to collect data based on direct observations (Yin, 2018). In this study, observations mainly served triangulation in terms of substantiating the evidence related to cases and validating the data collected from other two sources: interviews and documents. Observations helped witness and verify certain conditions that were emphasised related to selected case studies (by other data sources), particularly the current uses and the physical conditions of properties. Likewise, it helped enlighten the researcher about the selected cases and supported to conduct of productive

key-informant interviews by raising questions based on observations. Observations were recorded through photographs and field notes.

5.5. Methods of Data Analysis

After collecting the data using multiple methods, appropriate tools were used for data processing and data analysis as discussed below.

5.5.1. Thematic Analysis

Thematic analysis, which is also recognised as qualitative content analysis (Erlingsson & Brysiewicz, 2017) is a method used to analyse the patterns and themes in textual data (Vaismoradi et al., 2013). Following the coding process, this analysis collates the fragmented ideas that are in the form of codes into meaningful themes (Erlingsson & Brysiewicz, 2017; Nowell, 2017). A rigorous thematic analysis is able to provide insightful findings by synthesising the key attributes of a larger qualitative dataset (Nowell, 2017). In this study, thematic analysis was used at three different stages for analysing the textual data, as follows: 1) conceptualising the notion of underutilisation, 2) systematic literature review, and 3) examination of the critical factors affecting underutilisation.

5.5.2. Data Processing and Coding

The raw data collected in this study pertaining to multiple cases were mainly in the form of audio recordings, documents and field notes. Transcribing is an important step in data processing that is used to convert non-text data into readable text (Parameswaran, 2019). Accordingly, all the key-informant interviews and other documentary evidence collected were transcribed. The next important step was the coding, an integral part of qualitative data analysis.

Coding is an analytical process that supports distinguishing the codes that emerge from the textual data and accordingly, sorts data into themes (Parameswaran, 2019; Vaismoradi *et al.*, 2013). As per the objectives of this study, the coding process intended to identify a list of critical factors affecting underutilisation (objective 3) and their inter-relationships (objective 4).

Hence, this study used the Computer Assisted Qualitative Data Analysis Software (CAQDAS) for coding, namely the Nvivo 12 software, which is one of the widely used tools for analysing qualitative data. Coding helped to identify a list of critical factors and their inter-relationships from the textual data. This research inquiry was required to carry out an in-depth analysis of inter-relationships between critical factors and chose a CAQDAS for that purpose. The study used *Gephi,* an open-source software to analyse and visualise the networked relationships between the critical factors and their significance. The data files after being processed by Nvivo (information regarding inter-relationships between critical factors) were then exported to *Gephi* for network analysis.

5.5.3. Chronological Sequence Analysis

Chronological sequence is a form of time series analysis. It reflects one of the key strengths of case study research which provides the opportunity to examine changes of the subject matter under investigation over time (Cresswell, 2003; Yin, 2018). Rather than a descriptive technique, it can be used as a useful analytical tool to examine causal relationships over an extended period (Yin, 2018). Likewise, it is essential to identify the specific variable to be examined in a time-series analysis (Yin, 2018). In this study, the chronological sequences of each case study were analysed with respect to the use of land and its contribution to the function of the city. More

importantly, a cross-case comparison of the chronological sequences helped to identify a pattern of evolution across the cases in Colombo (see **Chapter 6).**

5.5.4. Network Analysis

Network studies examine the pattern of relationships among the entities in complex structures and their key features. Network analysis aims to assess the relationships within a system while providing a graphical interpretation of the network (Hevey, 2018; Marsden, 2005). Network analysis is conducted across a wide range of disciplines, such as the social sciences, medical sciences, business management, environmental management and policy-making (Ahrens, 2018; Altissimo, 2016; Bodin & Crona, 2009; Cherven, 2015; Hevey, 2018; Ingold, 2014; Marsden, 2005; Pereira-Morales, 2019; Zhou et al., 2020). This shows that network analysis is a versatile analytical approach that can accommodate different methods (i.e., Social-network analysis, Actor-network analysis), and as such it can be tailored to serve varied purposes.

A Network graph can be recognised as a

> …collection of nodes (often called vertices) that are connected by edges (sometimes called connections, links, or ties) to form a graph. Nodes can be thought of as individual elements in a network that might represent persons, places, or objects that collectively constitute a network. (Cherven, 2015, A network graph analysis primer section, para.1).

In this study, network analysis is used as one of the key analytical tools to examine the inter-relationships between critical factors affecting underutilization of public land. The Gephi software is the one chosen for this purpose. Gephi is an open-source software designed as an analytical tool for analysing and visualising complex networked relationships. The Fruchterman-Reingold forced-based network layout is used for the graphical presentation of the network as it is recognised as an accurate and standard way to represent small to medium

size networks. Further, it positions the nodes and edges either close to or apart from each other based on the strength of their connections (Cherven, 2015; Hevey, 2018).

i. Centrality Measures - Degree Centrality

The centrality measures are used to analyse the structure of the network. Centrality is a quantitative measure that gauges the relative importance of individual nodes within a network. It will show how central or influential a specific node is within the network (Cherven, 2015; Golbeck, 2015; Hevey, 2018). There are four main types of centrality measures and every study adopts the measure that is most appropriate for its purpose. This study uses the 'Degree Centrality' type, which measures how influential or significant a node is within the overall network, based on the number of nodes that are connected to a particular node within the network. As this study is required to analyse networks with directed relationships, the appropriate centrality measure was adopted, namely, In-degree centrality and Out-degree centrality, to measure the influence of each node. In-degree centrality gauges the connections linked 'into' a selected node, whereas out-degree centrality identifies the connections flowing out 'from' a selected node to a range of other network members (Cherven, 2015). In this study, degree centrality measures were used to assess the significance of critical factors affecting underutilisation.

ii. Cluster Analysis – Modularity

The function of a network can be better understood by identifying its sub-components or distinct communities (Blondel et al., 2008; Cherven, 2015). In this study, clustering was necessary to recognize the sub-components of the network that illustrate the inter-relationships between critical factors. The analytical tools provided in the Gephi software were used to identify the clusters inside the network. The modularity function of Gephi (which uses an

algorithm for community detection) helped to partition the critical factors into clusters based on the strength of their connections with other critical factors.

5.5.5. Within-Case analysis and Cross-Case Analysis

The data analysis of this study was performed in two main stages: 1) analysis within the case, and 2) analysis across the cases. Within-case analysis (first stage) is designed to provide an in-depth understanding of the case, its context and the analytical themes within the case (Cresswell, 2003). The second stage of the analysis was performed by cross-case analysis, a principal analytical method that is used to analyse the evidence in multiple-case studies (Cresswell, 2003; Ebneyamini et al., 2018; Yin, 2018). The cross-case analysis is a method used to compare and contrast the similarities and/or differences between cases under investigation. Synthesising the findings from multiple cases will provide a means for the generalisation of findings (Mathison, 2005).

5.6. Member Checking and Validation

Validation is a critical step in data analysis. The validity of qualitative research is recognised on the basis of how accurately the findings identify and interpret the perspectives of the participants about the phenomenon under examination (Creswell & Miller, 2000; Lewis et al., 2013). Member checking, also recognised as member validation is one of the useful techniques employed in validating the research findings. The findings obtained from the empirical studies will be analysed and then taken back to the participants to make sure that the final account of the analysis provides an accurate interpretation of the problem (Birt et al., 2016; Creswell & Miller, 2000; Lewis et al., 2013). This method ensures the credibility and the trustworthiness of the study (Creswell & Miller, 2000). There are different procedures for carrying out the

member-checking. For example, presenting either the raw data or the findings as texts or reports for the participants to comment on are some of the widely used strategies (Birt et al., 2016; Creswell & Miller, 2000; Iivari, 2018).

Despite the debates, there is the possibility of adopting internal and external validity checks on the methodology of qualitative research (Lewis et al., 2013). Accordingly, this study examined, 1) the internal validity – in terms of how well the findings are grounded in the data, and 2) the external validity – in terms of how the inferences can be generalised or applied to another setting (Lewis et al., 2013; Yin, 2018).

5.6.1. Member Check through a Questionnaire Survey

This study used the technique of referring back to the participants with the synthesized findings drawn from the data analysis for their review and feedback; this was also done through a questionnaire survey. At the end of the analysis, a questionnaire was designed in two Parts (see Appendix 3). The Part I disclosed the findings on how the concept of underutilisation of public land is characterised in planning decision making in Sri Lanka. The Part II presented the findings related to critical factors, their inter-relationships and how such inter-relationships affect the underutilisation. It mainly focused on the causal relationships and internal validity of the study (Lewis et al., 2013). The questionnaire was comprised of statements and diagrams to present the key findings in a straightforward manner. Participants were requested to express their level of agreement with the findings using a five-point Likert scale. A total of 20 questionnaires were sent back to the key informants who participated in in-depth interviews, of which 5 were completed and returned. The level of agreement of the participants with the research findings was analysed using the mean score analysis (See Chapter 7).

5.6.2. Mean-Score Analysis

The mean-score analysis is a basic analytical technique used in research studies to assess the expert's opinion on the relevance or the importance of research findings or frameworks derived by a researcher (i.e., Chan & Hou, 2015). This study used the mean score analysis in the stage of member-checking to estimate the level of agreement of the key informants who contributed to the data collection, with the synthesized findings of the research study. The mean scores of each finding (i.e., attributes of underutilisation, critical factors affecting underutilisation, relationships between critical factors) presented to participants via a questionnaire survey were calculated.

5.7. Summary of the Chapter

This chapter elucidated the research methodology adopted by this study, which included the philosophical stance of the study, research approach, methods of data collection, and methods of analysis used. This study adopts an interpretive approach towards the analysis of underutilisation of public land and follows an abductive research process. The case study approach is used as the means to address the research question of the study. As required by the objectives of the study, data collection is based on multiple sources, and analysis methods are chosen appropriately. The next chapter will bring the focus of the study to Sri Lanka and the chapter will provide a detailed account of the selected case studies.

CHAPTER 6

CASE STUDIES FROM SRI LANKA: UNDERUTILISATION AND THE CRITICAL FACTORS

6.1. Introduction

This chapter aims to address the third objective of the study, i.e. *to identify the critical factors affecting the underutilisation of urban public lands in Sri Lanka*, by way of using multiple cases selected in Colombo, Sri Lanka. To begin with, the chapter discusses the property right regime of Sri Lanka, the context of the urban development planning in the city of Colombo and provides a brief overview of the five case studies selected. Secondly, it examines how the claims about underutilisation of lands are made with the selected cases. This is followed by a discussion on the assessment of the underutilisation of public land in the course of planning decision-making in Sri Lanka. Thirdly, case studies are discussed in-depth in terms of the critical factors affecting underutilisation. Finally, a cross-case analysis is carried out to synthesise the findings of multiple cases in terms of two key aspects, 1) the trajectories of the evolution of case studies, and 2) critical factors affecting underutilisation.

Further, it is important to note that *public lands* are referred to by different terminologies such as *state lands* and *municipal lands* in different countries. In the previous chapters, the term *public land* was used as if it is one of the widely used terms across different countries. However, this chapter that discusses the cases in Sri Lanka will use the term *'state land'* since that is the official term used in the legislation in Sri Lanka.

6.2.Land Tenure and Property Right Regime of Sri Lanka

Land tenure refers to the relationship between land and people and how such relationships are recognised (i.e., by statutory or customary laws) in a particular society (USAID, 2013). Under different tenure systems, the property rights (or bundle of rights) are defining the ways in which land can be owned, used, develop and alienated in a specific institutional context (Payne, 2004; USAID, 2013). Different countries or cities have different tenure regimes and make use of diverse institutional structures (i.e., organisations, laws, procedures, norms) that determine the land and its relationships with people (Payne, 2004; USAID, 2013).

The land tenure system in Sri Lanka has evolved over a long period. The existing tenure system is influenced by both statutory and customary laws. Mainly, Roman-Dutch law, English law and customary/personal laws (Kandyan, Thesawalamai and Muslim law) guide the land management of the country (Perera, 2010; Thirunavukarasu, 2017). In Sri Lanka, approximately 18 % of the land is privately owned and the state owned almost 82% of the land (Thirunavukarasu, 2017). Considering the state lands, many public authorities are involved in state land administration and several legal statutes are available to manage those lands. Most of the key legislations that shaped the property right regime of state land (i.e., Crown Lands Ordinance of 1940, Land Development Ordinance No.19 of 1935 and State Lands Ordinance, No. 8 of 1947) were formed by the colonial British administrations (Perera, 2010; Thirunavukarasu, 2017). State lands can be alienated for different types of developments (i.e., agricultural, residential, road development, government purposes and town developments) through different mechanisms such as grants and permits and hence, can become 'semi-private' lands (Thirunavukarasu, 2017).

The administration of state land is still a highly centralised subject and the powers and authority retain within the central government. The 13th amendment to the constitution proposed the devolution of power by establishing provincial councils in Sri Lanka. Even though, it stipulates the rights over land (i.e., land improvement, transfer and alienation) to the provincial council, exercising the vested power is not sufficiently facilitated by the constitution (Thirunavukarasu, 2017). As per Article 33 (f) of the constitution of Sri Lanka, the president of the republic has the ultimate power over state land and hence, in reality, state land is no longer a subject under the provincial council.

Numerous other institutional procedures govern the possession and other rights associated with state land. These institutional structures determine the way the state land is used, developed, and transferred in the market and hence, may have a bearing in the underutilisation of state land in Sri Lanka. Therefore, the attributes of the property right regime that affect the underutilisation, if any, will be further investigated via the case studies from Colombo

6.3. Urban Development in the City of Colombo

Colombo, the commercial capital of Sri Lanka, has been the primate city of the island since the colonial period. Today, the City of Colombo is the largest urban agglomeration in the country, with the greatest concentration of economic activities, infrastructure and population.

The city gradually evolved over centuries while extending its spatial-economic boundaries. The recent urban planning initiative in Colombo demarcated the functional boundaries of Colombo City, which transcend the administrative jurisdiction of Colombo Municipal Council. According to the *Colombo Commercial City Development Plan 2019-2030*, the city of Colombo is recognised as a functional region (see **Figure 6.1**) that includes eight local

authorities (UDA, 2019). Currently, it is a city with a population of 1.1 million permanent residents and an average population density of 10,400 persons per square kilometer (UDA, 2019). All cases selected for this study are located within the boundaries of the Colombo Commercial City.
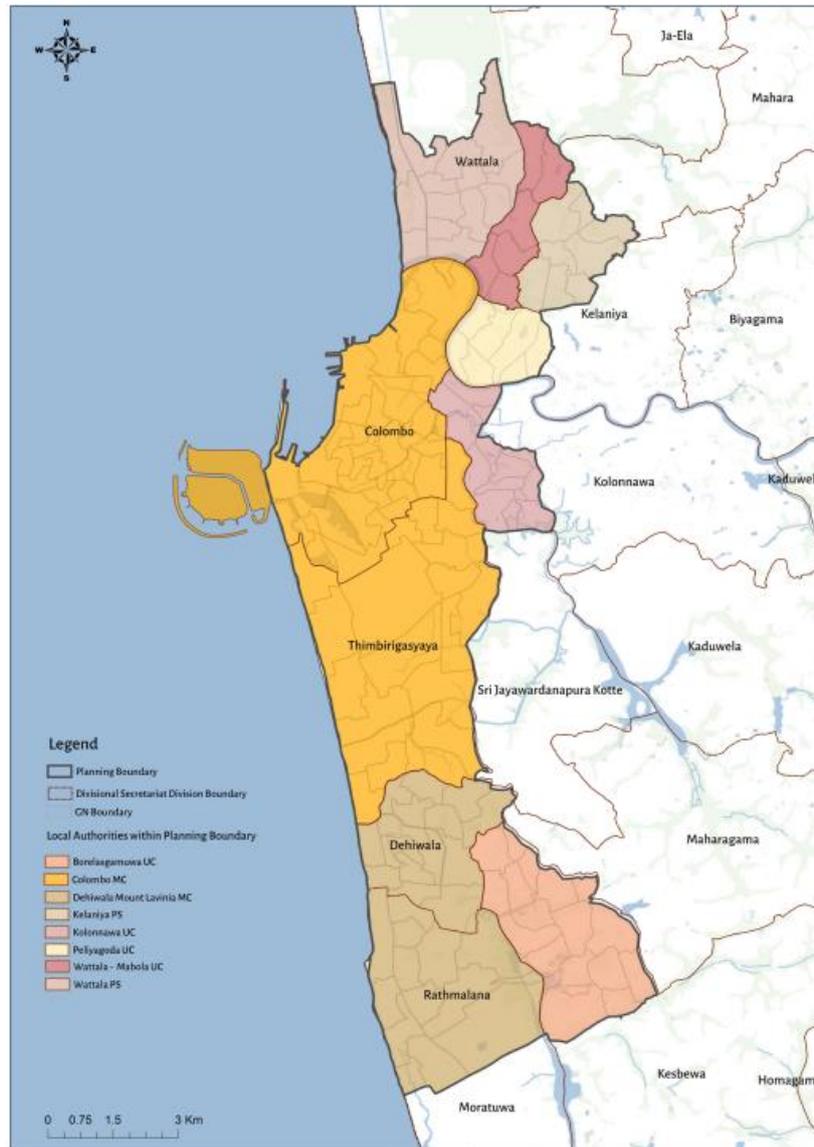
Figure 6. 1: Colombo Commercial City (UDA, 2019)

Starting from the Patrick Geddes plan of the colonial government in 1921, several other development plans were formulated over time to guide and regulate urban development in Colombo (Gunaratna, 2002; UDA, 2019). In 1978, the Urban Development Authority (UDA) was established as the apex body for guiding urban development in Sri Lanka, which has

proved to be a landmark decision in terms of urban development planning in Colombo. Post-1978, several development plans (i.e., the City of Colombo Development Plan of 1985, the Colombo Metropolitan Regional Structure Plan of 1996, the City of Colombo Development Plan of 1998 and the amended plan of 2008) were proposed by the UDA to guide urban development in Colombo.

The post-war urban development phase of Colombo (from 2010 to-date) can be recognised as significant as it was during this period that the city experienced a major physical transformation. The interest shown by the public sector and its active participation in development planning became quite evident during this period. '*Mahinda Chinthana*' was introduced as a 10-year development policy framework by President Mahinda Rajapaksa in 2006 and it recognised urban development to be one of the new government's priorities. Providing new housing for families living in underserved settlements and liberating the underutilised prime lands in the city, particularly the state lands, for commercial development at a competitive price was recognised as the new policy direction (Department of National Planning, 2006, 2010). The policy set this goal with the vision of making Colombo a slum-free city by 2020.

Following this vision, the UDA has been implementing the Urban Regeneration Programme in Colombo to resettle the families from the underserved settlements in high-rise apartments. Funds for constructing these mass housing projects were to be raised by liberating the unutilised state lands for approved development purposes to private investors (UDA, 2018). Along with these programmes, the city beautification and development of derelict public properties also have been some of the key functions of urban planning in Colombo during this period. Hence, several projects and programmes were commenced by the UDA with the support of the government ministry in charge of urban development to achieve these objectives.

6.4. Overview of Multiple Case Studies

Figure 6.2 shows the locations of the selected cases within Colombo City. All these state lands are vested with different public agencies and have been identified as 'underutilised' lands under the recent development plans. Since then, there have been attempts to develop these lands by the public authorities.
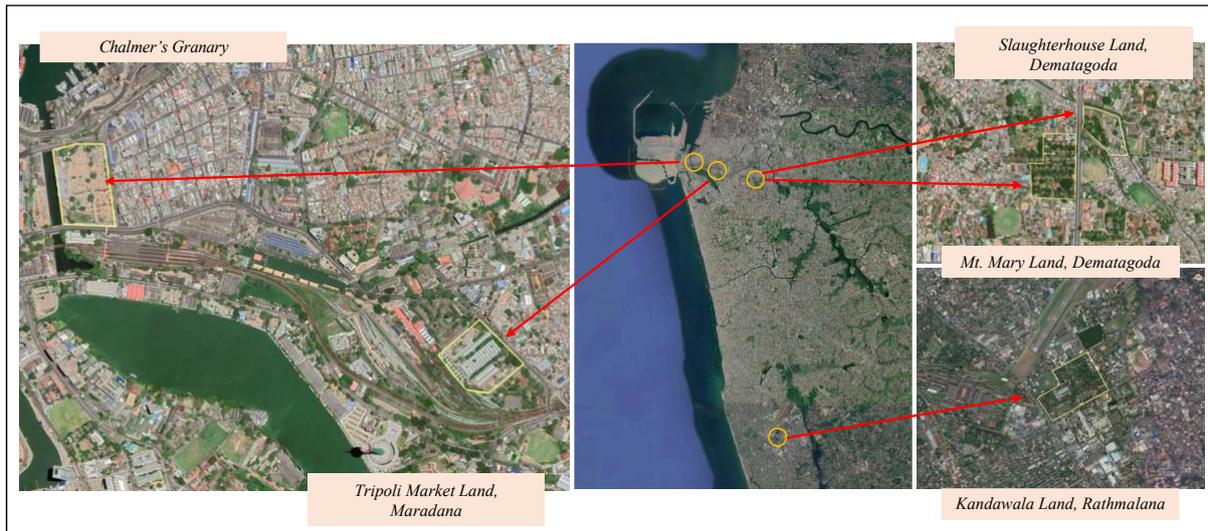
Figure 6. 2: Locations of selected cases in Colombo

Four of the selected cases, 1) Mount Mary Land, 2) Slaughterhouse Land, 3) Kandawala Land, and 4) Chalmer's Granary land were recognised as testaments of the underutilisation that persists for prolonged periods with state land. Only a single case, namely the Tripoli Market land was selected as a deviant case since it provides evidence of successful land development that transformed a previously underutilised state land into a productive use. As for the geographical locations, four of the selected lands are located in the core area of the city. As shown in **Figure 6.2,** only one of the sites, the Kandawala Land is located in Rathmalana, a town situated to the south of Colombo.

Table 6.1 provides an overview of the selected cases in terms of their land extent, land ownership, land use, and the current status of development.

Table 6. 1: An overview of the selected cases

No.	Case Name	Land Extent (Ha)	Land Ownership	Land Use	Current Status of Development
1	Mount Mary Land, Dematagoda	4.4 ha (11 Acres)	Sri Lanka Railways (SLR)	Quarters for the officers of the SLR	The development proposal has been abandoned
2	Slaughterhouse Land, Dematagoda	2.4 ha (6 Acres)	Colombo Municipal Council (CMC)	Slaughterhouse, Municipal Quarters & Vacant Land	Negotiations are currently underway between the public landowner (CMC) and development proponent (UDA)
3	Kandawala Land, Rathmalana	9.3 ha (23 Acres)	Department of Irrigation (DOI)	Quarters for employees of the DOI, Workshop of the waterboard & unauthorised housing	Calling for Request for Proposals (RFPs) for a housing development
4	Chalmer's Granary, Pettah	3.6 ha (9 acres)	Urban Development Authority (UDA)	Vehicle Park (an interim use) & Vacant land	Calling for Request for Proposals (RFPs) for a mixed development
5	Tripoli Market Land, Maradana (Deviant Case)	6 ha (15 Acres)	Urban Development Authority (UDA)	Office Spaces for IT-related companies – *'Trace Expert City'*	Phase I of the project is completed and planning is underway for the 2nd phase of the project

As a first step, the study analysed the claims made by different parties about the underutilisation of each land and the following section discusses this analysis.

6.5. Claims on Underutilisation of Selected Cases

All of the selected cases have been recognised as underutilised state lands by the public authorities. Public agencies such as the Urban Development Authority (UDA), the Sri Lanka

Railways (SLR), the Colombo Municipal Council (CMC) and the Department of Irrigation (DOI) have made diverse claims about underutilisation of lands. Hence, these claims on underutilisation relating to each case study were examined.

Claims made by different interest groups were analysed using the preliminary framework, which was put forward at the initial stage of this study to conceptualise the underutilisation (discussed in **Chapter 2.5**). This framework proposed that any assessment of underutilisation of land should be able to answer four fundamental questions, whereby underutilisation will be conceptualised in four dimensions. They are, namely: 1) Development context (within what context is the land underutilised?), 2) Associated values (what values are unrealised?), 3) Associated actors (whose values are unrealised?), and 4) Timespan (for how long did the land remain underutilised?). Accordingly, **Table 6.2** shows the analysis of the claims on underutilisation case by case. However, timespan (4) of underutilisation is not explicitly identified in the claims made by different actors and hence not included in Table 6.2.

Table 6. 2: Claims made by different interest groups on underutilisation relating to five cases

Data Input		Thematic Analysis; Claims on Underutilisation			
Source of Information	**Who Made the Claim? (By organisation)**	**Development Context: Development Challenges, Needs & Market Potentials** (*In what context is the land underutilised?*)	**Associated Values (*What Values are Unrealised?*)**		**Associated Actors (*Whose Values are Unrealised?***
			Associated Values	**Level of Value Realisation**	
Case 1: Mount Mary, Dematagoda					
Official Documents	UDA, Ministry of Megapolis and Western Development	1) Upcoming urban development of the surrounding; 2) Potential for more effective use of land; 3) Development potentials in railway lands - to support public welfare and to generate financial benefits for public sector	1) Potential for high-density development; 2) Economic value	Unclaimed/ Untapped value	General public; Public agencies; UDA and SLR
Key-Informant Interviews and Official Documents	UDA, Archelogy Department, SLR	1) Buildings on the site are more than 120 years old; 2) Lack of property maintenance by the SLR and gradual deterioration of structures	1)Historic, cultural, and architectural value; 2) Unique character	Partial Realisation	Do not specify
Key-Informant Interviews	SLR	1) High cost of housing in Colombo; 2) Railway employees are required to reside close to railway stations.	1) Adequate space for providing affordable housing; 2) Provide easy access to services; access to reputed schools in Colombo	Partial Realisation	Railway Employees
Key-Informant Interviews & Research Studies	SLR, UDA and Scientific Researchers	1) Site is shaded with a rich vegetation cover; 2) Recent evidence on the formation of *Heat Islands* in Colombo; 3) Need for protecting existing vegetation cover in Colombo to minimise heat island effect	1)Environmental Value	Complete Realisation	-
Case 2: Slaughterhouse Land, Dematagoda					
Official Documents	UDA	1)The Urban Regeneration Program in Colombo expects to relocate slum dwellers in new housing and the program required spaces for temporary resettlement	1) Capacity to provide space for temporary resettlement	Unclaimed/ Untapped Value	Slum and shanty dwellers
Key Informant Interviews and Official Documents	UDA	1) Land is located in a prime location; 2) High market value of lands in Colombo; 3) The need of generating a financial return from PLD in order to reinvest on low-income housing development	1) Economic Value: Potential in generating a financial return	Unclaimed/ Untapped Value	Public sector & Citizens in Colombo
Official Documents	Sri Lanka Air Force	1)Increasing building density and upcoming large-scale developments in Colombo; 2) The need for ensuring fire safety in the city	1) Public safety; A suitable location to establish a Fire Fighting Unit in Colombo	Unclaimed/ Untapped Value	Citizens in Colombo
Key Informant Interviews	CMC	1)The need of supplying and regulating quality fresh meat supply in Colombo	1)Public health: Regulating the quality in meet supply	Partial realisation	Citizens in Colombo

Data Input		Thematic Analysis; Claims on Underutilisation			
Source of Information	**Who Made the Claim?** (By organisation)	**Development Context: Development challenges, Needs & Market Potentials** (*In what context is the land underutilised?*)	**Associated Values** (*What Values are Unrealised?*)		**Associated Actors** (*Whose Values are Unrealised?*)
			Associated Values	**Level of Value Realisation**	
Case 3: Kandawala Land, Ratmalana					
Key Informant Interviews & Local area Development Plan	UDA	1) The need of promoting high-density development on state lands; 2) Increasing population and encroachment of state lands & reservations in Ratmalana	1)Potential for high-density development	Unclaimed/ Untapped Value	Do not specify
Key Informant Interviews	DOI	1)Long waiting list (of employees) to obtain government quarters provided by the DOI; 2) High cost of housing in Colombo	Social Value: 1) Provide affordable housing for employees of the DoI	Near Optimisation	Employees of the DoI
		1)Encroachments on irrigation land; 2) Socially-economically diverse communities on the same land and lack of social integration	Social Value: 1) The sense of community and social cohesion	Incomplete Realisation	Current residents of the Irrigation quarters
		1) Encroachments; 2) Lack of capacity of DOI for property management; 3) Physical deterioration of housing	Social Value;1) Quality of the living environment; 2) Public health	Partial Realisation	Current residents of the Irrigation quarters
Case 4: Chalmers Granary, Pettah					
Key Informant Interviews and Legal enactments	UDA	1) Long-term vacancy of the land,2) High land values in Colombo; 3) Land is being located at a prime location	1)Economic Value; Potential for generating financial and economic returns	Incomplete realisation	Public Sector
Case 5: Former Tripoli Market					
Key Informant Interviews and official documents	UDA	1)The need of promoting high-tech, knowledge-based industries in Sri Lanka; 2) Need to minimise the brain drain in Sri Lanka	1) A potential space to create new employments and innovations; 2) Economic value of the land; Potential for generating a financial return	Unclaimed/ Untapped Value	IT Professionals
Key Informant Interviews	SLR	1) The need of promoting railway-based freight transportation; 2) The need of increasing the revenue streams for SLR; 3) The need of promoting land-based financing system for railway development	1) Economic Value; Potential for generating financial return; 2) Social value: Financial returns could facilitate the efficient supply of public infrastructure	Incomplete realisation	SLR and the General public
Key Informant Interviews & official documents	SLR, UDA	1)Dilapidated warehouse which was built in British Period; 2) A building complex with a unique architectural identity which is required to be preserved.	1) Heritage value and the architectural identity	Incomplete realisation	Do not specify

The first three dimensions (that is, development context, values associated with land, and associated actors) explain how underutilisation was perceived from different vantage points at the national level, to the city level, and then to the site level. The first dimension of underutilisation recognises the *Development Context* (development challenges, needs of the city and market potentials) in which the land was underutilised. In **Table 6.2**, different public agencies identify the challenges, needs and potentials at different levels. For example, the need for high-tech-based businesses and innovation, and the potential for a land-based infrastructure financing system are recognised at the national level. The need of promoting high-density development in the city and the problem of high cost of housing in Colombo are concerns that emerge at the city level. Meanwhile, problems associated with unauthorised uses and lack of social integration between communities living on the same site are recognised at the site level.

Similarly, the second dimension, i.e. *Values Associated With Land,* has been recognised as having different scales, particularly non-economic values. The values identified in **Table 6.2** include epistemic community-oriented values (i.e., high-density development, character and identity of the built environment, and efficiency in infrastructure development), that are recognised by professionals as being at the macro-level (city or national level). Further, community-oriented values (i.e., affordable housing, easy access to good schools, sense of community) that are associated with land and its immediate neighbourhood have also been identified by different actors from public agencies (i.e., asset managers and leaders of labour unions). At the same time, public agencies have raised questions on whether these associated values have been fully captured or realised so far. Hence, based on their claims, the level of value realisation was evaluated by the researcher (myself) as 'complete realisation' or 'partial realisation', and the results are presented in **Table 6.2.**

The third dimension of underutilisation refers to the *Associated Actors*. Its aim is to identify who assigned these unrealised (or realised) values to the lands mentioned above. In the context of community-oriented values, it is relatively easy to identify whose values they are. Values that have been recognised at the macro-level i.e., high-density development, and heritage value can be assumed to be public values in general, however, have not been linked to any specific actor associated. Hence, under such claims, the associated actor was indicated as 'not specified' in **Table 6.2.**

The last dimension suggested in this study is the *Timespan* of underutilisation. However, except for one case (Chalmers Granary), none of the claims on underutilisation emphasised the timespan of underutilisation. In the case of Chalmers Granary, as per The Revival of Underperforming Enterprises or Underutilised Assets Act, no. 43 of 2011, this land was declared underutilised since it was alienated for development as long as twenty years before the date of the act, but still it has not been put to its intended use. The limited attention on the time factor might be attributed to the fact that underutilisation has been conceptualised as a 'condition' in relation to the present moment. Even though the reason for not paying sufficient attention is not certain, an assessment of the time span of underutilisation could provide some useful insights, such as whether the underutilisation is a temporary or prolonged situation. If there is a prolonged underutilisation, the time span would be an important indication of the deep-rooted structural issues related to the management of public lands in Colombo.

Analysing the claims on underutilisation in terms of the four dimensions above will help one understand how the underutilisation of urban public lands has been perceived and assessed during the course of planning decision making in Colombo.

6.5.1. Assessment of Underutilisation in Decision Making: Key Attributes of the Current Practice

Examination of claims on underutilisation help identifies the current organisational practices in assessing the underutilisation of urban public lands during the process of planning decision making in Colombo. Accordingly, by reflecting on the organisational practices and the claims of different actors, three key attributes of the current approach in the assessment of underutilisation were identified. The key attributes are: 1) underutilisation is a shared understanding, 2) underutilisation is a paradox, and 3) underutilisation does not necessarily capture all public interests. More importantly, the latter two attributes provide corroborative empirical evidence for the conceptual lapses in the concept of underutilisation that were identified at the previous stage of the study (see **section 2.4**).

i. Underutilisation is a Shared Understanding

Even though there is no officially accepted definition that spells out the meaning of underutilisation of land, the term is widely used in the planning lexicon in Sri Lanka. During the interviews held with key informants, though the interviewer (myself) made it a point to avoid using the word 'underutilisation', almost all the planning professionals instinctively chose exactly that term when expressing their opinion on selected cases. Most commonly, the following four attributes were identified as indicators of underutilisation:

- Physical deterioration of built structures
- Not being able to generate revenue from a land located in a prime area of the city
- Incompatibility between the current use of the land and its surroundings in terms of the best possible use and development density
- Undermining the potential capacity of the land for development

Underutilised public lands are recognised as a problem as well as an opportunity, simultaneously. Thus, the concept of underutilisation is found to be a 'shared understanding' in an epistemic community, particularly among urban planners.

The most likely implication of relying on such shared and instinctive understanding about underutilisation in decision making is the limited scope of assessment. The assessment of underutilisation relating to each case was found to be a brief explanation, rather than an explicit, systematic and multi-dimensional analysis. As illustrated in **Table 6.2**, development challenges and the needs of the city (the context of underutilisation) have been recognised in the development plans to justify the need to make use of public land for development. However, assessment of the dimensions such as associated values (*What* values of the land are unrealised?) and associated actors (*Whose* values are unrealised?) have not necessarily drawn systematic attention.

ii.   Underutilisation is a Paradox

The claims of underutilisation of the urban public lands in Sri Lanka appear to be a paradox because it is a phenomenon that is explained through claims that are contradictory. The problematic conditions associated with public lands, such as dilapidated structures, suppression of the potential for income generation, failure to utilise the land for affordable housing, issues of encroachment and difficulties associated with eviction, were discussed during the interviews and well-accepted as clear signs of underutilisation. None of the key informants totally denied the existence of these conditions. However, as individual cases revealed, the claims made by different parties over 'underutilisation' of land tended to collide, and hence, the concept of underutilisation was contested during the decision-making process.

The main cause of disagreement was attributed to the divergent views and expectations of the involved actors regarding what constituted the optimum use of land. This is one of the key theoretical lapses of the concept of underutilisation as identified earlier in the study. For example, as illustrated in **Table 6.2**, key informants from both the SLR and UDA agreed that the economic value of Tripoli land had remained untapped for a long period. However, they hold widely divergent views about how the land must be developed. Even after the development was completed, the SLR still expressed doubts about the claims made by the UDA about the underutilisation of the Tripoli Market land. The SLR is strongly in favour of capitalising on the economic value of land via allocating it to functions related to railway services. In contrast, the UDA firmly holds the position that this land is at its optimum use since it was developed to provide office space for IT businesses.

iii.   Underutilisation does not Necessarily Capture all Public Interests

Public lands tend to represent multiple public values. However, how well the assessment of underutilisation could capture these values in decision making is uncertain. The close scrutiny of the claims about underutilisation in some cases, particularly the Mount Mary land, validates this argument. As Table 6.2 illustrates, the historical value of the Mount Mary land and its potential to provide housing was recognised by the associated actors. Trade Unions of the employees of SLR seemed to appreciate the opportunity offered by the land to provide more affordable housing within city limits for the railway employees. Therefore, they emphasised this need during the discussions between the UDA and the SLR. According to the definition of 'public interest' proposed by Johnston (2016), expectations of the Railway employees can be recognised as a case of 'public interest'. Because as a community, Railway employees were in favour of realising a widely accepted social value, i.e. access to affordable housing.

The environmental value of the site (attributed to its rich vegetation cover) was appreciated by several key informants, but the idea does not seem to have received much attention during the collective decision-making process. Recently, several research studies have observed that there is a rising trend in the formation of 'heat islands' in the city of Colombo and the diminishing vegetation cover was recognised as one of the key contributing factors (Ranagalage et al., 2017; Senanayake et al., 2013). However, the discussions held among public agencies on the development of the site do not seem to have paid sufficient attention to the environmental value, one of the 'public values' associated with Mount Mary land. Hence, this case shows how the assessment of underutilisation of public land is unable to capture the diverse forms of public interests associated with the land during the decision making process.

These three attributes explain the current practices followed in the assessment of underutilisation of public lands in Sri Lanka, its limitations, and the implications on planning decision making.

It is important to recognise the uniqueness of each case in the case studies. Hence, the following sub-sections of this chapter examine each case study in depth with special attention to the critical factors affecting underutilisation.

6.6. Case 1: Mount Mary Railway Land, Dematagoda

6.6.1. Background

Mount Mary Railway Land is located in Dematagoda abutting Baseline Road, one of the main development corridors of the City of Colombo. This plot of land that is 4.4 ha (11 Acres). It is occupied by 66 residential quarters that were constructed during the time of the British administration. These quarters were built to provide comfortable accommodation to the British officials who worked for the Ceylon Government Railway. As shown in **Figure 6.3**, these quarters have a unique architectural style and hence the site is renowned for its historical value.

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During the British period, the vehicular movement on Baseline Road was stopped during holidays to ensure the comfort of the officers (Kaluarachchi, 2004). Presently, the quarters are occupied by employees of the Sri Lanka Railways (SLR).

Dematagoda is an urban centre with high-density developments and major arteries with heavy traffic flow crossing it. However, Mount Mary Land in Dematagoda is in stark contrast to its immediate surroundings, as the railway quarters have gardens that are shaded with a tree cover. As shown in **Figure 6.3**, some properties appear to be well maintained, though there are properties in dilapidated condition.

Figure 6.3: Railway Quarters on Mount Mary Land, Dematagoda

Coordinating and facilitating the takeover of state lands for development purposes were identified as among the key responsibilities of the land division of the Ministry of Megapolis and Western Development (Ministry of Megapolis and Western Development, 2016). There had been discussions at the Ministry in 2016 on the need for developing the lands vested with

SLR for urban development purposes (both welfare and commercial projects). Accordingly, Mount Mary Land was declared as being *underutilised* by the UDA. Since then, this site has been in the pipeline for development. The UDA has been marketing the Mount Mary Land as a prospective site for apartment cum mixed development and as per the guidelines, the developer is required to conserve a few buildings on the site for their historical value (UDA, 2017).

6.6.2. Critical Factors Affecting Underutilisation: Mt. Mary Land

As shown in **Table 6.2**, all public actors (the UDA, the SLR and the Trade Unions of SLR) who made diverse claims on the underutilisation of this land have agreed upon several aspects relating to underutilisation. One such claim was that the physical deterioration of buildings has undermined the unique historical and architectural value of the site. Another claim made by these actors was that the potential of the land in terms of providing more affordable housing within Colombo City limits is not being capitalised by the current land use. Both these claims on underutilisation of Mt. Mary Land were acknowledged and agreed upon by the key actors (The UDA and the SLR). Based on these agreements, negotiations for development had been carried out, but later the project was abandoned. After a careful analysis of key informant interviews and documents, the following critical factors affecting the underutilisation of Mt. Mary Land were identified.

Table 6. 3: Critical factors affecting underutilisation: Mt. Mary Land

No	Critical Factors	No	Critical Factors
1	Lack of regular property maintenance	12	Absence of a long-term vision for delivering railway transportation
2	Lack of financial capacity for property maintenance & land development	13	Lack of consensus over sharing the benefits of new development
3	Limited provisions of the legal enactments	14	Conflicting claims on underutilisation of lands
4	Challenges in attracting investors	15	Resistance of stakeholders against land transfer
5	Ineffectiveness in generating financial returns from land assets	16	Bureaucratic power
6	Unauthorised use of land and property	17	Unsupportive attitude & lack of commitment of officers
7	Political interference	18	Negative reputation and the mistrust over the UDA
8	Lack of up to date and reliable information on land	19	Challenges related to resettlement of current uses
9	Lack of skills and expertise necessary for PLD	20	Financial burden & risk over the UDA
10	Absence of a national policy for urban state land management	21	Lack of post-project evaluation and research
11	The landowner does not have a mandate for land/asset management		

Physical deterioration of the buildings on Mt. Mary was identified as one of the attributes of underutilisation. The buildings are more than 120 years old and thus require special attention to repairs and maintenance. The physical deterioration of the structure was attributed to the *lack of regular property maintenance (1).* Another concern was raised regarding the quality of repair and maintenance. Because performing routine repair procedures without guidance from specialists might run the risk of harming the unique architectural features of the buildings and hence their historical value.

The lack of financial capacity of the SLR for property maintenance and land development (2) has resulted in unsatisfactory property maintenance. The weak financial performance of the SLR has been a chronic problem. By 2018, SLR suffered a revenue-expenditure gap of Rs.22,217 Million. SLR has been relying mainly on foreign aid and loans for capital investment

(Sri Lanka Railways, 2018). Hence, allocating funds for maintenance and refurbishment of properties has not been a priority.

The analysis of evidence also helped identify several critical factors that have not directly affected the Mt. Mary Land but indirectly contributed to its underutilisation. All these factors have constrained the SLR's capacity to perform well as an asset manager.

Even if Mount Mary requires any form of development, the SLR is not in a position to undertake development by themselves. *Limited provisions of the legal enactments (3)* limit the opportunities available for SLR to use their land assets in a commercially viable manner. According to the existing legal provisions, the SLR can lease out their lands for no longer than 5 years. This limited timespan does not provide adequate scope for an investor to undertake financially viable development projects. This restriction creates *challenges in attracting private sector investors to venture into long term investments (4).* Hence, this undermines the SLR's efforts to undertake land development projects with other parties as necessary.

Ineffectiveness in generating financial returns from the land assets (5) has caused the SLR to depend on a limited stream of revenue despite being the owner of a significant asset base. The SLR is also adversely affected by huge lease payments in arrears. In 2016, there were 5,977 files to identify the SLR's reserved lands. For these lands, only 735 (12%) lessees have paid the lease payments according to the files, whereas 5,242 (88%) lessees have not made the lease payments (Ministry of Transport and Civil Aviation, 2019). Further, many railway lands that are located in prime locations have been leased out to other public agencies for delivering public services, such as special economic centres and transportation terminals. However, even the public agencies have not been paying for their leases to the SLR for many years. According

to the estimations made in 2018, the lease arrears due from government organisations and other affiliated bodies to the SLR were recorded as Rs.493 Million (Ministry of Transport and Civil Aviation, 2019).

Likewise, in the past, railway lands have been alienated to private parties without the signing of any lease agreements and such lands have been occupied for generations without paying a lease to the landowner. The SLR is presently trying to resolve disputes over lease agreement yet, unable to claim the due revenues from the current users (the second or the third generation of the first owner) of the land. *The unauthorised use of lands (6)*, particularly for commercial purposes, also deprives the SLR of the opportunity to capitalise on the economic value of its lands. Moreover, as the key informants stated, *political interference (7)* has badly subverted the established legal processes attached to the disposal of state lands. This has had a significant negative impact on the rent collections of SLR. Due to all these interlinked factors the SLR has been deprived of a significant stream of revenue over a long period.

Lack of up-to-date information (8) on lands (i.e., extent, boundaries, leaseholder information, encroachments, etc.) vested with the SLR has had a huge negative impact on the potential for revenue generation. The SLR still relies mainly on the maps prepared during the British colonial period, which need to be updated. The lack of information on land does not facilitate informed decision making in asset management, which is crucial to improve the financial performance of the SLR.

The lack of professional skills and expertise necessary for PLD (9) is another critical factor that is responsible for the underutilisation of Mount Mary. Even though there is a property management division within the SLR, the staff is not equipped to deal with property

management and land development. This is because there is no dedicated staff to undertake such functions. Identifying the development potential and preparing plans for better management of its properties has not been a priority of this division due to its limited human resources. Hence, the current functions of the property management division have been limited to lease management and rent collection.

The lack of capacity of the SLR for managing its properties is attributed to the *absence of a national policy on state land management (10)*, and also to *the lack of a mandate for land/ asset management (11)*. In Sri Lanka, there is no policy for guiding the use of state lands, particularly in the urban context. As a public infrastructure agency, the role of SLR has been limited to providing railway transportation in Sri Lanka. The SLR is not mandated to have long term strategies for managing its assets and capturing their values. After recognising these impediments, there have been attempts in the past to empower the SLR. The Railway Ordinance of 1902 has been the legal enactment that guides the function of the railway department. This legal enactment does not give the mandate to perform any functions related to the lands vested with the SLR. Another attempt was made to transform the SLR from a *Department* to an *Authority* by enforcing the Railways Authority Act of 1993. This institutional restructuring was expected to enhance the commercial viability of services and to minimise the reliance on government assistance (Central Bank of Sri Lanka, 2003; United Nations, 2003). However, the act was repealed in 2005 (Kumara & Bandara, 2021). The SLR still functions as a public department with limited resource capacity, restricted legal rights, and a lack of incentives for managing the land assets it holds.

The absence of a long term vision for improving railway transportation (12) has been a critical factor that restricts the functions of the SLR and hence indirectly affects the situation in Mt.

Mary. For example, as key informants emphasised, there is ample evidence from other countries on how 'railway townships' can be developed around the railway stations and sites such as Mount Mary. Further, capitalising on the value of land assets to generate sustainable revenue streams can support self-financed railway infrastructure development. However, despite having ample opportunities, the SLR is still not equipped with a long term vision, which indeed should be mandatory for such a key public infrastructure agency.

All of the critical factors discussed above identify the impediments in the path of the SLR that have directly and indirectly led to the underutilisation of Mount Mary. However, after the UDA pronounced Mount Mary as an underutilised land, it approached the SLR with a development proposal. Since 2016, there have been several rounds of discussions and negotiations for development. However, due to certain critical factors discussed below, negotiations did not succeed and even today the land remains in the same state.

Lack of consensus over sharing the benefits of the proposed development (13) has been a key factor that made the negotiations a challenging task. The SLR and the trade unions of SLR demanded more housing facilities for their employees. One reason for this was because Mt. Mary was valued as a prime location for housing since it provides easy access to several reputed schools in Colombo. The SLR was also interested in receiving better financial returns from the development of its land. However, the development proponent, the UDA, was not in full agreement with the SLR's demands.

The above disagreement emphasised the concerns over sharing the benefits of development. However, some key informants from the SLR question the decision of handing over the Railway lands to another agency in the first place. It showed that actors associated with this

land site have *conflicting claims on underutilisation (14)*. For example, actors representing the SLR argued that state lands have been vested with the SLR under the rationale that lands would be used for transportation related purposes. Hence, even if the lands are currently underutilised the optimum use of these lands should support efficient railway transportation. Handing over the lands permanently to another public organisation today will put the SLR in a disadvantageous position in future when the lands are required for railway expansions. Hence, *the resistance of the stakeholders against handing over the ownership of land to UDA (15)* has been another critical factor that has hindered the development process. Particularly, the labour unions of the SLR have shown strong opposition to the hand-over of lands to other parties.

Further, *bureaucratic power (16)* granted through legal enactments can restrict the land vesting procedures. According to the Railways Ordinance, the General Manager (GM) of the SLR holds the power over lands vested with the SLR. Hence, the refusal of the GM to grant approval to hand over the lands to another agency has been a critical concern. Likewise, *the uncooperative attitude and lack of commitment of public officers (17)* can also be identified as critical constraints that render planning a difficult task.

The findings also revealed that the implementation and outcomes of the previous land developments that were carried out by the UDA have caused dissatisfaction. To elaborate with an example, the Trace Expert City was a development undertaken on a tract of abandoned SLR land (Tripoli Market Land) by the UDA in 2013. However, the SLR is dissatisfied with both the development process as well as its outcomes. As the trade unions of the SLR have pointed out, there have been several cases in which lands in other cities of Sri Lanka were taken over from the SLR with the collusion of politicians. These incidents have resulted in a *negative reputation and led to mistrust of the UDA (18).*

From the standpoint of the public sector development proponent, a set of interconnected critical factors has hindered the development process. *The challenges related to the temporary resettlement of railway employees (19)* who are currently occupying the quarters have proved to be a critical concern in the proposed development. The UDA was required to either find an investor who was willing to support the cost of resettlement or incur the cost by themselves. Hence, the high cost of redevelopment cause by the resettlement imposes a substantial *financial burden and risk on UDA (20).* The financial risk of the proposed development has made the UDA reconsider the viability of the project.

Finally, *the lack of post-project evaluation and research (21)* was identified as a factor that rendered the negotiation and planning process a challenging proposition for the Mt. Mary development project. This was recognised as a deficiency that was attributable to the UDA. As key informants highlighted, there have been mixed results in the past with the state land development projects undertaken by the UDA. There have been failed and successful attempts. Despite that, there has never been an established organisational mechanism within the UDA to undertake post-project evaluation and/or conduct any study to determine the causes behind the success or failure of the development. The absence of a strategy for generating, structuring and sharing knowledge across project teams within the organisation seriously curtails the possibility of bringing new insights into the development process.

As per the findings, the underutilisation of the Mt. Mary land was largely attributable to the limitations associated with the landowner (the SLR) and the failures in negotiating for possible development.

6.7. Case 2: Slaughterhouse Land, Dematagoda

6.7.1. Background

Slaughterhouse Land is a 2.4 ha (6 Acres) land located in Dematagoda, abutting the Baseline Road. The land is currently owned by the Colombo Municipal Council (CMC) and occupied by a slaughterhouse, managed by the CMC. The slaughterhouse was built in 1868 to fulfil the meat requirements of the city. Currently, apart from the slaughterhouse, there are 08 municipal quarters (currently occupied) and an abandoned bungalow that was previously occupied by the chief veterinary surgeon of the slaughterhouse. As per the researcher's observation, the municipal quarters and the bungalow are in dilapidated condition (see **Figure 6.4**). Apart from these structures, approximately 50% of the land remains vacant.

In 2013, the UDA requested the CMC to release the slaughterhouse land for one year to provide space for the temporary resettlement of communities that were evicted from underserved settlements under the Urban Regeneration Programme. Later, under the same development programme, the UDA recognised the slaughterhouse land's potential for a mixed development project. The programme aimed to liberate the state lands with high commercial value and put such lands to the market for development. Since 2013, there have been discussions going on between the UDA and the CMC. Despite all those efforts, even after 08 years the land is being used for the same functions while the discussions are still going on.

Figure 6. 4. Current uses of Slaughterhouse Land

6.7.2. Critical Factors affecting Underutilisation: Slaughterhouse Land

Critical factors that lead to the land being underutilised are as follows.

Table 6. 4: Critical Factors affecting Underutilisation: Slaughterhouse Land

No	Critical Factors	No	Critical Factors
1	Ineffective revenue and profit generation for its owner	10	Absence of a long-term vision for managing land
2	Lack of property maintenance	11	Lack of institutional coordination in planning future development
3	Lack of political will and support	12	Misuse of legally vested power by development proponent
4	Socio-cultural values and resistance	13	Resistance of the CMC to transfer the land ownership to UDA
5	Unsupportive attitude and lack of commitment of public officers	14	Legal disputes and litigations
6	Lack of financial capacity for PLD	15	Mistrust over the development proponent
7	Lack of skilled human resources for PLD	16	Lack of consensus over sharing the benefits of new development
8	Time-consuming institutional procedures		
9	Lack of up-to-date information and information sharing		

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The capacity to generate financial returns from a land asset is an important factor that must be considered seriously in any investment-related decision making. The land under investigation that accommodates the slaughterhouse *has not been an effective source of profit or revenue generation for its owner (1).* As the land is used to provide only a basic service to the city it has not been profitable, and so the owner does not feel interested to invest further on its development or expansion. Hence, the slaughterhouse land has received little attention from the CMC. At the same time, there is physical deterioration of the slaughterhouse facility and the municipal quarters due to the *lack of property maintenance (2).*

The lack of political will and support (3) to upgrade or modernise the services has been a critical limiting factor. As the facility was built in 1868, there has been much deterioration in the facility and the CMC has in fact recognised the need for improvements. In 2001, there was a proposal to modernise the slaughterhouse with support from the Dutch Government. As sources confirmed, a preliminary agreement had even been signed between the Dutch Government and the CMC. However, with changes in the local political climate in Colombo, the proposal has been abandoned.

Socio-cultural values of society and resistance triggered by such values (4) have been a critical factor that discouraged a further upgrading or expansion of the services provided at the slaughterhouse land. Particularly, an anti-beef campaign has been continuing in Sri Lanka for several years and that has been putting pressure on successive governments to ban cattle slaughter in the country. In 1990, the slaughter of cattle in the Dematagoda slaughterhouse was halted (Wijayapala, 2010). Since then, the slaughterhouse has become only a distribution centre for beef (pig and goat slaughtering continues without restrictions). Again in 2013, there was an incident in which a hardline religious group, namely the Bodu Bala Sena raided the

slaughterhouse, claiming that illegal cattle slaughter was taking place and low-quality meat was being distributed by the centre.

Such criticism and protests indirectly affect *the attitudes of public officers and their commitment towards any proposed development (5).* Social resistance like this discouraged the public officers from expanding operations any further since it could intensify the opposition coming from hardline religious groups. This resistance was demonstrated once again in September 2020, when Prime Minister Mahinda Rajapaksa took the initiative to pass a bill in the Parliament to amend the existing legal enactments so as to totally ban the slaughter of cattle in Sri Lanka. These events show how the socio-political forces influenced the management decisions pertaining to the slaughterhouse land.

Another critical factor that hinders the better use of this land is *the lack of financial capacity of CMC for land development (6)*. CMC is the local authority with the highest revenue in Sri Lanka due to its massive asset base. However, its financial capacity has not been adequate to carry out large scale real estate investments. *The lack of skilled human resources within the CMC (7)*, such as experienced land officers and surveyors, was identified as another key hindrance for land management. Even though the CMC has a significant amount of properties (approximately 165 ha of land) under its custody, the absence of experts, particularly permanent licensed surveyors within the agency has weakened its capacity to update the information on its lands to facilitate their better management. Whenever the CMC needs to mobilise one of its lands for development, it is required to hire a surveyor for that particular exercise. Hence, CMC officials have to put in a lot of effort to follow *time-consuming institutional procedures (8),* even to execute the preliminary operations necessary for managing their land assets.

Lack of up-to-date information on the council lands (9) is another critical factor that contributes to ineffective land management by the CMC. The absence of the latest data on land means that the public officers cannot make any informed decisions on the lands; that is, they do not have full knowledge about its extent, boundaries, and other issues relating to it such as underutilisation, unauthorised uses, etc. For example, according to the residents of the CMC quarters in the slaughterhouse land, abandoned buildings and several pockets of the land are used for illegal activities during the night time. This is a big threat to the safety of the residents occupying the CMC quarters. Hence, not having access to information and not being able to share it with other agencies such as the UDA can prevent timely decision making.

Further, as officers of the CMC acknowledged, the role of CMC in managing its land assets is not satisfactory and the underutilisation of CMC land is a consequence of that. *CMC lacks a long term vision on how best to make use of its lands to support the delivery of public services (10).* Hence, prime lands with immense development potential such as the slaughterhouse land remain underutilised, due to the indifference of its owner.

The above critical factors explain how the slaughterhouse land received less attention from the CMC than it should have for an extended period. However, even after the UDA recognised the potential of this land, it continued to remain idle due to several interconnected factors.

Lack of institutional coordination in planning future development (11) has instigated many disputes in the development process. In 2013, UDA requested the CMC to release the land for temporary resettlement. In response, the CMC informed the UDA that they were unable to release land since CMC already had development plans for it. However, CMC expressed its willingness to hand over another land located in close proximity. Further, in 2020 the Sri Lanka Army also submitted a request to CMC asking for the same land to establish fire safety services

for Colombo. This shows that different public institutions have had different plans for the land without any coordination. These uncoordinated initiatives create misunderstandings that gradually develop into disputes between organisations, which cause delays in proceeding with any form of planning interventions.

The *misuse of legally vested power by the development proponent (12),* in this case the UDA, has also resulted in many setbacks to the development process. According to Section 15 (1) of the UDA Act No. 49 of 1978, if the UDA requires 'any land or interest in a land vested in a local authority' for a development purpose, the subject minister can order the local authority to vest the land in the UDA. Accordingly, in 2016 and 2017 the UDA was vested with two lands located in Dematagoda, including the Slaughterhouse land that was under the custody of the CMC. However, the vesting of both lands was done without the consent of the CMC, which is a clear case of misuse of power by the UDA. Because, the UDA regulations do not specify the need for the consent of the public landowner. However, during the state land vesting process, Divisional Secretariat Division, the public entity that approves land transfers seeks the consent of the landowner, without which the UDA cannot vest the land. Likewise, due to a legal issue associated with the first attempt of land vesting under the UDA Act, the UDA wanted to revest the land as a special grant under section 6 (1) of the State Land Ordinance of 1949 with the president's approval, and it triggered the resistance of the CMC further.

The CMC was *resisting the transfer of land ownership to UDA (13)* since the Slaughterhouse land happened to be one of its valuable assets. Therefore, initially the CMC tried to hold onto the land under its custody. However, after the land was taken over by the UDA, the CMC filed a petition against the vesting process. *This dispute and the litigation (14)* prevented all of the

parties from undertaking any development work on the land. This kind of situation has created *mistrust in the UDA and its development intentions* (15).

Lack of consensus over sharing the benefits of development (16) is another critical factor that affects the development process. The act of vesting the land in the UDA in 2017 (without the consent of CMC) does not indicate a willingness on the side of the UDA to share the benefits of development, at least at the inception of the process. Disputes experienced at the early stage of the development process made the negotiations even more difficult for both parties. In early 2021, the CMC expressed its willingness to withdraw the petition against the UDA and now both agencies have started negotiations for a new development. However, during the latest discussions, CMC has emphasised its expectation for a fair share of the financial returns generated from any future development. Hence, reaching a consensus over benefit-sharing will be instrumental in making productive use of the Slaughterhouse land to overcome its underutilisation.

6.8. Case 3: Kandawala Land, Rathmalana

6.8.1. Background

Kandawala land with an extent of 9.3 ha (23 acres), is in Rathmalana, a town located approximately 16 km to the south of Pettah, Colombo. The land falls under the purview of the Dehiwala Mount-Lavinia Municipal Council (DMMC) and is owned by the Department of Irrigation (DOI) of Sri Lanka. The land is located abutting the Colombo – Galle road, one of the busiest arteries in Colombo City. Currently, the land is being utilised primarily for residential purpose. The land is occupied by the single-detached residential quarters of the DOI, which comprises 266 housing units and several unauthorised housing units accommodating 72

families (UDA, n.d). Apart from the housing complex, there is a workshop belonging to the Water Resource Board on the site. **Figure 6.5** shows the current uses of the land.

As the DOI confirmed, there have been discussions about new developments since 1990 but nothing has materialised yet. In 2008, the UDA prepared the Urban Development Plan for DMMC and the plan was gazetted by the Sri Lanka government. This development plan identified the Kandawala irrigation land as underused state land with low residential density and dilapidated buildings (UDA, n.d.). As captured in **Figure 6.5**, the observations carried out by the researcher showed the deteriorated condition of the residential quarters, several abandoned structures and unauthorised constructions along the access roads to the land. Currently, the UDA is planning to take over the land from the DOI and construct a new housing development on the land, which is recognised as the 'Professionals' City' by the UDA. The development is expected to provide 300 housing units for the employees of the DOI and to release the remaining liberated land for private housing developments.

Figure 6. 5: Abandoned Irrigation Quarters and Unauthorised constructions along the road

6.8.2. Critical Factors Affecting the Underutilisation: Kandawala Land

Physical deterioration of structures, unauthorised uses of the land, and undermining the potential for high-density development of the land were recognised as the attributes of underutilisation of the Kandawala land. Hence, the following critical factors (see **Table 6.5**) were identified as the contributing factors leading to underutilisation.

Table 6. 5: Critical factors leading to underutilisation: Kandawala Land

No	Critical Factors	No	Critical Factors
1	Lack of property maintenance	7	Financial encumbrance and risk on UDA
2	Limited financial capacity of DOI	8	Challenges in finding potential investor
3	Unauthorized housing & associated issues	9	Lack of financial viability of the land development model
4	The public landowner does not have a mandate for land/asset management	10	High land value
5	Lack of adequate human resources for asset management	11	Restrictions imposed by planning and building regulations
6	Challenges associated with the resettlement of current uses	12	Unexpected schedule delays

The lack of property maintenance (1) has been the primary factor that has contributed to the physical deterioration of the properties. As shown in **Figure 6.5**, there are quarters in dilapidated condition and the lack of maintenance has gradually led to the deterioration of built structures.

The reason for the minimal maintenance has been the *limited financial capacity of the DOI (2)* to undertake property management efficiently. As shown in **Table 6.6**, DOI relies entirely upon the limited financial allocations received from the central government for property maintenance. Due to these constraints, in 2020 the DOI organised a community campaign for cleaning up the site by mobilising all the material resources and labour from its regional offices island wide.

Table 6. 6: Financial allocations for maintenance of Ratmalana housing scheme

Year	Financial Allocations for Housing Scheme per year (Rs.)
2017	6,000,000
2018	3,300,000
2019	3,300,000
2020	5,847,202

(Source: Irrigation Department, 2020)

The *presence of unauthorised housing on the land (3)* is one of the factors that undermines the value of the land. Retired employees of the DOI and their families have built unauthorised houses with temporary materials and continued to live on this land plot. Currently, the second and third generations of the previous employees live in these houses. Due to the financial difficulties and unaffordable price of land in the city, these people have chosen to occupy the state land. Though the land has provided space for housing, it has neither been a habitable living environment, nor a secure housing option for its users.

Another point to note is that *property and asset management has not been the mandate of the DOI (4)*. The vision and scope of the DOI are to manage the water and land resources of the country for the optimisation of irrigated agriculture and sustainable food production (Department of Irrigation, 2022). Hence, DOI's functions have been mainly concentrated in the North, North-Central and Eastern provinces of Sri Lanka where large irrigation schemes are found. The functions of the DOI in the Colombo region primarily focus on the management of canal and river reservations. Compared to other public agencies such as SLR and CMC, DOI does not hold lucrative assets in Colombo. Hence, asset management has never been the expertise of the DOI.

However, there is an Asset Management Division of the DoI. Kandawala land is the largest housing scheme that belongs to the DOI in the Colombo region. Hence, the management of Ratmalana housing committee, allocation of quarters for employees, and resolution of legal matters related to land are some of the key functions of the Asset Management Division. However, *the absence of adequate human resources (5)* at the DOI for its property management has proved to be another hurdle. Particularly, as the key informants stated, the DOI does not have a lawyer or a legal officer within their organisation other than the legal officer at the Ministry level. The absence of such expertise within the organisation has created an additional burden for the other officers at the DOI. Therefore, officers had to take on additional responsibilities to resolve the issues related to the unauthorised occupation of quarters (by the employees of DOI) and land. According to Section 6, Chapter XIX of the Establishment Code of Sri Lanka, government employees are entitled to occupy quarters for only 5 years (Ministry of Public Administration and Home Affairs, 2013). However, there have been instances of employees occupying their quarters even after retirement. In recent years, there have been about 30 court cases against such unlawful occupation of quarters in the Kandawala housing scheme and the DOI has now to resolve these matters.

The factors discussed above explain how the limited capacity of the DOI caused the Kandawala land to gradually decline and become an underutilised asset. In stark contrast to the two previous cases, the UDA and the DOI have been able to build consensus over the new development. This is mainly attributed to the fact that the DOI did not insist on receiving any financial benefits from the new development. DOI only expects to receive 300 residential quarters. Hence, there have not been any disputes over the issue of profit sharing between them. DOI is willing to hand over the land to the UDA and proceed with the development after

signing a Memorandum of Understanding (MOU). However, despite having reached consensus with the landowner, the UDA has not been able to develop the land due to the following factors.

The challenges associated with the resettlement of current occupants (6) was identified as a critical factor that makes the development a difficult task. From the inception, there have been objections to the proposed off-site resettlement of the employees of the DOI. After discussion, the new development proposal is to build housing on the same site to accommodate both employees of DOI and families living in the unauthorised housing units. Just as with the Mt. Mary case, the new development requires temporary resettlement of the current occupants. Hence, the UDA is required to find ways to bear a huge cost for redevelopment due to resettlement (payments for temporary rental houses). Further, as the development proponent, the UDA should be prepared to bear the financial risk that could occur in case of a project delay. Therefore, land development that calls for resettlement *involves a huge financial burden and risk on the development proponent (7)*. However, the UDA has not adequately prepared for any strategy to manage such risks.

Apart from all the complications that are internal to the public landowner, there are also external factors that can delay the development process further.

The challenge of finding a potential investor for development (8) has been a critical factor that delays the development process. The development prospectus that was released by the UDA in 2017 advertised the Kandawala land for housing and mixed development purposes (UDA, 2017). Further, as the UDA confirms, they have made Request For Proposals (RFP) twice, yet have not been able to find a potential investor.

The financial feasibility of the land development model (9) proposed by the UDA has not been sufficiently appealing to investors. Further, the UDA has been planning to develop the 9.3 ha land as a single block with a single investor. Due to its prime location, the *market value of the land was also found to be rather high (10)*. Hence, as key informants confirmed, the UDA has now realised that the proposed development is unmanageable for a single investor due to the large scale of the project.

The feasibility of the envisaged development is also affected by factors such as *restrictions imposed by the planning and building regulations (11)*. Since the land is located in close proximity to the Rathmalana Domestic Airport, there are height restrictions on construction projects. Hence, the permissible height of the buildings on Kandawala land is largely limited to 45 m but part of the land will have the possibility to accommodate structures up to 150 m in height. In this case, there is a strong rationale for imposing height restrictions and thus physical development needs to adhere to the building guidelines. However, in economic terms, development restrictions can affect the profitability of an investment, one of the key concerns of private investors in real estate development. Hence, high land values and development restrictions can both make this site not so attractive to investors.

Due to all these complexities, the project experienced some *unexpected schedule delays (12)*. Delays have occurred mainly at the land disposal stage and the uncertainties created by the delay affect the management decisions. As key informants stated, the DOI is not planning to spend large amounts on maintenance of the housing scheme at present since the properties are likely to be demolished soon to make way for new development. Hence, the delays and uncertainty associated with new development will cause the underutilisation to persist as things are being put on hold indefinitely.

As the analysis revealed, the DOI's lack of capacity in property and asset management, combined with the challenges confronted by the UDA during the land disposal, has badly affected the Kandawala land, causing it to remain in an underutilised state for an extended period.

6.9. Case 4: Chalmer's Granary Land, Pettah

6.9.1. Background

Chalmer's Granary is a 4 ha (9 acres) land located in Pettah, one of the most bustling districts in the City of Colombo. Currently, part of this land is occupied by a vehicle park (covering approximately 50% of the land), which is an interim use while the rest of the land remains vacant. Compared to the other case studies, this land is small in size, though its location is highly strategic in terms of the spatial structure and function of the city.

Further, it differs from the other cases in terms of the landowner. The land is vested in the UDA itself. However, despite its comparatively powerful landowner and strategic location, the land has not been utilised for any development purposes for the past 39 years (1982-2021), except for the current interim use. Hence, this case was purposefully selected to examine the underlying factors that cause even the lands with great development potential to remain vacant for an extended period.

'Pettah', where the Chalmer's Granary is located, has gone through a unique historical evolution. During the period of Dutch rule, Pettah, a civic settlement outside the Colombo fortress was occupied by villas and 'clean and shady streets'. The land under investigation used to be an open space named 'Racket Court' (Brohier, 2007, p. 60-62). However, Colombo started to expand as a commercial capital during the British period and 'Pettah was the nucleus

around which Colombo grew' (Brohier, 2007, p. 61). Further, there was the need for a secure warehouse for the safe storage of grain in Colombo to prevent the spread of an epidemic of bubonic plague. To fulfil this need, the Racket Court land was used to put up a warehouse for all food items that were unloaded from the harbour. This vast storage facility was named as 'Chalmer's Granary' and opened in 1916 (Brohier, 2007; Kaluarachchi, 2004). By 1928, this land that was abutting the Chalmer's canal was developed into Chalmer's quay warehouse and reserved for storing government cargo (Gamini, 2016). Later, a railway track was laid across the land and a railway station was positioned on this site (Gamini, 2016; Kaluarachchi, 2004). However, with the further expansion of the City of Colombo, the railway service was halted in 1978 and the storage facility that functioned for more than six decades was closed down in 1982 (Kaluarachchi, 2004).

The UDA received the Chalmer's Granary land through a grant in the 1980s (Sri Lanka Law Reports, 1996) and in 2012, the old storage structures on the land were demolished. Since then the land has been temporarily occupied by a car park. Images of the land before and after the demolition of structures are shown in **Figure 6.6**. Currently, as an interim measure, the site is being used as a car park, which is being managed by a private party. The UDA is able to collect a monthly rental income of Rs.4.9 Million from this arrangement.

Before demolising the storage
(photo courtesy: https://ishikaperera.wordpress.com/tag/chalmers-granaries/)

b) Current Use : vehicle park and vacant space

Figure 6. 6: Use of Chalmer's Granary

6.9.2. Critical Factors Affecting Underutilisation: Chalmer's Granary Land

The land was legally declared as an underutilised asset in 2011 by the Revival of Underperforming Enterprises or Underutilised Assets Act, No. 43 of 2011; the land was then vested in the Secretary to the Treasury on behalf of the state (POTDSROSL, 2011). Later, the land was re-vested with the UDA. However, the rationality of taking over the land by claiming its underutilisation and then handing over the land back to the same public owner who was accountable for the underutilisation is difficult to comprehend.

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Before investigating underutilisation, it is important to understand the role played by the UDA in this case. In all the other cases considered, different public agencies (i.e., SLR, CMC and DOI) owned the lands and the UDA acted as the development proponent. However, in this case, the UDA was both landowner as well as development proponent who attempted to guide the development of the land. In all previous cases, the landowners were found to have limited capacity in land and asset management. Therefore, there was a vital need to examine how the UDA performed compared to other public agencies as a landowner and how that difference (if any) affected underutilisation.

After data analysis, the following critical factors were identified as the ones that contributed to the underutilisation of Chalmer's Granary land.

Table 6. 7: Critical Factors affecting the Underutilisation: Chalmer's Granary

No	Critical Factors	No	Critical Factors
1	Lack of effectiveness in generating financial & economic returns from land assets	7	Financial feasibility of the land development model
2	Legal dispute and litigation	8	High land prices
3	Challenges of attracting investors	9	The limited scope of the marketing strategy
4	The unfavourable political-economic condition of the country	10	Lack of a post-project evaluation, learning, and research
5	Unexpected schedule delays	11	Lack of knowledge management
6	Time-consuming institutional procedures		

Firstly, the underutilisation of Chalmer's Granary is partially attributed to the *lack of effectiveness in generating financial and economic returns from land assets (1)* by the UDA. Considering the attempts at leasing out the land in 1994 for a 99-year lease and the recent development attempts, it is clear that the UDA always intended to utilise the land for a development that could generate financial returns. Fourteen years after receiving the land ownership, the UDA leased out the land to a local developer named Multinational Property

Developments Private Ltd (MDPL) in 1994. However, in the same year, the UDA decided to annul the lease of the land to that particular developer (Sri Lanka Law Reports, 1996). As a result, the land was embroiled in a legal dispute. As recognised by the Revival of Underperforming Enterprises or Underutilised Assets Act, 2011, when land owned by a government agency does not accrue the intended outcomes, it is 'being prejudicial to the national economy and public interest' (POTDSROSL, 2011, p.8). Hence, this incident provides evidence for ineffective property management, especially in terms of its unsatisfactory lease contract management and inability to produce desired economic benefits.

The dispute and litigation (2) over the land that stretched on from 1994 to 2010 is interlinked with the aforementioned inefficiencies in property management. In 1994, the decision to reclaim the land from the prospective developer even after receiving an advance payment led to a dispute, which was soon followed by litigation between the two parties. This legal wrangle precluded the land from being used for any possible developments.

After being re-vested with the land in 2011, the UDA had tried to dispose of it in the market. However, *the challenge of attracting potential investors (3)* prevented the land from realising any of its development possibilities. When the UDA called for bids in 2017, it did not receive any bids from potential investors. Then in 2018, UDA called for Request for Proposals (RFP) for the second time and the results were the same. As many of the key informants pointed out, several factors that were beyond the control of the landowner undermined all efforts to develop the land. One leading factor was *the unfavourable political-economic climate of the country (4)* that was triggered by the Easter Sunday bomb attack in April 2019. And another factor was the change of government that took place the same year. The political-social instability in Sri Lanka was not conducive to the building of confidence among the local and foreign investors

in the real estate market. This observation can be corroborated by the studies conducted on market fluctuations for the same period. The already sluggish economy of the country with subpar growth had further affected by the negative spill over effects of the Eater Sunday bomb attack (i.e., setbacks in the Colombo stock exchange, withdrawal of foreign investments) in 2019 (Central Bank of Sri Lanka, 2020).

Unexpected schedule delays (5) are regarded as another critical factor that affects the project cycle and causes the land to stand idle for long periods, much against the owner's wishes. In the case of Chalmer's Granary, prolonged delays have been experienced as a result of the many interconnected factors that have been discussed above. Further, *time-consuming institutional procedures (6)* such as obtaining land valuation from the Valuation Department and the bidding process (calling for and evaluation of bids) can result in long delays. These delays have a cumulative effect on the development process and so it extend the time span of underutilisation.

The *financial feasibility of the land development model (7)* is another important factor that plays a critical role in determining the disposability of the land plot in the market. Attempting to dispose of 4 ha of land as one block to a single investor for development has proved to be a difficult task. Further, the financial feasibility of the development is highly susceptible to external factors such *as high land prices (8)*. As per the estimations made in 2017, this land is worth Rs.19 Billion Rupees based on a 99-year lease. Given the high land value, attracting either a local or a foreign investor who could afford to undertake such a massive investment has been more difficult than expected. These interrelated factors have made the disposal of the Chalmer's Granary land to the market an extremely challenging task for the UDA. Hence, the land is being kept the same way as it was.

Whenever the UDA wants to dispose of an asset, it generally advertises the prospective land on its website, local newspapers and in a development prospectus produced by the agency. However, *the limited scope of the marketing strategy (9)* adopted by the UDA has been identified as a constraining factor. Particularly, the approach adopted by the UDA in marketing lands has been recognised as unsatisfactory, compared to the strategies employed by private sector real estate developers.

Some factors that are not limited to the case but have an overarching impact at organisational level were recognised as contributing factors towards underutilisation. For example, factors such as *lack of post-project evaluation, and lack of learning and research (10)* and *lack of knowledge management (11)* have an indirect yet significant impact at organisational level. Unlike other public agencies, the UDA is the prime agency that is mandated to undertake planning and development in the urban areas of Sri Lanka. The UDA itself recognised the importance of practicing post-project evaluation, learning and research in its organisation. Particularly, the UDA should be equipped with advanced knowledge such as feasible models for land development, alternative financing mechanisms, and marketing strategies to undertake PLD at a large scale. Further, there is a risk that once the officers who were involved in the earlier projects are no longer available for the later projects, the lessons learned from the previous projects will not be available to the current staff. This shows that *knowledge management*, which encompasses the generation, organisation and sharing of knowledge within an organisation, is not satisfactory within the UDA. It has become a critical shortcoming that has a significant negative impact not necessarily limited to the Chalmer's Granary land but the overall performance of the organisation (UDA) in land development. Despite being a landowner and a developers who are equipped with powers, the UDA is still finding it challenging to transform its lands into developed properties due to these serious shortcomings.

6.10. Case 5: Deviant Case - Tripoli Market Land

This case was purposefully selected as a 'deviant case' as it can provide contrasting evidence against the common pattern observed in relation to the underutilisation of state lands and the efforts to develop them in Colombo. Compared to the four cases discussed, Tripoli Market land development is an example of successful development of state land that had remained underutilised. The hypothesis developed in this study postulated that the lack of responsiveness of the institutions (i.e., organisations, laws, regulations, norms) towards the needs and market potential invariably gave rise to underutilisation of state land. However, this case shows how the very same institutions that govern state land in Sri Lanka have transformed the underutilised Tripoli land into a lucrative asset. The land was vested in the UDA in January 2013 and the development was completed by the end of 2014. This confirms that the project had been implemented speedily. Given the typical capability of the land institutions in realising the intended development, the Tripoli land development was thus acknowledged as a deviant case. However, it is important to note that the quality of the development process and its outcomes were not taken into consideration in selecting this case.

6.10.1. Background

Previously known as Tripoli Market, this land plot of approximately 6 ha (15 acres) in size. It is located facing Maradana Road, within close proximity to the Maradana Railway Station. The land is adjacent to the premises of the SLR headquarters. Tripoli Market land was previously vested with the SLR and used as a warehouse complex that facilitated storage of railway freight. The warehouses were later abandoned with the termination of freight transportation via railways. As part of the development programme that aimed to capitalise on the underutilised state lands in Colombo, a portion of the land (3.6 ha) was alienated to the UDA in 2013 for

development purposes. Subsequently, the land plot was developed into an office complex, dedicated to IT-related companies and is now known as 'Trace Expert City'.

photo courtesy: http://trace.lk/trace-expert-city/

Figure 6. 7: Tripoli Market warehouses before demolition and after the development

As shown in **Figure 6.7**, the old warehouse buildings possessed a unique architectural character and so considerable attention was paid to replicate those architectural characteristics in the new development.

6.10.2. Critical Factors affecting Successful Implementation

Prior to the development, the land plot was under the possession of the SLR. As the Mount Mary case study revealed, the SLR was a public agency without the powers and functions for managing even its own assets. The same institutional handicaps caused the Tripoli land also to idle for some time after shutting down the functions of its warehouses. However, having

identified the Tripoli Market as an underutilised land with great commercial potential, the UDA embarked on the Trace Expert City development and completed it by 2014.

Hence, this study examined the factors that were critical for realising the development potential of this state land. **Table 6.8** shows the 12 critical factors that were identified.

Table 6. 8: Critical Factors for Successful PLD - Tripoli Land

No	Critical Factors
1	Political interest and support
2	Role of Mr.Gotabaya Rajapaksha
3	The ability of the project for producing tangible economic outcomes
4	The attraction of private sector business partners
5	Promising vision with a national significance
6	Alignment with a city-wide strategy that implements at scale
7	The consensus of the stakeholders to alienate land
8	New organisational structure
9	Convenient mobilisation of resources
10	Provisions of the legal enactments (for land vesting)
11	Empowerment of UDA as a developer
12	Public sector-driven investment in development

Political interest and support (1) was one of the critical factors that helped the project towards a speedy implementation. The 'Mahinda Chinthana - Vision for Future' came into effect in 2010 as a renewed development policy framework (it followed the 'Mahinda Chinthana' framework that was in effect from 2006 to 2010) to guide the post-war development phase of Sri Lanka. Following this vision, the UDA launched many development programmes to make Colombo a world-class city. The revitalisation of heritage buildings was part of this initiative and so these developments received significant political support and blessings.

Further, in the context of political support, *the role of Mr. Gotabaya Rajapaksa (2)* who was the Secretary to the Ministry of Defence and Urban Development at that time (who also happened to be the brother of the president of the country) was one of the determining factors in the success of this project. As the evidence showed, the interest and involvement of Mr.

Gotabaya Rajapaksa throughout the project cycle made a big difference. He was involved in initiating discussions with potential business partners, proposing the development, inspecting the site during construction and finally opening the development for businesses. Moreover, despite the change of government in 2015, the Tripoli Market development continued to receive political support. In 2018, trade unions of the SLR protested against handing over the land adjoining Trace Expert City to a private company for further development. On this occasion, the subject minister emphasised that the expansion of the Trace Expert City development should be supported since it was turning into a technological hub of the country and generating economic benefits.

It is important to examine how this development continued to receive political support. This can be mainly attributed to *the ability of the project to produce tangible economic outcomes (3).* As discussed earlier, political leadership has shown interest in the capacity of the development to generate revenue for the public sector and the job opportunities created by it. By 2020, all 13 bays of the Trace Expert City had been rented out to tenants (IT companies) and the UDA continued to receive approximately Rs.11.8 Million as the total monthly rental income. Hence, as the developer, the UDA feels reassured about the financial viability of the project and hence, is working towards the implementation of the 2nd phase of the development. As the project proposal of the Trace Expert City confirmed, by the time of initiating the land vesting procedure in 2013, the UDA had already reached an initial agreement with IT companies that were interested in becoming partners in this venture. *Finding potential private sector partners (4)* at the very inception of the development assured the raising of initial funding for development via upfront rental payments. The interest the private partners showed provided much reassurance to the development proponent and helped the project progress steadily.

Further, the project was planned to realise *a promising vision with a national significance (5)*. Thus, the project received great media attention during that time. The agencies involved in the development, such as the UDA, Sri Lanka Army and the Trace City, have emphasised the importance of the project to the national economy. The project proposals released by the UDA stressed the need for promoting technology-based economic development while mitigating the problem of brain drain and strengthening the national economy. Accordingly, in 2013, a Memorandum of Understanding (MOU) was signed between the UDA and TRACE stakeholders to develop Trace Expert City as a place that would attract experts who promote technology-based innovations. Hence, the key factors at work, such as *the ability to produce tangible economic benefits (3)* even during the 1st phase of the development and the promise of a vision with national significance, have collectively enabled the development to gain political support throughout its project cycle.

Tripoli market development cannot just be seen as an isolated project that aimed to revitalise an abandoned state land. As discussed earlier, the project was part of a city-wide development strategy that was undertaken by the UDA in accordance with national policy guidelines. In parallel with the Tripoli Market development, several other projects were implemented by the UDA. This included renovating several run-down buildings in Colombo with colonial legacies. Some of them were Government Auditor-General's Department Office (now recognised as Arcade Independence Square), Race Course development and Dutch Hospital development. Accordingly, *alignment of the proposed development with a city-wide development strategy that was implemented at scale* (6) gave much prominence and recognition to the Tripoli development.

Hence, it is vital to recognise how the factors such as promising vision with national significance and the integration of the proposed development with the city-wide development programme that was implemented at scale become critical to the success of Tripoli. Those factors have become highly influential in shaping the attitudes of the other public agencies with lands too, particularly the SLR. As the key informants from the SLR confirmed, this impactful presentation of the project has been able to persuade the SLR also to adopt this approach and curtail any potential resistance towards the project. Accordingly, *having the consensus of the public landowner to transfer the land (7)* has had a significant impact on the success of the project. As evidence revealed, the SLR has agreed to transfer the land to the UDA without making any demands for sharing the benefits of the development. Hence, the land has been smoothly transferred to the UDA without any disputes or delays.

The new organisational structure (8) that merged urban development with the Ministry of Defence was one of the critical factors that led to the successful implementation of the development programmes. In 2010, urban development (hence, the UDA) was assigned to the Ministry of Defence and Urban Development under the Extra Ordinary Gazette No.1681/03 (Ministry of Defence and Urban Development, 2013). This new organisational structure supported *a convenient resource mobilisation (9)* from the defence sector to the urban development sector. In the Tripoli Market development, labour and technical expertise required for construction were mobilised from the Sri Lanka Army (UDA, 2014). This contributed towards bringing down the cost of the development significantly. However, following the change of government in 2015, the organisational structure was amended. From then on, urban development and defence has been managed by two different ministries.

Further, *the provisions of an existing legal enactment (10)*, particularly the State Land Ordinance, provides an opportunity for the UDA to access state land more easily. As Section 6.1 of the ordinance spells out, 'A special grant or lease of state land may be made at a nominal price or rent or gratuitously for any charitable, educational, philanthropic, religious or scientific purpose, or for any other purpose that the President may approve' (State Land Ordinance, 1949). Accordingly, the UDA received the Tripoli land through a special grant without needing to make any payment or being under any other financial obligations to the SLR. Likewise, the provisions of legal enactments along with other factors, such as supportive organisational structure, ease of resource mobilisation, and political support, have *empowered the UDA as a developer (11).* In an interview conducted with the Chairman of the UDA in 2014, he emphasised how taking over the UDA under the Ministry of Defence and Urban Development, done at the behest of Mr. Gotabaya Rajapaksa, had contributed to property-led regeneration in Colombo, while also enhancing the financial capacity of the UDA. As shown in **Figure 6.8.,** in 2014, the UDA experienced a 75% growth in revenue compared to the previous year. This was mainly attributed to the increase in rental income (which accounts for 83% of total revenue) of the UDA (UDA, 2014). At the same time, such growth has empowered the UDA financially.
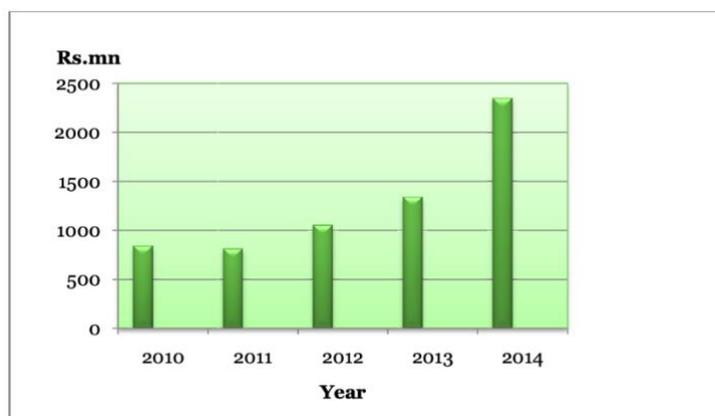
Figure 6.8: Expansion of the revenue of the UDA

(Source: UDA, 2014)

This newfound role of the UDA was highly interconnected with the urban development approach that had been adopted in Colombo after 2010. *Public sector-led investment in urban development (12)* played a prominent role in guiding development in Colombo. As mentioned earlier, the role of the UDA became prominent as a developer and several significant urban restoration projects were implemented by the UDA in Colombo using public funds. For example, projects such as refurbishment of former Auditor General Department building, Old Colombo Dutch Hospital development and Floating market, were undertaken by the UDA with public sector funding (UDA, 2014). Embracing this approach in urban development enabled the implementation of the Trace Expert City development as the UDA did not have to wait for private sector investments. The development (Phase 1 & 2) is estimated to cost approximately Rs.2000 million, to be incurred by the UDA (UDA, 2014)

These highly interconnected critical factors have contributed to the successful completion of the Tripoli Market development. However, despite its timely implementation and delivery of economic benefits, there have been concerns about the quality and the legitimacy of the development process. The implications of the Tripoli development on other PLD initiatives and their effect on the underutilisation of state land will be discussed under cross-case relationships in **Chapter Seven.**

6.11. Results and Discussion: Cross-Case Synthesis

Following the in-depth analysis above, the study has synthesised findings from all five cases to further examine commonalities, deviations (if any) and patterns across cases. This section discusses the inferences from a cross-case synthesis with respect to the following three aspects, namely: 1) Chronological sequence analysis and the trajectory of evolution, 2) Critical factors affecting underutilisation, and 3)Behaviour of the Public landowners

6.11.1. Chronological Sequence Analysis and The Trajectory of Evolution

Chronological sequence of events and the change in the use of lands that has occurred with the passage of time were analysed by triangulating the Google imageries with information collected from other sources (interviews and documents). All of the tables numbered from **Table 6.9** to **Table 6.13** illustrate the evolution of each selected case over time with regard to the milestone events, dating back from approximately a century ago (in several cases for two centuries) to date. Likewise, Google imageries from **Figure 6.9** to **Figure 6.13** provide evidence of the physical transformations (if any) that took place on selected lands in recent decades.

Table 6. 9: Mount Mary Land, Dematagoda - Chronological Sequence

1800s	2016	2016	2018	2021
Use of the Land: The land was occupied for residential quarters (56 quarters) of the British officers, who served in the Ceylon Railways.	Identified as an 'underutilised' land that has the potential for an 'effective use'.	Discussions were commenced between the SLR and the UDA for development of Mount Mary, along with the proposals for development of several other lands vested in the SLR.	The project was stalled due to the inability of reaching a consensus.	*Use of the Land:* The land is continued to be occupied by the SLR quarters. *Use of the Land*: Railway quarters -100%

Figure 6. 9: Bird's-eye view of Mount Mary Land

2003

2021

Note: Any significant physical transformation has not taken place on the land during the period.

Table 6. 10: Slaughterhouse Land (No.246), Dematagoda - Chronological Sequence

1895	1860s	2001	2013	2017	2021
The land was vested by the Colombo Municipal Council (CMC) as per the Colonial Secretary's approval	*Use of the Land:* The land was used as a slaughterhouse in Colombo, managed by the CMC	The Mayor of the CMC signed an agreement with the government of the Netherlands to modernise the slaughterhouse. However, the project was not implemented.	The UDA requested the land from the CMC for a period of 1 year to provide temporary resettlement for slum/shanty dwellers in Colombo. The CMC informed UDA that they are unable to alienate the land.	The UDA vested the land without the consent of the CMC. Created a dispute over land vesting process and the CMC filed a lawsuit against the UDA.	The CMC expressed the willingness to withdraw the lawsuit and to negotiate for a development ***Use of the Land*** (approximately): Slaughterhouse : 27% Municipal Quarters & other: 22% Vacant : 51%

Figure 6. 10: Bird's-eye view of Slaughterhouse Land

2004   **2010**   **2021**

Note: Except for a few upgrades (shown in the 2010 image), there have not been any significant physical transformations on land during the above period.

Table 6. 11: Kandawala Land, Rathmalana - Chronological Sequence

1950s	1998	2009	2012	2015-2016	2020
Use of the Land: Housing scheme was constructed for employees of the Department of Irrigation (DOI)	Sought for cabinet approval for development	The local area development plan prepared by the UDA identified the land as one of the underused state lands. Recognised the need for rebuilding due to the dilapidated condition of housing.	The UDA and the DOI carried out negotiations for a development.	Discussions were carried out between the UDA and the DOI. They reached an agreement to sign a Memorandum of Understanding (MOU) for development.	The MOU is not signed yet. The UDA continue to look for potential investor/s. *Use of the Land:* The land is still occupied by the DOI quarters and unauthorised housing.

Figure 6. 11: Bird's-eye view of the Kandawala Land

2004

2010

2021

Note: There has not been any significant physical transformation on the land during the above period.

Table 6. 12: Chalmers Granary, Pettah - Chronological Sequence

1916 – 1982	1994	2011	2012	2017-2018	2020
Use of the Land: Used as a storage house for grains imported via Colombo port. However, all functions were abandoned by 1982. **1980-**The UDA received the ownership of land	The UDA leased out the land for a local development company. Later, the UDA withdrew the agreement and hence, caused a legal dispute between the two parties.	The land was declared as an 'underutilised asset' under The Revival of Underperforming Enterprises or Underutilized Assets Act 2011.	Demolished the storage structures that were on land (Shown in bird's eye view of the land)	*Use of the Land:* The land was leased out by the UDA for a vehicle park. The UDA called for Bids and Requests for Proposals (RFPs) twice. However, the UDA didn't receive any successful bids or RFPs.	The UDA has not been able to secure an investment yet. *Use of the Land* (approximately)**:** Vehicle Park: 50% Vacant : 50%

Figure 6. 12: Bird's-eye view of the Chalmers Granary

2011   **2012**   **2021**

178

Table 6.13: Former Tripoli Market Land, Maradana - Chronological Sequence

Since 1800s	2013	2014	2016	2018	2020
Use of the Land: Land had been used by the Ceylon Government Railways (CGR) as a warehouse and later abandoned.	Part of the land (3.6 ha) was vested by the UDA for the development.	*Use of the Land:* The land was developed by UDA as 'Trace Expert City', a place for IT-based companies. Phase I of the project was completed. (Shown in bird's eye view of the land)	The UDA started to seek approval for vesting the land next to Trace expert city. The joint trade union alliance of the SLR opposed the decision of taking over the SLR lands for urban development.	A dispute occurred over the development of adjoining land of the Trace Expert City. The trade unions of the SLR conducted a strike to express their objections.	The UDA is planning for the 2nd phase of the Trace Expert City project and working for vesting the land from the SLR.

Figure 6.13: Bird's-eye view of the Tripoli Market Land

2010

2014

2020

Examination of the chronological sequence of events in each case study helped to establish that all 5 cases have followed a fairly similar trajectory of evolution in terms of the use of the land and their role in the city. Hence, as illustrated in **Figure 6.14**, three key phases of the evolution can be identified, namely, 1) Active contribution, 2) Decline and/or stagnation, and 3) Regaining attention.
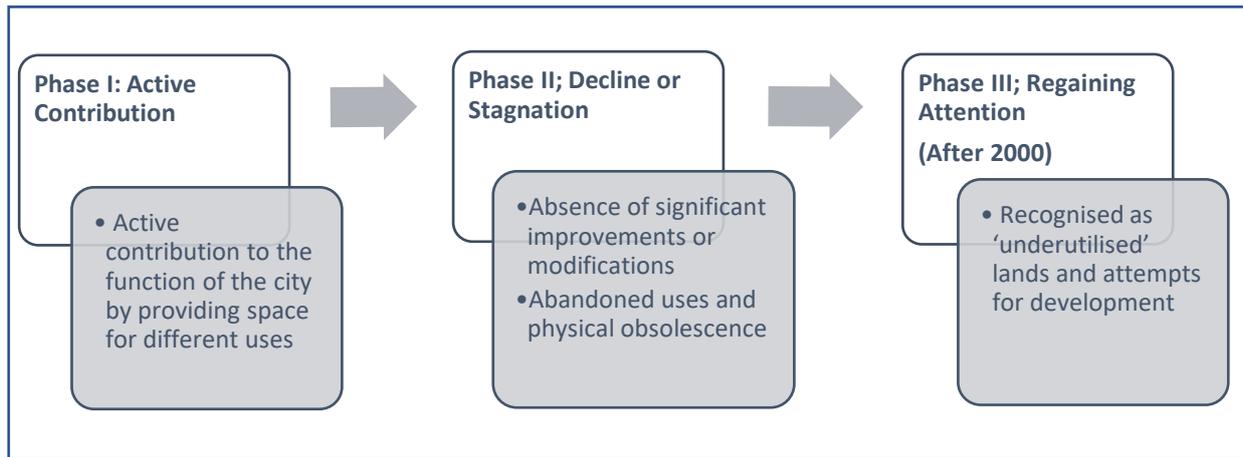
Figure 6. 14: Three key phases of evolution

Phase 1 of the trajectory of evolution refers to the period between the 1800s to mid-1900s, during which the lands located at the core of the City of Colombo had been positively contributing to the function of the city by providing space for different types of uses. This was the period of the British administrative era (1796-1948) when the City of Colombo was evolving into the commercial capital of Sri Lanka (Perera, 2016; UDA, 2019). While going through many changes, Colombo was also experiencing a significant expansion of port-related activities and a trend towards industrialisation in the late nineteenth century (Perera, 2016). The lands under investigation provided space for luxury residential quarters for British officers (Mount Mary Land), a slaughterhouse for the CMC (Slaughterhouse land), a storage space for grains imported via the Colombo Port (Chalmers Granary) and a warehouse for the railway freight (Tripoli Market land). Only the Kandawala land, located in Ratmalana (Ratmalana was

proposed to be developed as a satellite town of Colombo by Abecrombie's Plan in 1948) was developed at a later stage (in 1950) into the irrigation quarters.

During *Phase II*, which covers the period from 1980 to 2000, many of these lands seemed to have experienced challenges of varying degrees in respect of their function and management. None of the sites has seen any development by way of expansion or modernisation in terms of its use due to various reasons. Particularly, Chalmers Granary and Tripoli Land, which used to function as warehouses were abandoned due to the changes that happened in railway-based freight transportation. Mount Mary and Kandawala lands have been continuously utilised as employee quarters. Likewise, the Slaughterhouse land has continued its use without being subject to any significant modifications. The private sector-driven changes that have been taking place in the supply chain of livestock products in Colombo (FAO and RUAF Foundation, 2016) may have acted as a disincentive to the CMC as it made no further effort to upgrade the slaughterhouse. Though only limited sources of information originating from this period were found, the records prepared after the 2000s have provided evidence of the gradual physical and functional deterioration experienced by these sites during this phase of evolution.

During *Phase III*, which refers to the period from 2000 to 2020, there has been a newfound interest in land matters with public agencies, particularly the UDA formulating development plans for the City of Colombo and its suburbs. Developing Colombo as a slum-free city that makes effective use of state lands has been a key a development target (UDA, 2019). Hence, selected public lands have received greater attention from the government agencies after the 2000s.

In the end, analysing the development processes in chronological order revealed how these lands have evolved into their current status over time. Moreover, this cross-case synthesis demonstrated how the selected lands have followed a similar development trajectory despite their differences in terms of landowner, land extent, and previous uses. This examination is crucial, because the findings derived help identify commonality across cases. This provides an effective way to gauge whether to aggregate the case data for further examination.

6.11.2. Critical Factors Affecting Underutilisation

Following the individual case analyses, critical factors identified in four cases (except for the deviant case) were aggregated, and as illustrated in **Table 6.14**. Accordingly, a total of 31 distinct critical factors were identified. Based on the initial screening, critical factors affecting underutilisation were identified with reference to two key phases of development process (which may refer to as *Phase I* and *Phase II)*. Phases I and II refer respectively to the periods before and after a land is deemed as underutilised land that needs development.

As shown in **Table 6.14**, *Phase I* identify the adverse conditions that were experienced by the public agencies who owned these lands. After the lands are deemed underutilised, public agencies have initiated development projects. However, the process of building partnerships for development and disposing of the land to the market have been deeply undermined by several factors. These factors have caused further exacerbation of the underutilisation of public lands and *Phase II* identifies these critical factors.

However, a detailed classification of the critical factors into clusters is not undertaken at this stage. The analysis intends to identify the clusters of critical factors based on the inter-

relationships between factors in the system and this will be discussed under the network analysis in the next chapter.

Table 6. 13: Case studies and the critical factors

Label	Critical Factors	Mount Mary Land	Slaughterhouse Land	Kandawala Land	Chalmers Granary
Phase I: Before identifying as a site that needs redevelopment					
A1	Lack of skilled human resources for PLD	√	√	√	
A2	Lack of financial capacity for PLD	√	√	√	
A3	Ineffective property maintenance	√	√	√	
A4	Ineffective information and knowledge management	√	√		√
A5	Political interferences & lack of political will	√	√	√	
A6	Absence of a long-term vision for delivering public services	√	√		
A7	Unauthorised use of land and property	√		√	
A8	Ineffectiveness of generating financial/economic returns from land assets	√	√		√
A9	Provisions of the legal enactments	√			
A10	Bureaucratic Power	√			
A11	Public landowners without a mandate for land/asset management	√		√	
A12	Absence of a national policy for urban state land management	√			
Phase II; After identifying as a site that needs redevelopment (Planning and building partnership)					
B13	Lack of institutional coordination in PLD	√	√		
B14	Unsupportive attitude and lack of commitment of public officers	√	√		
B15	Financial encumbrance & risk over development proponent	√		√	
B16	Negative reputation and the mistrust over development proponent	√	√		
B17	Lack of consensus over sharing the benefits of the new development	√	√		
B18	Resistance of stakeholders towards land alienation	√	√		
B19	Unfavourable political-economic context of the country				√
B20	High cost of land			√	√
B21	Less feasibility of land disposal/development model			√	√
B22	Challenges in attracting investors	√		√	√
B23	Unexpected schedule delays			√	√
B24	Legal disputes and litigations		√		√
B25	Time consuming institutional procedures		√		√
B26	Challenges in the resettlement of current uses	√		√	
B27	Development restrictions imposed by regulations			√	
B28	Lack of post-project evaluation, learning & research	√			√
B29	Misuse of legally vested power by development proponent		√		
B30	Limited scope of marketing				√
B31	Socio-cultural values and resistance		√		

More importantly, analysis of multiple cases justified why the aforementioned factors should be recognised as '*critical*' factors but not as regular challenges confronted in the development process. The reason is twofold. Firstly, these factors have brought the development projects

either to a complete standstill or caused serious delays. Secondly, the impact of these factors are not limited to the selected public land but have a cascade effect on the function of the public agency and its role in PLD as a whole.

6.11.3. Behaviour of The Public Landowners

Public Landowner refers to the public agency in which the state lands are vested. Based on the classification suggested by Adams and May (1991), public landowners in Colombo can be distinguished as *Active* and *Passive* landowners based on their behaviour. *Active Landowners* are the public agencies who actively take the initiative to develop the land owned by the agency and the UDA is the active landowner identified from Colombo. Likewise, the UDA is also identified as the *development proponent* in all selected cases since the UDA act as the agent who approaches the other public landowners or private sector agents with the development proposal. Hence, the UDA function as a landowner and also as a development proponent in PLD in Colombo.

Passive Landowners are the agencies who have the public land under their custody yet they are not proactively looking for developing the land. Public agencies such as the SLR, the DOI and the CMC are recognised as passive landowners. However, the behaviour of these landowners particularly, passive landowners such as the SLR seems to change under different circumstances (there is evidence outside the selected cases) and hence, may not always be confined into this classification.

6.12. Chapter Summary

Based on the empirical evidence collected from multiple case studies from Colombo, this chapter discussed the approach that was adopted for assessment of underutilisation of urban state lands in the city. Further, it provided evidence of the conceptual lapses that were associated with the concept of underutilisation and their implications on decision making. Finally, after examining multiple cases, the study identified 31 critical factors that exerted influence on two key phases of the PLD process. The lack of capacity of public landowners in property and asset management, combined with the challenges confronted during the planning and land disposal have a bearing on the underutilisation of state land for a prolonged period. Likewise, the analysis identified two types of landowners in Colombo as active and passive based on the behaviour in PLD. The next chapter will further analyse the inter-relationships between critical factors and explore how such relationships play a role in the underutilisation of public land.

CRITICAL FACTORS AND THEIR INTER-RELATIONSHIPS: A CROSS-CASE ANALYSIS AND SYNTHESIS

7.1. Introduction

The previous chapter provided a detailed account of individual cases, with special reference to their evolution, underutilisation and critical factors that affect underutilisation. This chapter examines the inter-relationships between critical factors and how those relationships affect underutilisation. This examination is carried out through a cross-case synthesis. Hence, the chapter begins with a discussion on why a cross-case synthesis is used in data analysis. It highlights the similarities and differences across cases. Secondly, the chapter discusses the analysis of the significance of individual critical factors. Subsequently, based on the inter-relationships, these critical factors are classified into clusters in order to have a better understanding of the inter-relationships among factors. Finally, the analysis examine the paths that connect the different clusters of the network.

7.2. Similarities – Differences Across Cases and The Cross-Case Synthesis

This study adopts a relational approach to examine state land and its development. Hence, the analysis is not limited to identifying the set of critical factors that affect underutilisation but it also aims at examining the inter-relationships among the critical factors and their implications. Hence, the inter-relationships identified from each case study were aggregated and analysed together as a whole to obtain a comprehensive understanding of the underutilisation associated with urban state lands in Colombo.

However, as Yin (2018) suggested careful examination of the similarities and differences (if any) across cases is crucial for a cross-case analysis and synthesis. In this study, compiling the findings of multiple cases is justified by two reasons. Firstly, among these multiple cases, none of the cases is identical to one another yet, cases are 'sufficiently comparable along important dimensions'(Yin, 2018, p.198). For example, the cases under examination manifest many similarities in terms of 1) the trajectory of evolution, 2) the geographical context of the land, 3) the public agency that proposes and guide development (i.e.,UDA), and 4) the issues and challenges experienced during the development process. Secondly and more importantly, in each case, the lack of capacity of the public landowners (i.e., SLR, CMC, DOI and UDA) in property and asset management has impelled the state lands towards underutilisation. Subsequently, there have been initiatives to develop those lands yet, the inability to execute the desired development has further extended underutilisation. These two aspects are the crucial commonalities found across the cases.

At the same time, differences too could be observed between the cases in respect of 1) current use of the land, 2) the types of development proposed, 3) functions and behaviours of landowners. The most significant difference identified here is the behaviour of the landowner. Three of the lands under investigation are vested by passive landowners such as the SLR, the CMC and the DOI. Only one land (Chalmers Granary land) is vested by an active landowner, the UDA. Paradoxically, as the case of Chalmers Granary and several other recent developments in Colombo (i.e., Arcade Independence Square, Floating Market) revealed, despite the powers vested within the agency, the UDA also has been confronting challenges in managing their properties. Hence, while taking into consideration the inconsistencies of the behaviour, the UDA is identified as a landowner who experiences ineffective property and asset management.

Hence, the differences across cases do not undermine the validity of cross-case synthesis. On these grounds, findings from multiple cases were compiled to examine the inter-relationships among critical factors. The Gephi software was used to analyse and visualise the inter-relationships.

7.3. Critical Factors and their Inter-Relationships

Based on the aggregated findings of the case studies, **Figure 7.1** illustrates the thirty-one (31) critical factors influencing underutilisation and their inter-relationships. In this network diagram, each critical factor is identified by a coloured dot, which recognises a 'node' in the network. The inter-relationships between factors are illustrated by the arrows that connect the dots, each of which recognises an 'edge' in the network diagram. The network comprises 31 nodes and 47 directed edges. As the diagram illustrates, none of the critical factors exists in isolation as each of them connects to a minimum of one other factor. This confirms that land underutilisation can be attributed to a network of relationships among many critical factors.

However, the significance of a node varies according to the number and nature of the connections. 'Degree Centrality' measures how central or 'significant' a particular node is within the entire network. Hence, **Figure 7.1** shows the significance of each critical factor in terms of the total number of connections it has (degree centrality). The size and colour of the nodes indicate the variations in the degree centrality as nodes of larger sizes and darker colours represent a higher degree of centrality. As shown in **Figure 7.1**, the critical factor such as *the resistance of landowners and other related actors to land alienation (B18), challenges in attracting investors (B22),* and *ineffective information and knowledge management (A4)* are recognised as the top three critical factors with the highest degree centrality. These critical factors signify the impediments that arose at the different stages of the development process.

The critical factors listing shown in the figure:

Critical Factors

A1	Lack of skilled human resource for PLD
A2	Lack of financial capacity for PLD
A3	Ineffective property maintenance
A4	Ineffective information and knowledge management
A5	Political interferences & lack of political will
A6	Absence of a long-term vision for delivering public services
A7	Unauthorised use of land and property
A8	Ineffectiveness of generating financial/economic return from land assets
A9	Limited provisions of the legal enactments
A10	Bureaucratic power
A11	Public landowners without a mandate for land/asset management
A12	Absence of a national policy for urban state land management
B13	Lack of institutional coordination in PLD
B14	Unsupportive attitude and lack of commitment of public officers
B15	Financial burden & risk over development proponent
B16	Negative reputation and mistrust over the development proponent
B17	Lack of consensus over sharing the benefits of the new development
B18	Resistance of landowners and related actors to land alienation
B19	Unfavorable socio-political context of the country
B20	High cost of land
B21	Less feasibility of land disposal/development model
B22	Challenges in attracting investors
B23	Unexpected schedule delays
B24	Legal disputes and litigations
B25	Time consuming institutional procedures
B26	Challenges in the resettlement of current uses
B27	Development restrictions imposed by regulations
B28	Lack of post-project evaluations, learning & research
B29	Misuse of legally vested power by development proponent
B30	Limited scope of marketing
B31	Socio-cultural values and resistance

Figure 7. 1: Significance of critical factors and their inter-relationships

7.3.1. Significance of Critical Factors: Out-Degree and In-Degree Centrality

Since this study examined the directed relationships (the direction of the relationship is specified) between critical factors, two types of degree centrality were identified and measured: 1) In-degree centrality, and 2) Out-degree centrality.

These two centrality measures provide a reliable assessment of the '*significance*' of a critical factor and help to understand the role of that factor. A careful examination of the centrality measures shows that the '*significance*' derived through the connections may not always make the critical factor more '*influential*' within the network. Having a higher number of connections (particularly inbound connections) can also make the factors more '*vulnerable*' as they receive a higher exposure. In other words, critical factors with more inbound connections are more likely to be affected by the numerous other critical factors. Such complexities of significance were examined by differentiating the in-degree and out-degree centrality of critical factors.

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Table 7. 1: Out-degree and In-degree Centrality of critical factors

Label	Critical Factor	Out-degree Centrality	In-degree Centrality	Degree Centrality
A1	Lack of skilled human resource for PLD	**5**	0	5
A2	Lack of financial capacity for PLD	1	1	2
A3	Ineffective property maintenance	0	**4**	4
A4	Ineffective information and knowledge management	**3**	**4**	7
A5	Political interferences & lack of political will	**4**	0	4
A6	Absence of a long-term vision for delivering public services	1	1	2
A7	Unauthorised use of land and property	**2**	**2**	4
A8	Ineffectiveness of generating financial & economic return from land assets	**2**	**3**	5
A9	Limited Provisions of the legal enactments	**2**	0	2
A10	Bureaucratic Power	1	1	2
A11	Public landowners without a mandate for land/asset management	1	**2**	3
A12	Absence of a national policy for urban state land management	1	0	1
B13	Uncoordinated plans for PLD & Conflicting claims on underutilisation	1	0	1
B14	Unsupportive attitude and lack of commitment of public officers	**3**	1	4
B15	Financial encumbrance & risk over development proponent	1	1	2
B16	Negative reputation and the mistrust over development proponent	1	0	1
B17	Lack of consensus over sharing the benefits of the new development	1	**3**	4
B18	Resistance of landowners & other stakeholders over alienation of land	**2**	**7**	9
B19	Unfavourable socio-political context of the country	**2**	0	2
B20	High cost of land	1	0	1
B21	Less feasibility of land disposal/development model	1	1	2
B22	Challenges in attracting investors	1	**7**	8
B23	Unexpected schedule delays	0	**5**	4
B24	Legal disputes and litigations	1	1	2
B25	Time consuming institutional procedures	1	**2**	4
B26	Challenges in resettlement of current uses	1	0	1
B27	Development restrictions imposed by regulations	1	0	1
B28	Lack of post-project evaluation, learning & research	**3**	0	3
B29	Misuse of legally vested power by development proponent	1	0	1
B30	Limited scope of marketing	1	1	2
B31	Sociocultural values and resistance	1	0	1

Note: Values in bold indicate the critical factors with the degree centrality above the means of respective centrality measures. The mean value of In-degree and Out-degree centrality is 1.5.

i.   Out-Degree Centrality: Influential Factors

Out-Degree Centrality (ODC) determines how influential a node is (critical factor in this case), based on the outbound connections flowing from this node to other nodes of the network. As shown in **Table 7.1**, the ODC of the critical factors varies from 0 to 5. Based on the mean score of ODC (1.5), critical factors were divided into two categories as follows: 1) factors with ODC

≥ 2 were marked 'highly influential', and 2) factors with ODC 0 >2 were marked 'influential'.

Figure 7.2 shows the two types of influential factors and their relationships. 10 out of 31 critical factors were identified as highly influential and indicated by blue colour nodes within the network diagram.
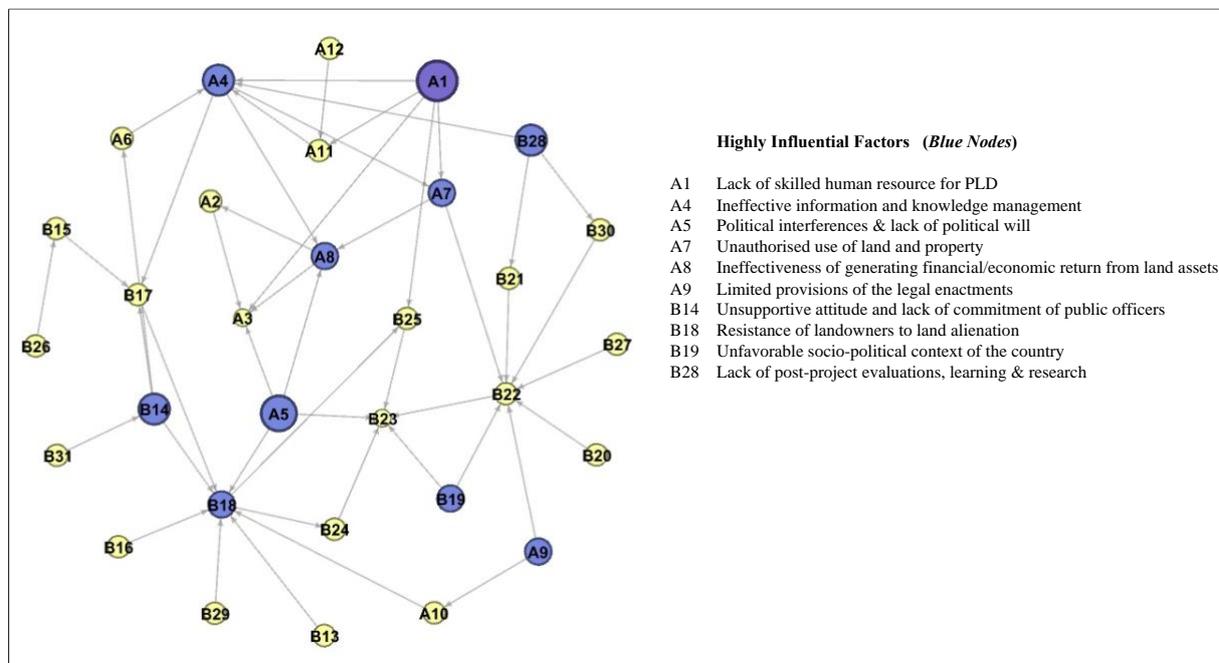
Figure 7. 2: Out-Degree Centrality of Critical Factors

Note: The size of the node indicates the variations in the out-degree centrality. Nodes of larger sizes indicate a higher out-degree centrality.

As shown in **Figure 7.2,** *the lack of requisite human resources within public agencies for land development (A1)* and *political interference and lack of political will (A5)* were found to be the two critical factors with the highest out-degree centrality. Likewise, other factors such as *ineffective information and knowledge management (A4), uncooperative attitudes and lack of commitment of public officers (B14), and lack of post-project evaluation and research (B28)* have shown relatively high out-degree centrality. The implication is that these factors are *highly influential* because they affect many other factors of the network that contribute to the underutilisation of public land.

ii.   In-Degree Centrality: Vulnerable Factors

In-Degree Centrality (IDC) measures the significance of a node based on the inbound connections that a node received from the other nodes of the network. However, examination of the IDC of critical factors and their inbound connections within the network reveals highly 'vulnerable' aspects of the development process that lead to the underutilisation of public lands.

As shown in **Table 7.1**, *the resistance of public landowners and related actors to alienating land for development (B18)* and *challenges in attracting investors (B22)* recorded the highest in-degree centrality. Likewise, the factors such as *unexpected schedule delays (B23)*, *ineffective property maintenance (A3), ineffective information and knowledge management (A4)* show relatively high in-degree centrality. This suggests that these critical factors can be affected by multiple other critical factors. For example, reaching a consensus to alienate the land (transfer the ownership of the land) from one public agency to another for development is heavily influenced by factors such as the *ability to share the benefits of redevelopment (B17)*, *trust in project proponent (B16), attitudes of the public officers (B14) and bureaucratic power (A10)*. Therefore, arriving at a consensus for land alienation can be recognised as a highly vulnerable element in PLD process.

As shown in **Table 7.1**, the In-degree centrality of the critical factors varies from 0 to 7. Based on the mean score of IDC (1.5), critical factors were classified into two categories as follows: 1) factors with IDC ≥ 2 were regarded as 'highly vulnerable', and 2) factors with IDC 0 >2 were regarded as 'vulnerable'. **Figure 7.3** shows these two types of factors and their relationships. 10 out of the 31 critical factors can be identified as highly vulnerable and shown by red colour nodes within the network diagram.
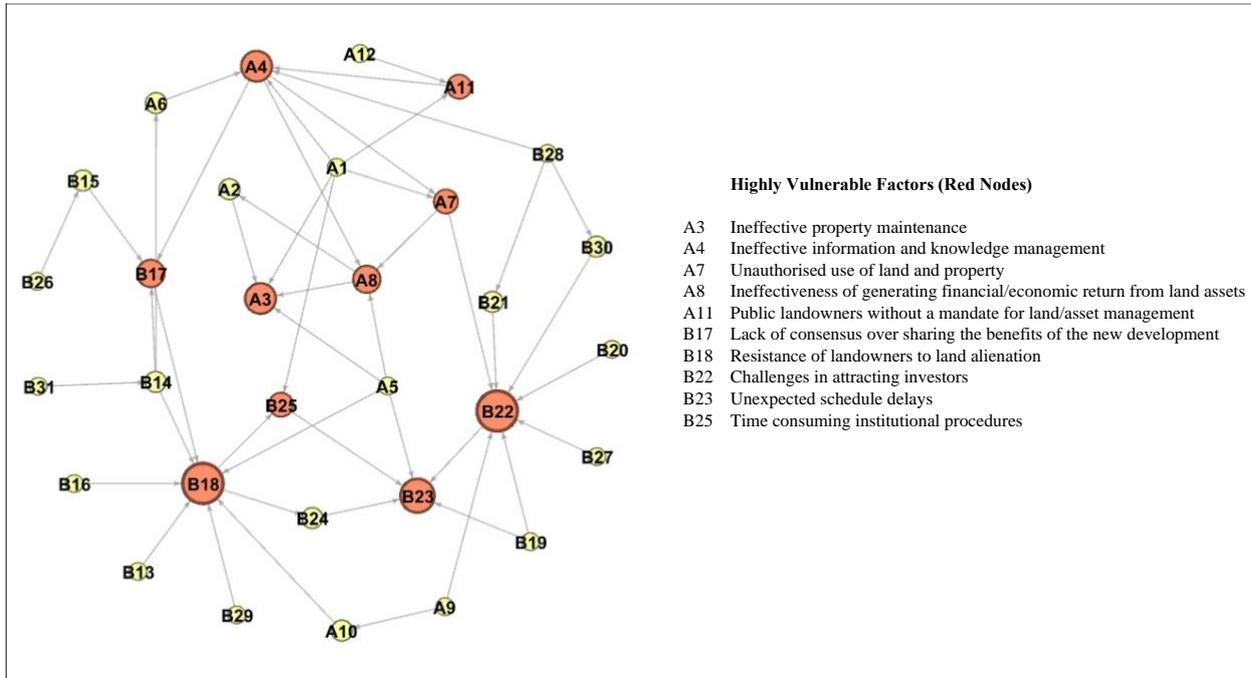
Figure 7. 3: In-Degree Centrality of Critical Factors

Note: The size of the node indicates the variations in the in-degree centrality. Nodes of larger sizes indicate a higher in-degree centrality.

In-degree centrality measures show that 13 critical factors have zero inbound connections. Factors such as *lack of human resources (A1), absence of a national policy for effective use of urban state land (A12), unfavourable socio-economic-political context of the country (B19),* and *high cost of land (B20)* have zero in-degree centrality. Undoubtedly, there can be multiple conditions or 'inbound connections' that can have an impact on the above factors. However, those conditions do not directly affect the 'underutilisation' of public land and therefore, are not considered pertinent in the analysis of underutilisation. For example, the high cost of land in Colombo can be attributed to the increasing population, new infrastructure development and growing demand for housing. However, these factors do not directly influence the underutilisation of public land, and this explains why some critical factors such as the high cost of land have zero inward connections within this network analysis.

iii.   A Complex Combination: Being 'Influential' and 'Vulnerable'

Findings show that a critical factor can become significant within a network by acquiring relatively high in-degree and out-degree centralities simultaneously. For example, factors such as *ineffective information and knowledge management (A4), unauthorised use of land and property (A7)* and *ineffectiveness of generating financial and economic returns from properties (A8)* show more or less equal levels of in-degree and out-degree centralities. Therefore, these factors can be recognised as being influential and vulnerable simultaneously within the same network.

Likewise, the comparison of two different networks related to PLD also provides evidence on how the same critical factor plays different roles that result in markedly contrasting consequences under different circumstances. For example, as per the above network which elucidates underutilisation of public land, *political interference and lack of political will (A5)* was recognised as one of the critical factors with higher out-degree centrality and hence, influential in persisting the underutilisation of public land (see **Figure 7.2**). However, the Tripoli Market land development, which is the deviant case study that demonstrates the *successful* redevelopment of an underutilised land, serves well as contrasting evidence. *Political interest and support (S1)* was identified as one of the significant factors that guided the development of the previously underutilised Tripoli land. However, this factor has a relatively high in-degree centrality within that network. As **Figure 7.4** illustrates, *political interest and support (S1)* tends to be affected by several other factors such as *having a promising vision of national level significance (S5), the land being attractive to the private sector business partners (S4),* and *the ability to deliver tangible economic outcomes in the 1ˢᵗ phase of the project (S3).* It implies that PLD may not necessarily receive political interest or

support unless the development is supported by factors such as *S5, S4* and *S3*. Hence, *Political support* will be a vulnerable element that may not be readily forthcoming in PLD.

| Label	Critical Factors	Out-degree Centrality	In-degree Centrality
S1	Political Interest and support	2	3
S2	Role of Mr.Gatabaya Rajapaksha	3	1
S3	The ability to produce tangible economic outcomes	1	0
S4	The attraction of the private sector business partners	1	0
S5	Promising vision with a national significance	2	0
S6	Alignment with a City-wide strategy	0	1
S7	The consensus of the stakeholders to alienate land	0	3
S8	New organisational structure	3	1
S9	Convenient mobilisation of resources	0	1
S10	Provisions of legal enactments (for land vesting)	1	0
S11	Empowerment of the UDA as a developer	1	3
S12	Public Sector-driven Investments for development	0	1

Figure 7. 4: Tripoli Market: In-degree and Out-degree Centrality of Critical Factors

Recognising *political interest and support* as a *vulnerable* factor in PLD is an interesting finding as it can provide new insights for those professionals who are involved in PLD. If planning decision-makers are looking for political support for the development of public land to overcome underutilisation, they may need to pay attention to many other factors to obtain the support they require.

These findings confirm that the importance or significance of a critical factor within a network is a complicated matter. Hence, analysing the significance of certain critical factors by differentiating between in-degree centrality and out-degree centrality can help one to acquire a comprehensive understanding of the role of critical factors and their different ways of being significant (influential or/and vulnerable) within the network.

7.3.2. Do the Critical Factors Capture the Complexity of PLD?

Before moving further into the analysis of this network, a re-examination of the critical factors discussed earlier is vital to ensure that these factors capture the complexities of PLD effectively. Hence, the critical factors identified from the case studies are synthesised as follows.

As shown in **Figure 7.5**, the critical factors identified in the analysis cut across multiple dimensions of the PLD, such as 1) Stages of the development process (before the development, planning the development, disposal of land to the market), 2) Levels of development planning (site level, organisational level and policy level), and 3) Role of actors with multiple interests (public landowners, development proponents, investors, etc.). Further, these factors identify the resources required for a development process such as skills and expertise, finance, information and policy support.
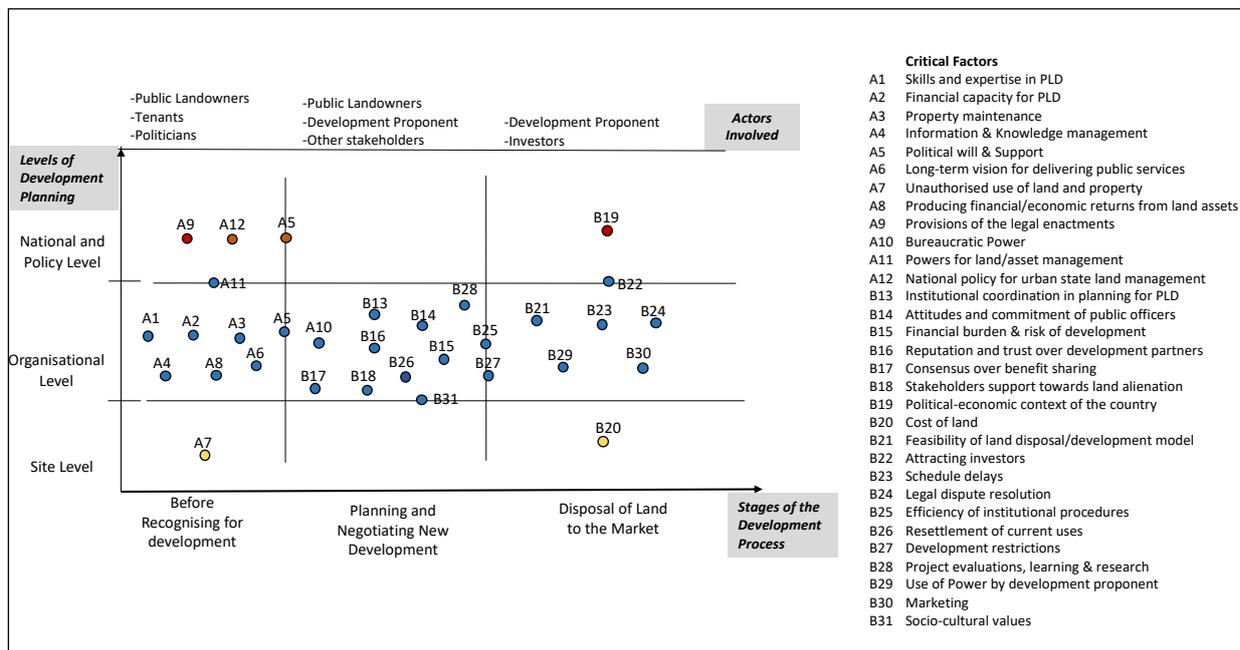

Figure 7. 5: Critical factors and dimensions of PLD

In terms of the levels of development planning, many critical factors identify the organisational level attributes and this becomes evident through **Figure 7.5**. Hence, the organisational level

attributes such as functions of the organisation, laws, procedures, availability of resources and organisational practices that govern the PLD process have been identified in relation to underutilisation.

Further, the 'Institutional Model' suggested by Healey (1992) attempts to conceptualise the development process by elaborating on how it functions through a combination of events and agents. It also discusses the roles of agents, which are shaped by the resources, rules, and ideas that occur within a broader politico-economic context. The critical factors identified in this study have been able to capture these multiple dimensions in relation to PLD. Hence, it can be argued that this analysis follows the institutional perspective towards the development process. After examining the role of individual critical factors, the analysis then moved towards acquiring a more comprehensive view of the relationships through the clustering of critical factors.

7.4. Clusters of Critical Factors and their Relationships

Identifying sub-components or distinct communities of a network is essential to understanding the function of a network. The analytical tools provided in the Gephi software (modularity function) helped to identify the clusters inside the network by partitioning the critical factors into clusters based on the strength of their connections with other critical factors. As shown in **Figure 7.6,** the modularity function partitioned the critical factors into five key clusters, which identify sub-components of the network. Yet, there is a certain degree of overlapping between clusters, which is inevitable considering the interconnectedness of the critical factors. However, after focusing on the distinctive features of each cluster, the five clusters were identified as; 1) Limited powers and functions of public landowners, 2) Ineffectiveness in property

management, 3) Challenges in planning the development, 4) Failures in building consensus

between key actors, and 5) Delays in disposing of land in the market.
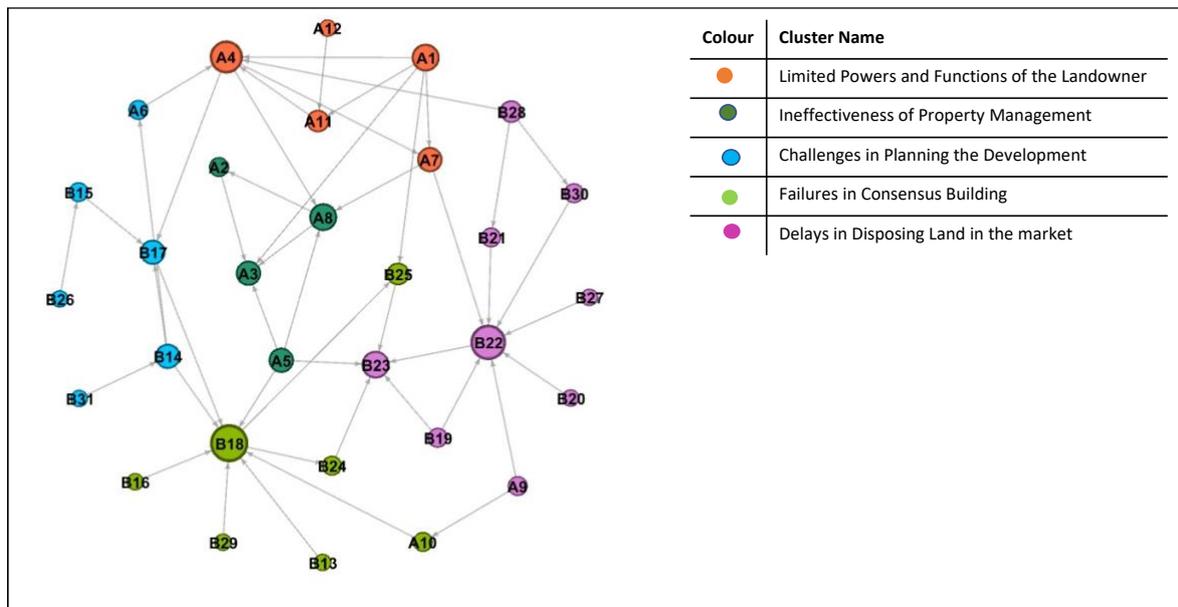
Figure 7. 6: Five clusters of critical factors

Table 7.2 provides the list of critical factors with respect to five clusters.

Table 7. 2: Five clusters of critical factors

No.	Name of the Cluster	Critical Factors of the Cluster
C1	Limited Powers and Functions of Landowners	Lack of skilled human resources for PLD (A1)
		Inefficient information and knowledge management (A4)
		Unauthorised use of land and property (A7)
		Public landowners without a mandate for land/asset management (A11)
		Absence of a national policy for state land management (A12)
C2	Ineffectiveness of Property Management	Lack of financial capacity for land development (A2)
		Inefficient property maintenance (A3)
		Lack of effectiveness in generating financial and economic returns from land assets (A8)
		Political interference (A5)
C3	Challenges in Planning the Development	Absence of a long-term vision for public service/ infrastructure delivery (A6)
		Unsupportive attitude and lack of commitment of public officers (B14)
		Financial burden & risk faced by the development proponent (Public agency) (B15)
		Lack of consensus over sharing the benefits of the new development (B17)
		Challenges in the resettlement of current uses (B26)
		Socio-cultural values and resistance (B31)
C4	Failures in Consensus Building and Dispute Resolution	Uncoordinated plans for development and conflicting claims on underutilisation (B13)
		Negative reputation and mistrust of the development proponent (B16)
		Resistance of public landowner and other related actors in land alienation (B18)
		Land disputes and litigations (B24)
		Time-consuming institutional procedures (B25)
		Misuse of legally vested power by development proponent (B29)
C5	Delays in Disposing Land in the Market	Provisions of the legal enactments (A9)
		Bureaucratic power (A10)
		Unfavourable socio-political climate in the country (B19)
		High cost of land (B20)
		Low feasibility of the land disposal & development model (B21)
		Difficulties in attracting investors (B22)
		Unexpected schedule delays (B23)
		Development restrictions imposed by local regulations (B27)
		Lack of post-project evaluation, learning & research (B28)
		Limited scope for marketing (B30)

The following section provides a summative view of the five clusters and the implications they have on underutilisation.

7.4.1. C1. Limited Powers and Functions of Public Landowners

The critical factors in Cluster C1 represent two interconnected dimensions, which are, 1) the national level policy guidance for management of urban state lands, and 2) legally vested powers and functions of the public landowner.

As key informants argued, the absence of a national-level policy that advocates a long term vision and spells out proactive strategies to promote the productive use of state land in the urban context *(A12)* is one of the contributing factors for underutilisation. In Sri Lanka, there is well-established policy guidance for the management of state lands that have been declared as forests and wildlife sanctuaries (i.e., National policy on wildlife conservation) but these encompass mainly non-urban state lands in Sri Lanka. However, the state lands in urban areas that can contribute to urban development have not received the same level of policy attention.

The absence of a well-defined national-level policy to govern the use of urban public lands has strong negative implications on the powers and functions of 'public landowners'. The primary duty of three of the public landowners (i.e., SLR, DOI, CMC) has always been to provide efficient and effective public services to the citizens. However, land management, the process by which 'land resources are put to good effect' (Enemark, 2006, p. 13), or asset management, which seeks to generate 'the best value for money from property assets' (Ngwira & Manase, 2016, p. 2), have not been a recognised as one of the main administrative functions (A11) of these landowners. As such, there are no policies or legal enactments in effect that mandate these public landowners to utilise their lands for development purposes.

Likewise, the power of an organisation can be determined by the resources it possesses. Unfortunately, it was found that these landowners are not equipped with the resources required for PLD. For example, the *absence of skilled human resources (A1)* and *inefficient information management (A4)* were identified as crucial factors that prevented them from making productive use of their land resources. In this context, despite their land ownership, these public agencies have become passive landowners. As an active landowner who holds legal power to carry out physical developments in urban areas, the UDA appeared to be an outlier. However,

the absence of an efficient organisational mechanism to manage *knowledge*, a strategic resource that affects the performance of an organisation (Aliaga, 2000; Dayan et al, 2017), was identified as an impediment for the dual roles played by the UDA as a landowner and as a development proponent.

7.4.2. C2. Ineffectiveness of Property Management

Property management includes the day-to-day management functions such as property maintenance, rent collection and management of tenants. The public landowners in Sri Lanka have been found to be ineffective in these property management functions (A3 and A8). This is mainly attributed to *inefficient information management(A4)* and the *limited financial capacity of the organisations (A2* identified in cluster 1). Further, *political interference (A5)* was found to be a highly influential factor as that created inefficiencies in revenue generation from properties.

As discussed above, both Cluster 1 and Cluster 2 mainly indicate how the limited powers and functions of the public agencies have led to inefficient property and asset management.

7.4.3. C3. Challenges in Planning the Development

While underutilised state lands remain in the hands of public landowners, the UDA as the *development proponent* has entered into the PLD process. Hence, Cluster 3 and Cluster 4 encompass the critical factors that hinder the planning and the consensus-building between the two key public agencies (landowner and the development proponent) during the PLD process.

In the preparation of city development plans, the UDA has identified the underutilised lands and hence, approached the public landowners to carry out new developments. While one of the

landowners (DOI) had no objections to the UDA proposal, claims made by the UDA about underutilisation were not fully accepted by other landowners (i.e., SLR and CMC) and the allied stakeholders (i.e., Trade unions). However, due to the *absence of any long term vision with respect to their service provisions (A6),* the public landowners were unable to provide a strong justification for holding on to their lands. Hence, public landowners were compelled to enter into discussions with the UDA with the expectation of sharing financial (i.e., rental income generated by the proposed real estate development) and non-financial benefits (i.e., housing units for their employees from the new development) to be yielded by any new development. However, a *lack of consensus over the sharing of benefits (B17)* and *unsupportive attitudes of public officers (B14)* resulted in a deadlock for one of the projects (Mt.Mary land development). In the meantime, having experienced a significant delay, public agencies are currently planning to share the benefits of Slaughterhouse land development. The public agencies involved in Kandawala land development have already agreed to share the benefits of the new development and hence moved forward in the development process.

Further, the risks associated with the development turn out to be another significant aspect identified under this cluster. Three out of the four public lands have been used for housing purposes (including unauthorised housing). Development of such lands requires the resettlement of current uses and people occupying the land either temporary or permanent. Hence, among many other factors, *planning the resettlement and managing the financial and non-financial risks associated with it (B26)* was recognised as an *additional financial and transactional burden on the development proponent (B15).*

7.4.4. C4. Failures in Building Consensus and Dispute Resolution

Building consensus is recognised as a way of resolving disputes that arise during decision making related to complex public issues and the disputes are primarily triggered by the plurality or diversity of interests of the different stakeholders (Innes, 1996). As case studies have revealed, factors such as *development planning undertaken by different public agencies in isolation without efficient institutional coordination (B13),* and the *negative reputation of the development proponent (B16)* have made the negotiation process a challenging task. Public landowners such as the SLR and the CMC have shown *resistance to alienating their lands to the UDA (B18)* to undertake new development.

In one of the cases, without recognising or acknowledging the dissatisfaction expressed by the public landowner, the UDA has *used its legally vested power (B29)* and thereby resulted in *legal disputes (B24).* As shown in the cases of Mt.Mary land and Slaughterhouse land in Dematagoda, the inability to reach consensus between the landowner and development proponent has resulted in either long delays or stalling of the proposed developments. Further, the case of Chalmers granary provided evidence on how the legal disputes between the public sector agency (the UDA) and the private sector developer hindered the development process. Hence, this cluster recognises how the failures in resolving disputes between the key actors (i.e., landowners, development proponents, other interested actors) involved in PLD affect the PLD.

7.4.5. C5. Delays in Disposing Land in the Market

The disposal of the public lands in the market is one of the key stages of the PLD process. Among the public landowners under investigation, only the UDA holds the legal power to

dispose of land to private developers on a long-term lease basis for various types of developments. Hence, in all selected cases, the UDA is held responsible for disposing of lands to the market. However, as the case studies have revealed, even after passing through several challenging phases of the development process, the UDA has found it difficult to dispose of the lands as they expected. Critical factors that are internal and external to public agencies have a bearing on this bottleneck. For example, internal factors such as; *lack of feasibility of land development models (B21), unexpected schedule delays (B23), limited scope for marketing (B30), lack of project evaluation and research (B28)*], and external factors such as; *unfavourable socio-political circumstances (B19) and high cost of land (B20)* have badly undermined the attempts to attract investors for land development. Hence, this cluster of critical factors emphasised how important the roles of the private sector and the market are in public land development.

Despite the unavoidable overlappings, this method of clustering helped obtain a more structured understanding of the critical factors and their network of relationships identified through the multiple case studies.

7.4.6. Relationships Across Clusters: A Cyclical Path ?

Understanding the nature of the relationships or paths between or across clusters can help understand the behavioural patterns of a network. In a network, '*path*' refers to a set of relationships that connects one node with other nodes. There can be cyclical paths (the path starts and end at the same node) or acyclic paths (also recognised as simple paths) in networks (Cherven, 2015; Hevey, 2018).

The network diagram that was derived from the findings of case studies shows that only the acyclical paths are connecting the individual nodes in the network diagram. However, there is a cyclical path that connects the clusters of the network and hence, it was worth examining this cyclical path further. The complex and messy connections among clusters within the network show the direction of connections but do not clearly indicate a starting point of the path. However, a careful examination reveals that the five clusters signify the chronological sequence of events that contribute to the underutilisation of state land. This sequence of events indicates the various 'phases' of the development process. Further, as Eidelman (2016) argued 'there is no use studying a city unless you first understand who owns the land' (Eidelman, 2016, p.4). Hence, understanding underutilisation can initiate by recognising the landowner (Cluster 1 in the network) and how that ownership affects underutilisation.

Based on the actual network diagram that emerged from the analysis, a conceptual diagram was developed to obtain a summative or abstract understanding of the connections between clusters (see **Figure 7.7**). The conceptual diagram combined Cluster 3 (Challenges in planning the development) and Cluster 4 (Failures in building consensus between key actors) since the two clusters are closely interconnected and overlapping each other. Further, Cluster 5 (Delays in disposing land to the market) was renamed as 'Delays in disposing of land & lack of post-project evaluation' in the conceptual diagram to illuminate the relationships between clusters. It should be noted that the conceptual diagram (b) is an anticlockwise presentation of the actual network diagram (a).
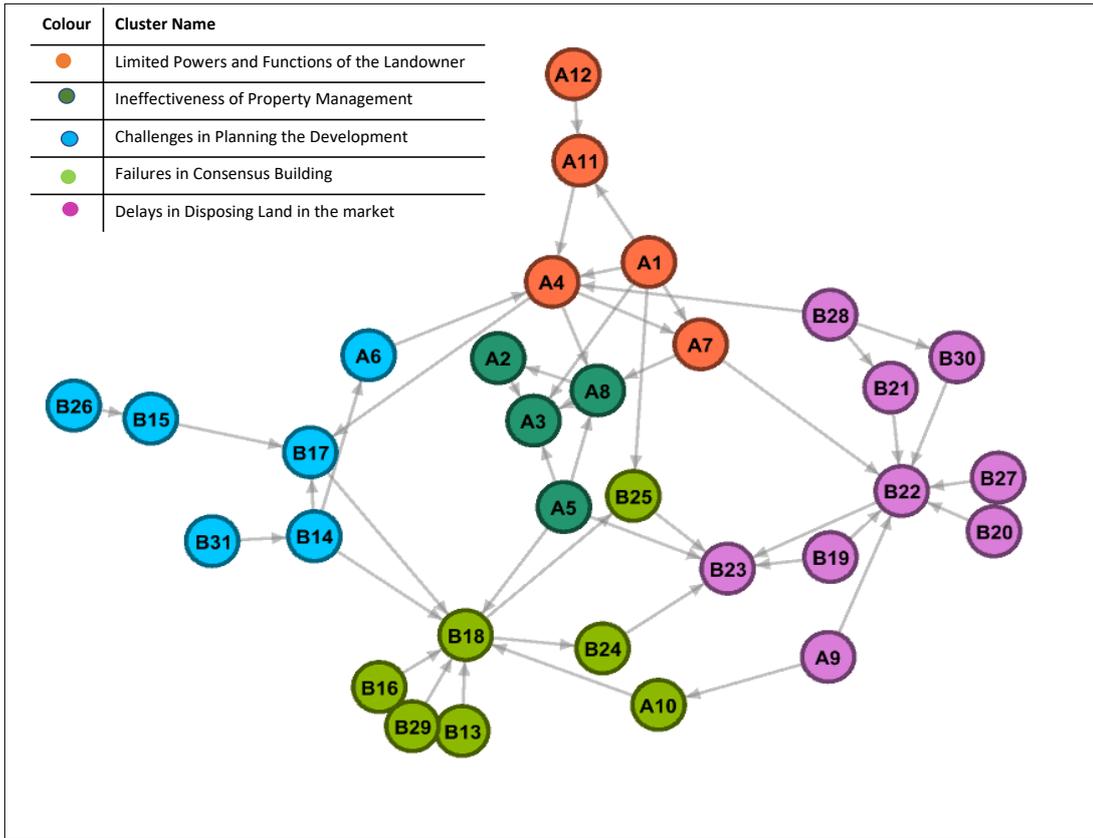
(a)
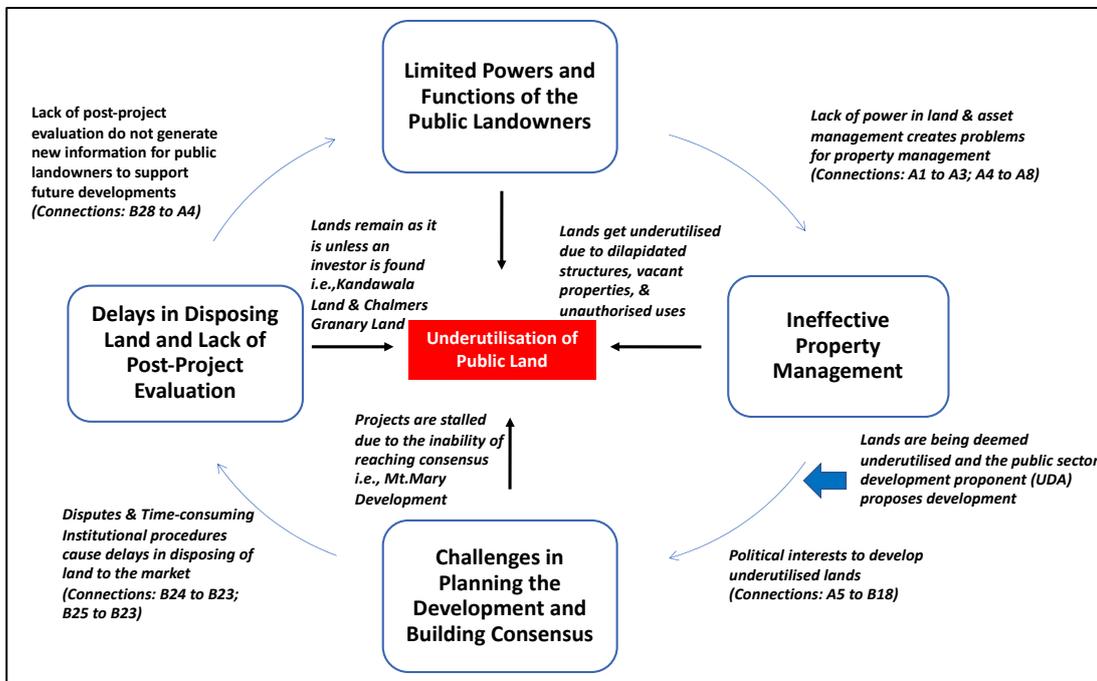
(b)

Figure 7. 7: From actual network diagram (a) to abstract diagram (b) - Path across clusters

As shown in **Figure 7.7**, these four clusters signify a chain of events. As identified by *Cluster 1*, there are public landowners particularly, two types of landowners as active and passive who hold state land under their custody. Within the existing legal and policy context, these agencies have varying degrees of power and functions related to land development and asset management. Hence, each public landowner experience inadequacies in different magnitudes when managing their lands. As a result, the management of state lands vested within these public agencies has not been effective and its negative consequences are identified by *Cluster 2*. State lands have been experiencing problems such as low-density developments, deprivation of potential revenue, unauthorised occupation of land, and deterioration of built structures. Having observed the problems associated with state lands, the city development plans and programs deem these lands as underutilised. Consequently, as the landowners are unable to carry out development by themselves, they are obliged to collaborate with a public sector development proponent (i.e., UDA) or private sector investors for developing the land. However, planning the development in collaboration with other actors and building consensus between key actors proved to be highly problematic and *Cluster 3* identifies this phase of the development process. Failures in planning the development and consensus-building have either stalled the project or delayed the process of disposing land to market. Hence, *Cluster 4* recognises the problems associated with state land disposal to the market.

When considering individual cases, each state land that is under investigation has been through these phases of development however, not necessarily moved from Cluster 1 to Cluster 4 (refers to the conceptual diagram). For example, Mt.Mary land progressed until *Cluster 3* (planning and consensus building) and mainly due to the inability of reaching consensus, the development proposal was shelved. Likewise, Slaughterhouse land development has recently reached *Cluster 3* and the discussions are currently underway for a development that shares the benefits

between public agencies (owner and the development proponent). The other two cases, namely, Kandawala land and Chalmers' Granary land serve as examples of lands that reached the stage of disposing land to the market. However, the difficulties in attracting investors and delays in disposing of lands to the market have caused these lands to confine with the current use of land without any transformation. The latter two cases show that passing the barrier of building consensus among key actors for a new development is not sufficient enough to overcome the problem of underutilisation. The external factors, such as the increasing cost of the land and the socio-political instabilities of the country, can make negative effects and hence delay land disposal.

As the network analysis revealed, the path between clusters does not end at the phase of land disposal. The lack of post-project evaluation particularly by the development proponent (the UDA) was recognised as one of the critical factors affecting underutilisation. In analysis of the path within the network, there is no exact connection (edge) or a causative factor that made the UDA lacking attention on project evaluation and research on PLD. However, the UDA is the development proponent in all selected cases and plays a major role ranging from proposing the development to disposing of land to the market. Hence, undertaking an impartial project evaluation by the UDA is an unreasonable expectation to be achieved. For the same reason, the lack of comprehensive post-project evaluation may not be coincidental. However, whatever the root cause had been, the consequence of this drawback was that the UDA was unable to generate new information and knowledge which can benefit forthcoming developments to overcome underutilisation. Ineffective information and knowledge generation do not contribute to enhance the capacity of the landowner, thereby possibly perpetuating the chain of events over again. This relationship was identified by the connection flowing from

Factor B28 (Lack of post-project evaluation, learning & research) to Factor A4 (ineffective information & knowledge management). Hence, it connects *Cluster 4* to *Cluster 1.*

Accordingly, as shown in **Figure 7.7,** the path that began from *Cluster 1* eventually reached the same cluster, showing a *cyclical* path within the network. The lack of powers and functions of the public landowners (Cluster 1) has produced negative outcomes which follow by a string of negative consequences thereafter and hence perpetuate underutilisation. Therefore, this cyclical path that connects clusters of critical factors that affect underutilisation can be identified as a *'vicious cycle of underutilisation'.*

- **Insights from the Deviant Case**

As discussed above, the lack of post-project evaluation is identified as the last link which connects *Cluster 4* to *Cluster 1* and hence perpetuates a vicious cycle. The findings of the deviant case, namely, Tripoli market development provide useful insights into why this connection is critical in terms of land underutilisation. Further, one could question whether the successful implementation of Tripoli land development did break the vicious cycle. Hence, the findings of the deviant case can be re-examined to answer these questions.

Even though the UDA regards the Tripoli Market development (completed in 2014) as a successful project, that development is not viewed positively by the former landowner, the SLR. Particularly, the absence of a profit-sharing mechanism with the SLR is one of the key reasons for this dissatisfaction and for the SLR, the project signifies the misuse of power by the UDA. Consequently, this compelled the senior management of the SLR to oppose the transfer of the ownership of their other 'underutilised' lands to the UDA. Likewise, the projects initiated by the UDA with the SLR and other public agencies after Tripoli development have been

confronting with problems of transferring the land and sharing the benefits of PLD. Impartial post-project evaluation could have provided new information to the development proponent and also the policymakers about the dissatisfactions of previous landowners, their expectations over land and better solutions for state land development.

Further, critical factors that supported the Tripoli market project during its development phase from 2011 to 2014, such as strong political interest, new organisational structures (Defence Ministry supervision of urban development), approach adopted for land vesting (vesting land without benefit-sharing), and methods of resource mobilisation (using the labour from SL Army) were only sustainable during that particular period. The project was able to overcome the challenging phases of the development process and eventually completed the development. However, the project could not contribute to improving the institutional conditions that are critical for effective state land development to overcome underutilisation. This case proves that completion of a state land development as an isolated and one-time project that does not bring in any sustainable institutional changes or improvement to break the vicious cycle of underutilisation.

7.5. Validating the Findings via Member Checking

This study aims to validate the findings of the research through *Member Checking*. The key objective was to assess how accurately the findings had been derived from the data, and how well the findings can be used to interpret the perspectives of the participants on underutilisation of state land in Colombo. Hence, the member checking process mainly focused on the internal validity of the findings.

The member-checking process was based on an email-based questionnaire survey since it provides easy access to the target group. A questionnaire that disclose the synthesized findings of the research study was sent to the key informants (20 participants) who took part in the in-depth interviews during the data collection in Colombo. The survey received valid responses from five (5) participants. The rate of response was not high and it was recognized as a limitation for this study. In the questionnaire survey, participants were asked to rate their level of agreement with the key findings using a five-point Likert scale (5= Strongly Agree, 4=Agree, 3=Neutral, 2= Disagree, 1= Strongly Disagree). The level of agreement expressed by the five participants and the mean score obtained by each finding is shown in **Table 7.3.**

As shown in **Table 7.3,** the respondents agreed with the findings on how underutilisation of state lands in urban areas is recognised during the planning decision making in Sri Lanka. Hence, all four attributes of underutilisation have obtained mean scores equal to or greater than 4. Regarding the critical factors affecting underutilisation, different respondents may have experienced different dimensions of the PLD process and underutilisation of land. Therefore, variations in the level of agreement can be seen across factors. Except for two critical factors (i.e., conflicts with socio-cultural values and development restrictions imposed by planning/building regulations), the mean scores of all other critical factors are equal or greater than 4.

Table 7. 3: Mean Score Value of Key Findings

No	PART I Attributes of Underutilisation of State Land	Responses of the Participants					MEAN SCORE
		P1	P2	P3	P4	P5	
1	Physical deterioration of built structures	4	3	5	4	4	4.0
2	Not being able to generate revenue (for public agencies) from a land located in a prime area of the city	5	4	4	5	5	4.6
3	Incompatibility between the current use of the land and its surroundings in terms of the best possible use and the development density	5	4	5	4	5	4.6
4	Undermining the potential capacity of the land for development	4	4	4	4	5	4.2
	Part II						
	Critical Factors Affecting Underutilisation of Urban State Land	P1	P2	P3	P4	P5	
	Limited Powers and Functions of the Public Landowner						
1	Lack of skills and expertise (human resources) for land development	4	4	3	4	5	4.0
2	Ineffective information management & knowledge management	5	3	3	5	4	4.0
3	Public landowners without a mandate for land and asset management	5	3	3	5	4	4.0
4	Absence of a national policy for urban state land management	4	4	3	4	5	4.0
5	Limited provisions in the legal enactments for land development (i.e., Railway Act)	5	4	3	4	4	4.0
	Inefficient Property Management by the Public Landowner						
6	Lack of financial capacity for land development	4	4	3	4	5	4.0
7	Ineffective property maintenance	5	4	5	4	4	4.4
8	Ineffectiveness of generating financial and economic returns from land assets	5	4	5	4	4	4.4
9	Unauthorised use of land and property	5	4	4	5	4	4.4
10	Political interferences and lack of political will	5	4	4	5	5	4.6
	Challenges in Planning the New Development (Collaboration between the Public Landowners and the UDA)						
11	Absence of a long-term vision for public service/ infrastructure delivery	5	4	3	5	5	4.4
12	Unsupportive attitude and lack of commitment of public officers	4	4	3	4	5	4.0
13	Financial risk and burden on the public development agency; The UDA	4	4	3	4	5	4.0
14	Lack of consensus (between public agencies) over sharing the benefits of new development	5	3	4	5	5	4.4
15	Challenges in the resettlement of current uses	5	4	3	5	4	4.2
16	Conflicts with Socio-cultural values	3	5	5	3	3	3.8
	Failures in Consensus Building between Public Agencies (i.e.,UDA and Sri Lankan Railways/Colombo MC)						
17	Lack of institutional coordination in planning & conflicting claims on underutilisation	4	4	4	5	4	4.2
18	Negative reputation of and mistrust over the development proponent	4	4	4	4	4	4.0
19	Resistance of stakeholders (i.e. Landowner, trade unions) to the land alienation from the public landowner to UDA	4	3	3	5	5	4.0
20	Land disputes and litigations	4	3	4	4	5	4.0
21	Time-consuming institutional procedures (i.e valuation of properties, land vesting)	5	3	5	5	4	4.4
22	Misuse of legally vested power by the development proponent	4	4	3	4	5	4.0
23	Bureaucratic power	4	3	4	5	4	4.0

No	Attributes of Underutilisation of State Land	Responses of the Participants					MEAN SCORE
		P1	P2	P3	P4	P5	
	Challenges in Disposing of the Land in the Market						
24	Unfavourable political- economic climate in the country	4	3	5	5	5	4.4
25	High cost of land	4	2	5	4	5	4.0
26	Lack of feasibility of the land disposal & development model	5	3	4	5	4	4.2
27	Difficulties in attracting investors	3	4	5	5	4	4.2
28	Unexpected schedule delays	4	3	5	4	4	4.0
29	Development restrictions imposed by planning/building regulations	3	2	2	2	3	2.4
30	Lack of post-project evaluation, learning & research within public organisations	5	3	5	4	4	4.2
31	Limited scope for marketing the land for development	3	4	5	4	4	4.0
	Key phases of the PLD process and how each phase causes Underutilisation	P1	P2	P3	P4	P5	
1	Despite having lands in their possession, public landowners (except for the UDA) do not have the powers and functions for land/ asset management. Further, they do not have adequate resources (i.e., finance, information, skilled human resources, legal provisions, etc.) to manage their lands or real properties effectively.	4	4	5	4	4	4.2
2	Due to the lack of powers and inadequate resource capacity, Public Landowners experience inefficiencies in property management (i.e., property maintenance, rent collection, avoiding unauthorised uses, management of tenants and lease agreements, etc.)	4	4	5	4	4	4.2
3	Compared to other public agencies, UDA as a 'Landowner' is equipped with the necessary powers and resources for land development. However, UDA also encounters difficulties in property management, particularly in generating expected financial returns from the lands vested in the UDA (e.g., From 1980 to 2011, Chalmer's Granary land had not been put to the intended development).	5	4	3	4	4	4.0
4	UDA identifies underutilised lands in the city and approaches the public landowners to carry forward new developments. However, planning collaboratively and building consensus between public agencies for new development are extremely challenging tasks. Hence, some projects are even abandoned due to the inability to reach consensus between the agencies.	5	4	4	4	4	4.2
5	If the public agencies manage to build consensus for development, the land will be prepared for disposal in the market. However, disposing of lands in the market is a long-term exercise due to the challenges of attracting investors and also other external factors such as the socio-economic instabilities prevailing in the country	3	4	5	5	4	4.2
6	The absence of post-evaluation of projects, not learning from failures and lack of research within public organisations do not support to generate new information and advanced knowledge (i.e., information on the extent of underutilised land owned by the organisation, innovative methods for land disposal/marketing, methods of consensus building, etc.). Thus, these limitations do not empower the public landowners to be effective in state land development and management.	5	4	5	5	4	4.6
		P1	P2	P3	P4	P5	
1	The visual interpretation of the Cyclical process that dives the underutilisation of urban state land in Colombo	4	4	4	4	4	4
2	The above findings on underutilisation of urban state land in Colombo (31 critical factors and the cyclical process that leads to underutilisation of state land) can be used to understand the underutilisation of state lands in other urban areas outside Colombo in Sri Lanka.	4	4	4	4	5	4.2

It is important to note that all respondents are very much in agreement with the explanatory statements that are used to articulate the key phases of the PLD process that dive public land towards underutilisation in the context of Colombo, Sri Lanka. Likewise, the abstract visual illustration that was used to demonstrate the relationships between the four key phases of the development process is recognised as a valid interpretation of the underutilisation of state land. Accordingly, as shown in **Table 7.3,** all six statements and their visual illustration have obtained mean scores of equal to or greater than 4.

Apart from assessing the internal validity, the process tried to identify the external validity of the findings. Hence, the last statement of the questionnaire intended to check the feasibility of generalising findings derived from Colombo into other urban areas in Sri Lanka. That statement has obtained a mean score of 4.2. which verifies the external validity of the findings in the Sri Lankan context.

7.6. Chapter Summary

The foregoing sections of the chapter mainly discussed the relationships between critical factors that affect underutilisation, the significance of critical factors (based on relationships), clusters within the network, and cyclical relationships within the network that explain the persistence of underutilisation of state land in Colombo. As the analysis of relationships among critical factors confirmed, land underutilisation is attributed to a network of relationships. The analysis proved that underutilisation can be better explained through the analysis of relationships associated with land rather than debating over the physical conditions (i.e., deterioration of built structures, land vacancy, low density etc.) of land that symbolise only the outlook of underutilisation. The significance of a critical factor varies according to the relationships that factor has with other factors within the network. Based on the relationships,

critical factors can become *influential* and/or *vulnerable* in the context of PLD. The analysis identified a cyclical relationship across clusters of critical factors which shows a sequence of negative consequences that perpetuates underutilisation. Hence, it was recognised as a *vicious cycle of underutilisation*. Overcoming a challenging phase of the cycle is crucial for addressing underutilisation but not sufficient to break the vicious cycle. The next chapter will discuss the final step of the analysis i.e. testing the hypothesis against the findings derived from case studies from Colombo.

CHAPTER 8

FROM HYPOTHESIS TESTING TO DEVELOPING NEW THEORETICAL INSIGHTS

8.1. Introduction

The research question central to this study is: *why the public lands with development potentials remain underutilised in the urban areas of Sri Lanka*. The study examined multiple case studies from Colombo to address this question. At the beginning of the examination of case studies, a hypothesis was developed to elucidate underutilization of urban public land in Sri Lanka (discussed in **Chapter 5**). After completing the data collection relating to case studies, the data analysis and the key findings were discussed in **Chapters 6** and **7**. Hence, this chapter aims to test the validity of the hypothesis against the findings from Colombo. In doing so, while reviewing the literature, Section 8.2 discusses different methodologies used for hypothesis testing in qualitative research. Sections 8.3 examines two propositions of the hypothesis postulated in this study against the findings. Then, Section 8.4 builds new theoretical insights into Institutional Elasticity (IE) and underutilisation of public lands.

8.2. Testing Hypothesis with Qualitative Data: Methodological Insights from Literature

The objective of this section is to examine the methodologies that have been used by previous studies for testing or verifying the hypothesis in qualitative research studies.

Despite the strong polarization of deductive and inductive approaches, research studies tend to use integrated approaches in qualitative research lately. Recent studies on the abductive research approach (i.e., Awuzie & McDermott, 2017; Chigbu, 2019; Dubois & Gadde, 2002;

Shani et al., 2020; Timmermans & Tavory, 2012; Zelechowska et al., 2020) discuss how generating and testing hypothesis in scientific research can contribute to producing new knowledge.

Developing and testing hypothesis in qualitative research differs from the quantitative research tradition (Chigbu, 2019; Kelle, 1996). Previous studies (i.e., Chigbu, 2019; DeRosia & Christensen, 2009; Gerber, 2016; Hesse-Biber & Dupuis, 2000) provide evidence on different strategies adopted for 'testing' or 'verification' of the hypothesis using qualitative or textual data. These studies confirm that hypothesis testing in scientific research does not necessarily mean a quantitative or numerical test. The verification or falsification of the hypothesis may adopt diverse strategies.

For example, Hesse-Biber & Dupuis (2000) provided an example of testing a hypothesis using textual data and the study has adopted a computer-aided data analysis strategy to ascertain the evidence from the textual data through coding. Findings extracted from codes were carefully examined to see how those findings support or reject the hypothesis. Another study by Chigbu (2019) has discussed how visual communication particularly, diagramming can be used to demonstrate and test the propositions of a hypothesis in qualitative research. A qualitative research study that examines the effects of New Public Management (NPM) on land-use planning has presented the hypothesis in the form of clear statements. The study has used an in-depth discussion of findings as the method of verifying the hypothesis (Gerber, 2016). Another study by DeRosia and Christensen (2009) has proposed a new technique recognised as *Blind Qualitative Hypothesis Testing* in which two researchers work independently for forming the hypothesis and collecting empirical data. After completing the data analysis, two researchers have jointly examined how findings disconfirm or support the hypothesis. Hence,

these studies affirm methodological pluralism in scientific research. It provides insights for qualitative researchers to adopt permissive and appropriate methods that serve the purpose of their research study.

In this study, the data collection and the analysis followed an inductive approach. The data analysis was not constrained by the predetermined themes that were identified by the hypothesis. At the stage of the hypothesis testing, the findings derived from the data analysis will be re-examined against the hypothesis to determine whether the proposition is substantiated or disconfirmed by the findings. Hence, in this study, testing of hypothesis refers to the process of re-examining the findings derived from (qualitative) data analysis, against each proposition of the hypothesis. The propositions that are supported by the corroborating evidence are accepted, while the propositions that are not supported by the evidence are rejected. Hence, accepted propositions should be able to expound the phenomenon under investigation, underutilisation of urban public land in this case.

8.3. Testing the Hypothesis: Propositions Versus Findings

As discussed in **Chapter 4**, the hypothesis postulated in this study consists of two inter-related propositions that seek to explain the underutilisation of public land in Colombo. When developing the hypothesis, the IE in PLD was re recognised as *the responsiveness of land institutions to the changing conditions of the external socio-economic environment.* Accordingly, the hypothesis postulated the following two propositions.

Proposition 1: *Underutilisation of public lands with development potential can be attributed to the lack of elasticity in the land institutions, which are produced and reproduced through an iterative process (a vicious cycle).*

Proposition 2: *Institutional Elasticity (IE) in PLD constitutes four critical dimensions, namely: 1) Local agent with devolved power, 2) Assessment of development context and utilisation of public land, 3) Resource mobilisation, 4) Scaling-up the development interventions and the cyclical relationships between the critical dimensions.*

*Hence, the vicious cycle of lack of IE in PLD was visually illustrated as part of the hypothesis (see **Figure 4.1** in **Chapter 4**).*

The following section investigates each of the above propositions against the findings derived from case studies. However, before testing the two propositions, it is essential to revisit the initial conceptualisation of IE and examine how the findings from Colombo supplement or align with that conceptualisation. Section 8.3.1. addresses this requisite.

8.3.1. Responsiveness of Institutions; To what conditions are the institutions responding?

Here the land institutions refer to agents (i.e., organizations, individuals), regulative structures (i.e., laws, policies, regulations etc.), normative and cognitive structures (i.e., norms, beliefs, ideas, values, practices etc.) that govern the relationship between public land and people. The subsequent question that arises at this juncture is what the land institutions are responding to. As per the initial interpretation of IE, land institutions are expected to respond to the conditions of the socio-economic environment that are external to institutions. However, case studies from Colombo provided more precise and context-specific evidence that can widen the scope of this interpretation.

As per the findings, institutions are required to respond to both *internal and external conditions* during the process of PLD. Here, the term *condition* is used as an inclusive expression to encapsulate the ideas of constraints, needs, risks and uncertainties. Based on their origin, these conditions can be classified as endogenous and exogenous.

There are two types of *endogenous conditions* to which the land institutions in Colombo were required to respond.

i.   **Property Rights Related Constraints**:

Property rights over public land in Sri Lanka are fragmented among different public agencies. These public landowners hold varying degrees of power for PLD. Hence, there are both passive and active landowners. As discussed in **Chapter 6**, passive landowners do not proactively engage in PLD and it was recognised as one of the key constraints related to property rights. Further, as Adams & May (1991) identified there are different types of *ownership constraints* that impede the availability of land for development in cities. The behaviour of public landowners in Colombo provided evidence for such ownership constraints. Firstly, the function of disposing of land in the market for development by the landowner (i.e., SLR) has not been well supported by existing legal enactments. Secondly, some landowners (i.e., SLR, CMC) were completely unwilling to hand over their lands to another public agency that has the power to undertake development. Thirdly, on some occasions, the landowner (i.e., SLR) was willing to alienate their land but did not agree with the benefits that they were promised to receive from the proposed development. These are the three key ownership constraints identified by case studies.

ii. **Organisational Constraints**:

Each case study provided evidence for constraints that manifests at the organisational level. Organisational constraints are recognised mainly related to two types of public organisations that are involved in PLD namely, 1) the public landowners, and 2) the public sector development proponent. As shown in the cycle of underutilisation, public landowners, such as the SLR, the DOI and the CMC, struggle with the constraints which

curtail their capacity for undertaking PLD and property management. In many cases, public landowners were compelled to adopt a passive role in land development under conditions as lack of financial capacity for property maintenance, lack of skills and expertise for PLD, absence of up-to-date information, and limited provisions of legal enactments. On the other hand, the public sector development proponent (i.e., UDA) experiences a different set of limitations, i.e., ineffective knowledge management, limited scope in marketing the development and lack of institutional coordination. Hence, public organisations were required to respond to these conditions during the PLD process.

Further, there are two *exogenous conditions* to which the land institutions were expected to respond.

i.   Public Needs and Market Potentials:

Development problems, emerging needs of citizens and market potentials have put pressure on public lands in Colombo. Diverse claims made by public agencies and other associated actors on underutilisation of selected public lands in Colombo have pinpointed such problems, needs and market potentials. Hence, examination of these claims helped recognise the *exogenous conditions* emphasised by different actors. **Table 6.2** in **Chapter 6** illustrated these findings. For example, *underserved settlement in Colombo, increasing demand for affordable housing, the need for easy access to social infrastructures such as schools, the need for high-density developments in urban areas* and *the potential for generating land-based revenues for public landowners* were recognised as the triggers for proposing developments for public lands in Colombo.

ii.   Social and Market-Related Uncertainties and Threats

Landowners have not always been capable of foreseeing the external conditions that produce uncertainties and threats to the PLD. However, during development, public agencies were held responsible for addressing such uncertainties and threats. As identified by the analysis of cases, *high land prices, socio-political instabilities of the country* and *the lack of interest of private sector investors* have imposed unforeseen risks to PLD projects in Colombo, mainly at the phase of land disposal. Hence, land institutions should be adequately equipped to respond to these threats and uncertainties.

Initially, the ability of land institutions to respond to external socio-economic conditions was recognised to be the IE in PLD. However, as forgoing section discussed, land institutions in Colombo were expected to respond to both internal (endogenous) and external (exogenous) conditions in PLD. Therefore, there is a need to expand the scope of the initial interpretation provided for IE in PLD.

8.3.2. Proposition 1 VS Findings

Proposition 1: *Underutilisation of public lands with development potential can be attributed to the lack of elasticity (responsiveness) in the land institutions, which are produced and reproduced through an iterative process (a vicious cycle).*

Following the above statement, it was required to verify whether the findings from Colombo provide evidence for the lack of responsiveness of land institutions. Investigation of critical factors affecting underutilisation of public lands by the means of multiple case studies (discussed in detail in **Chapters 6 and 7**) has already captured the institutional dimensions of PLD (See **section 7.3.2 in Chapter 7**). Re-examination of these findings enabled me to discern

the responses of land institutions towards the exogenous and endogenous conditions during the PLD process.

Hence, while drawing evidence from case studies, **Table 8.1** provides a summarised view of the responses of the land institutions concerning four types of exogenous and endogenous conditions that were identified in **Section 8.3.1**. As shown in **Table 8.1**, the land institutions in Colombo have not always been successful in responding to the exogenous and endogenous conditions (property rights related constraints, organisational constraints, public needs and market potentials, and social- market related uncertainties). All these conditions, the responses of land institutions and the consequences of responses were capsulated in the analysis of critical factors and their interrelationships.

Table 8. 1: Responses of land institutions in PLD

Exogenous and Endogenous Conditions	Response of Land Institutions
Property Rights Related Constraints: *i*) Passive landownership, ii)Absence of willingness for land alienation, iii)Disagreements over the conditions of development	-As a response towards passive land ownership, the UDA, an active landowner, and the public agency with the mandate for land development has been involved in PLDs in past decades. The UDA has taken initiative in proposing developments for underutilised public lands and vesting underutilised public lands from other public landowners. -Sharing the benefits (financial and non-financial) of the new development between the passive landowner and the development proponent is recognised to be the most effective response for winning over the resistance shown by passive landowners for land alienation. Proposed developments for Mt. Mary land, Slaughterhouse land and Kandawala land provide examples for such responses. Public organisations have tried to reach a consensus on sharing the benefits through negotiations. However, as per the findings from Colombo, this strategy has not been successful in every case.
Organisational Constraints: i) Lack of financial capacity for PLD, ii) Lack of skills and expertise, iii) Ineffective information and knowledge management, iv) Ineffective institutional procedures, v)Limited provisions of legal enactments	**Response of Public Landowners:** - Making conditional offers for transferring the ownership of underutilised lands to the UDA has been the most common response of the passive landowners towards their limited organisational capacity in PLD and asset management. Besides this strategy, there have not been any significant institutional responses to improve the capacity of passive landowners in PLD. However, an attempt was made to transform the SLR from a *Department* to an *Authority* by enforcing the Railways Authority Act of 1993. Yet, the proposed legal reform was later repealed. Hence, the passive landowners appeared to navigate through existing organisational constraints without a significant institutional change. **Response of Public Development Proponent:** -In terms of the organisational conditions of the development proponent, the *Support to Colombo Urban Regeneration Project (SCURP)* was commenced in 2019 by the UDA as a continuation of the previous project; the Urban Regeneration Program (URP). The SCURP project aims to mobilise the necessary finance from the Asian Infrastructure Investment Bank (AIIB) for the development of housing on public lands. Along with the finance, the project aims to obtain technical support to upgrade the technical know-how and review existing policies on public interventions in housing (UDA, 2021). The slaughterhouse land is proposed to be developed under this project. The non-financial benefits that are expected to be achieved through SCURP might be a strategic response to overcome the organisational constraints of the UDA in terms of knowledge management, innovations in development. Yet, it is too early to evaluate the effectiveness of this institutional response. Because the case studies didn't provide any supporting evidence to witness the implications of the proposed institutional response.

Exogenous and Endogenous Conditions	Response of Land Institutions
Public Needs and Market Potentials: **i**)Need for effective railway services for freight and passenger transportation, ii) Need for affordable housing within the city, iii) Need for high-density developments	**Response of Public Landowners:** -The SLR, a key public infrastructure agency has identified the need for developing the railway infrastructure network for effective transportation of freight and passengers. However, the organisation is not yet equipped with a long-term vision and a strategy to capitalise on its land assets to support the functions of the SLR. -With the employee demand for public housing, the DOI and the SLR have recognised the potential of their lands in providing affordable housing for their employees within city limits. As the key informants from these organisations confirmed, given the limited financial capacity, respective organisations have hardly managed their existing housing stock. Hence, with the new developments proposals, these organisations have tried to negotiate with the UDA to build housing for their employees with adequate quality and quantity. However, building consensus over sharing the benefits of land development has been a critical challenge. **Response of Public Development Proponent:** - The development plans, programs (i.e., URP, SCURP) proposed by the UDA in the past decade and the development interventions of the government ministry which is in charge of urban development have heavily focused on the development of public lands in Colombo. As the UDA claims, these interventions aim to address multiple objectives such as providing affordable housing and maximising revenue from prime lands. However, evidence indicates that there is an ongoing debate over the objectives and implications of these development interventions. Likewise, political interferences are recognised as one of the critical factors that caused the SLR to resist the transfer of its lands for development. The actual objectives of PLDs are questioned due to the political interventions underlying the process. Hence, there is the possibility that these institutional responses in PLDs may not be mere responses towards public needs but can be driven by other factors such as politics and power.
Social and Market-related Uncertainties/ Threats: i) Socio-political instabilities, ii) High land prices, iii) Lack of interest of investors	**Response of Public Development Proponent:** -The development proponent had to confront social and market-related uncertainties and threats mainly at the stage of disposing of land to market. For example, as the UDA identifies, the development of large parcels of lands has come across as unaffordable for individual investors due to the high land prices in Colombo. Investors haven't shown much interest in investing in such lands. However, the examination of case studies from Colombo did not provide any significant evidence on strategic responses by the land institutions towards these uncertainties and threats.

Likewise, the cross-case analysis and the synthesis of inter-relationships between critical factors revealed that not only does underutilisation of public lands occur, but it also perpetuates in an iterative process that follows sequential steps. The iterative process was recognised as a *vicious cycle* (See section **7.4.6 in Chapter 7**). This *vicious cycle of underutilisation* elucidates how the lack of effective responses by the land institutions (identified in **Table 8.1**) and the implications of such responses have contributed to underutilisation in public lands.

In the end, findings from Colombo confirmed that critical factors affecting underutilisation characterise the lack of elasticity or the responsiveness of institutions and *the vicious cycle of underutilisation* is recognised as a proxy for the lack of IE. Hence, underutilisation of public lands is attributed to the lack of IE in PLD. Re-examination of findings against the proposition concluded that the first proposition of the hypothesis is well supported by the evidence and hence, accepted.

8.3.3. Proposition 2 VS Findings

> *Proposition 2: 'Institutional Elasticity' (IE) in PLD constitutes four critical dimensions, namely: 1) Local agent with devolved power, 2) Assessment of development context and utilisation of public land, 3) Resource mobilisation, 4) Scaling-up the development interventions and the cyclical relationships among the critical dimensions.*

The second proposition of the hypothesis is inter-linked with the first proposition. It postulates what constitutes the IE, particularly the critical dimensions of IE. Further, this proposition of the hypothesis was supplemented with a visualisation that illustrates the relationships between these four critical dimensions (see **Figure 8.1 (a)).** Further, this visualisation suggested that the critical dimensions of IE can be affected by several other critical factors.

As discussed earlier, the *vicious cycle of underutilisation* demonstrates the lack of effective responses by the land institutions and is recognised as *a proxy for the lack of IE* in PLD (see **Figure 8.1** (**b**). Hence, as shown in **Figure 8.1**, the visual interpretation of the lack of IE (postulated by the hypothesis) is examined against the vicious cycle of underutilisation (derived from data analysis) to compare and contrast the constituents of IE.
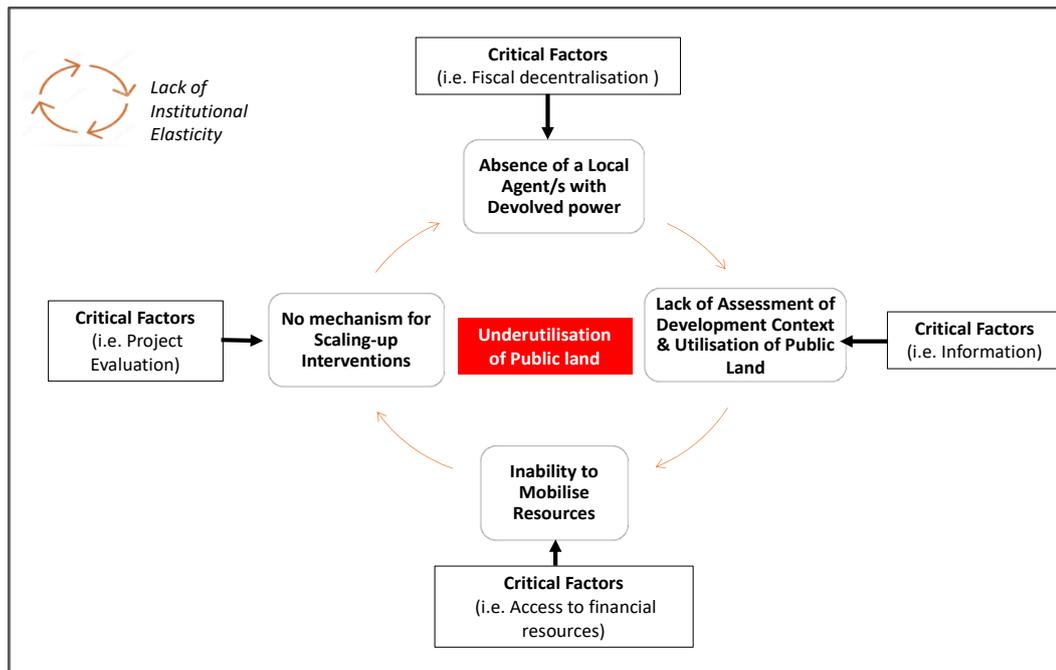
(a)
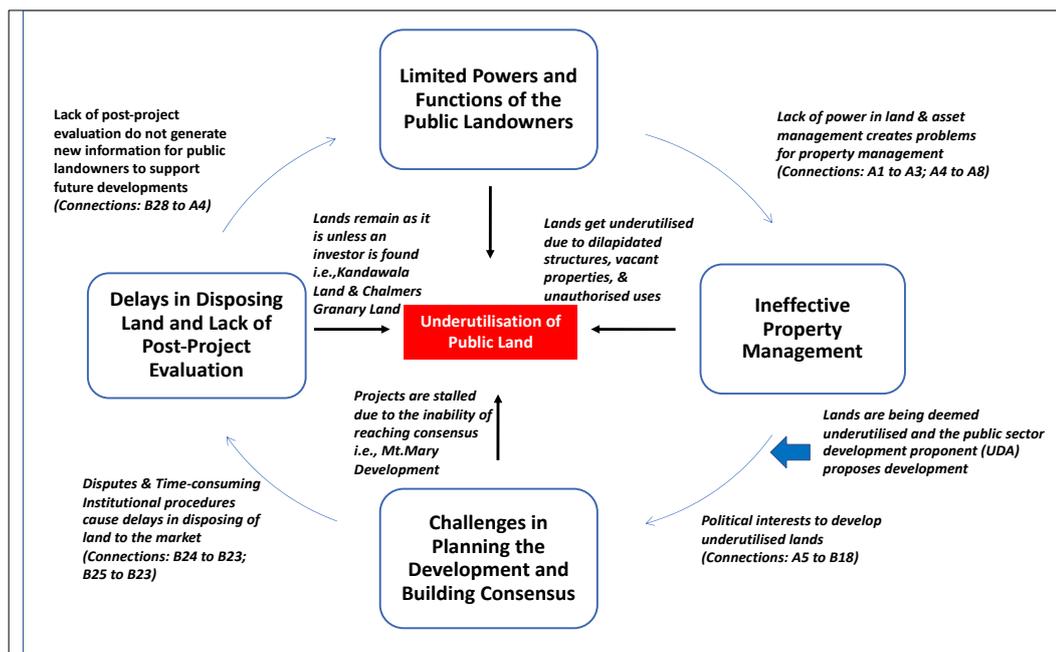
(b)

Figure 8. 1: The lack of institutional elasticity in PLD (a) and the vicious cycle of underutilisation (b)

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Both illustrations above; the lack of IE in PLD (a) and the cycle of underutilisation (b) demonstrate an iterative process that contributes to underutilisation of public land in Colombo. However, as shown in **Figure 8.1,** the critical dimensions or the key phases of the iterative processes are synthesised differently in two diagrams. The reason is that the analysis of the data collected from Colombo was not framed by the predetermined themes that were identified by the hypothesis as critical dimensions of IE. Hence, differences were observed between the hypothesis and the case-based findings. Recognising these differences is important as it can potentially provide new insights from the findings that go well beyond the hypothesis on IE.

As illustrated in **Figure 8.1**, when comparing the proposition on the lack of IE with the cycle of underutilisation, one apparent similarity can be noted. The critical dimension which is positioned at the top of both cycles identified the power vested in public landowners and their role in PLD. Apart from this similarity, the following discrepancies can be observed between the hypothesis and the findings derived from case studies.

Three of the critical dimensions suggested by the hypothesis as crucial for IE are recognised by the findings but none of these dimensions appeared as a distinct cluster within the vicious cycle that contributes to underutilisation. These three critical dimensions are as follows.

- As per the hypothesis, *lack of assessment of the development context and effectiveness of the utilisation of public* land is a critical dimension of lack of IE. Case studies recognised how critical factors such as lack of up to date information, absence of a mandate for PLD and absence of a long-term vision for public infrastructure delivery impede the landowner's commitment towards assessment of the productivity of public lands. Particularly, passive landowners are not equipped with comprehensive assessment strategies which evaluate the

productive use of the land related to its development context (i.e., needs, market potentials). However, a lack of assessment of the development context was not recognised as a key dimension of underutilisation by the findings. This might be mainly because the assessment of utilisation of public lands in the city and their development context had been carried out by the UDA, the development proponent who dealt with all selected cases from Colombo. The assessments and claims made by the UDA on public lands have been highly influential in decision making as such assessments are part of the legally sanctioned city development plans or development programs.

- The hypothesis also suggested the *inability to mobilise resources* as a critical dimension of the lack of IE in PLD. The findings from Colombo also emphasised the significance of resources mobilisation. However, rather than recognising resource mobilisation as a distinct phase, the findings discovered it to be an embedded aspect of each phase of PLD. Further, it was not merely the availability of the resource but its quality also mattered. For example, access to necessary skills and expertise (human resources) is crucial, but as case studies have confirmed, the attitudes and commitment of the public officers towards the development process were also found to be crucial in decision making.

- The hypothesis identified the *absence of a mechanism for scaling up development interventions* as one of the critical causes of the lack of IE in PLD. The findings provided corroborative evidence as it examined the effect of lack of post-project evaluation and research on underutilisation. However, the findings did not recognise scaling up as a distinct cluster.

On the other hand, the findings derived from case studies identified three critical dimensions of the PLD process, which were *not recognised* as significant by the hypothesis. These three dimensions are; 1) property management, 2) planning the development and building consensus among key actors, and 3) disposing of land to the market. The analysis of critical factors affecting underutilisation disclosed the significance of these three dimensions and their impact on underutilisation of public land in Colombo. These critical dimensions also refer to key phases of the PLD process and hence, failing to succeed in these defining phases jeopardise the development process of underutilised public lands.

Therefore, as discussed above, there is a contrast between the proposition of the hypothesis and the findings derived from Colombo in terms of how the critical dimensions of IE are synthesised. Hence, the second proposition of the hypothesis is not fully supported by the findings.

In the end, testing the validity of the two propositions of the hypothesis can be summarised as follows.

The first proposition on underutilisation was corroborated by the findings derived from case studies and hence, underutilisation of public lands can be attributed to the lack of IE. It is also proved to be an iterative process. However, in terms of the second proposition, the critical dimensions and cyclical relationships suggested by the hypothesis to be the lack of IE were not substantiated by the findings that emerged from the data analysis. Except for the first proposition, the second propositions of the hypothesis do not fully counterpart the findings of the analysis. Therefore, the study would argue that a plausible hypothesis is only partially effective in explaining the phenomenon under investigation, which is underutilisation of urban public lands.

In the end of the hypothesis testing process, it is necessary to question how a partially effective hypothesis can be reoriented while incorporating alternative insights that emerged from the qualitative analysis (DeRosia & Christensen, 2009). Careful examination of the findings on underutilisation of public land, responses of land institutions in PLD and the verified proposition of the hypothesis provides room to reframe the concept of IE in PLD. Hence, at this juncture, this study transcended from the stage of hypothesis testing towards offering new theoretical insights on IE that can better explain the underutilisation of public lands. The following section will discuss how the study progressed towards providing more structured theoretical insights on IE and underutilisation.

8.4. Towards Case-based Theory Building

Developing new theoretical insights or frameworks through an interplay between empirical evidence and already available knowledge is one of the key outcomes anticipated from qualitative case study research based on abductive reasoning (Dubois & Gadde, 2002; Timmermans & Tavory, 2012). Accordingly, research studies that follow the above approach come up with *plausible theoretical explanations* or *preliminary analytical frameworks* (Charmaz, 2017; Dubois & Gadde, 2002). However, with the empirical findings, such frameworks can be further expanded and modified for building new ideas, concepts or theoretical frameworks to explain the subject under investigation, which is the key aim of abduction in research *(*Awuzie & McDermott, 2017; Dubois & Gadde, 2002*; Rashid et al., 2019; Timmermans & Tavory, 2012)*. By the same token, this study headed towards constructing a new theoretical framework by systematically combining the findings of the case studies with the proven propositions of the hypothesis. With that, as qualitative research, this study only looks for theoretical generalisation but not statistical generalisation (Lewis et al., 2013; Yin, 2018).

Accordingly, along with the hypothesis testing, this exercise addresses the final objective of this research: *to develop a theoretical framework that can be used to assess underutilisation of urban public land in Sri Lanka*. Development of the new theoretical framework is discussed regarding two inter-connected aspects; 1) New theoretical insights into institutional elasticity, and 2) Assessment of underutilisation of land as a process.

8.4.1. New Theoretical Insights into Institutional Elasticity

At the beginning of this discussion, it is important to note that based on prior scholarly work, this study has been using the term '*institutional response'* to characterize the IE. The latest literature (i.e., Awasthi et al., 2020) has recognized the IE from the perspective of 'institutional change'. Therefore, the below discussion on IE will bring the term *institutional change* into the argument. Institutional change is an overarching concept, and it has been conceptualised in diverse ways in theory (Micelotta et al., 2017). The institutional response and the institutional change may happen simultaneously. However, the latter emphasises the effects of institutional responses on institutions.

Based on the findings drawn from Colombo relating to responses of land institutions and their effects, this study can provide new insights to enhance the theoretical argument on IE. Hence, this discussion aims to compare and contrast the inferences derived from case studies with the existing theories on IE. Discrepancies were observed between the theory and the evidence from case studies.

Differences were identified mainly in relation to the conditions of the *post-change institution*; the situation of an institution afterwards a withdrawal of unsuccessful or failed institutional change. As argued in the recent study by Awasthi et al. (2020), theoretical discussions on

institutional change have been more skewed towards successful changes and the failed changes have not received adequate theoretical attention. While addressing this knowledge gap, Awasthi et al. (2020) discuss a phenomenon where institutions revert to the *original state* or *pre-change stat*e after a failed attempt for institutional change. This behaviour of institutions is recognised as the key attribute of IE and hence, the institutions with high elasticity can easily revert to their *original state* (Awasthi et al., 2020). However, as the authors confirmed, the study is based on a single case study that has experienced changes only in terms of regulative elements of institutions but not in normative or cultural-cognitive elements.

Reversing the changes or discontinuing an institutional practice is recognised as '*deinstitutionalisation*' in organisational theory. According to Oliver (1992), deinstitutionalisation is 'the erosion or discontinuity of an institutionalized organizational activity or practice*'* (Oliver, 1992, p.563). Case studies from Colombo provided evidence for *institutional responses* and their *deinstitutionalisation*.

However, the findings on institutional behaviour in PLD in Colombo suggest that even after discontinuing failed attempts for institutional responses or change, institutions do not revert to their 'original stage' or 'pre-change state'. Discontinuing institutional changes may have dissimilar impacts on diverse elements of institutions. According to Scott (2003, 2008), institutions consist of three key pillars as regulative (i.e., rules, sanctions, laws), normative (i.e., norms, social/ moral obligations) and cultural-cognitive pillars (i.e., common beliefs, shared conceptions). Withdrawing changes may cease the modifications introduced to regulative pillars but it will not necessarily revert the effects produced on normative or cultural-cognitive pillars of institutions. Case studies from Colombo provide evidence to validate this argument

and the following section discusses such evidence relating to deinstitutionalisation with examples from Colombo.

Example 1; When the context of urban development in Colombo relating to the Tripoli Market land development (deviant case) is concerned, the period from 2010-2015 has experienced a significant institutional restructuring in urban development. In 2010, urban development was assigned to the Ministry of Defense by a special gazette notification and the subject ministry was renamed as the Ministry of Defence and Urban Development. However, with the appointment of the new president and the new government in 2015, urban development got separated from the Ministry of Defense. Discontinuation of the previously adopted organisational structure for urban development in Colombo substantiates Oliver's (1992) argument on deinstitutionalisation, which recognised the political and social pressures as causes of deinstitutionalisation. Along with this deinstitutionalisation, other associated institutional practices adopted by the UDA such as mobilising resources for urban development through the Army forces came to a halt.

Example 2; In some selected cases, the procedures adopted by the UDA to vest underutilised public lands from the passive public landowners have not shown any attempts for sharing the benefits of development with the landowner. For example, the development of Tripoli market land in 2013 was not designed to share its benefits with the landowner. In the case of Slaughterhouse land development (in 2017), initially, the UDA has vested the land without the consent of the landowner (the CMC). However, due to the resistance shown by the CMC, the UDA had to negotiate to share the benefits of the development. Lately, the UDA has been making an effort to modify their land vesting procedure by sharing the benefits of development with the landowners (i.e., Mt. Mary Land development, Kandawala land development).

Even though there has been a deinstitutionalisation of regulative structures, procedures and organisational practices as discussed above, the land institutions have not reverted to their original state. For example, perceptions of the key informants from the SLR, the CMC and the UDA have been heavily shaped by the experiences they obtained from projects such as Tripoli market development and other PLDs that were implemented during the same period. As a result, critical factors such as the *negative reputation of development proponent (UDA)* and *attitudes of public officers* tend to impede the development of underutilised land. These two critical factors revealed how the PLD-related institutional practices adopted by the public organisations from 2010 to 2015 have made a significant and irreversible impact on the shared beliefs and attitudes of key actors involved in PLD.

Hence, these findings suggest that deinstitutionalisation might be able to discontinue changes that affected the regulative elements (i.e., laws, rules, procedures). However, changes experienced by the cultural-cognitive elements (i.e., shared values and beliefs) are hard to recognise and hence do not revert easily. A study by Awasthi et al. (2020) on IE has recognised this behaviour related to institutions. The study suggested that institutions can easily return to their original stage if the changes did not affect all three pillars (regulative, normative and cultural-cognitive pillars) of the institution. If the scope of change is narrower, it is easier for institutions to revert (Awasthi et al.,2020). However, as discussed below, my study fundamentally differs and disagrees with this theoretical interpretation of IE.

The findings of this study on PLD and behaviour of land institutions in Colombo do not corroborate the idea of *returning to the original state,* after a failed response. By contrast, the study by Awasthi et al. (2020) on IE has borrowed the concept of elasticity from the realm of material sciences. The authors have used the analogy of metals that 'retain their original shape

after deformation' to understand the IE (p.22). However, the findings from Colombo suggest that after deinstitutionalising an institutional change (regulation, procedures or practice), institutions cannot revert to their pre-change state. This is because the actors who become the agents of change do not return to their original state by withdrawing all changes like metals. Deinstitutionalisation has provided an opportunity for organisations to *learn* better practices such as building consensus through negotiations for PLDs and showing resistance to dominant powers. Likewise, organisations tend to *unlearn* the detrimental practices such as prioritizing regulatory powers over consensus-based partnerships in PLD. Hence, the actors who act as the agents of change *learn, unlearn* and *evolv*e through the deinstitutionalised changes. Hence, there cannot be an 'original state' for evolving institutions.

Based on these findings, this study recognises *IE as the ability of institutions to evaluate the success and failures of institutional responses that address exogenous and/or endogenous conditions, and subsequently, take deliberate actions to; 1) discontinue failed changes (deinstitutionalise), and/or 2) adopt or validate successful changes (institutionalisation).* Based on the interpretations provided by Scott (2003) and Levy (1996), institutionalisation refers here to the process of embedding rules, norms and values to become regular and continuous practice or behaviour in institutions.

Therefore, based on the inferences of case studies, this study modifies the existing theoretical interpretation of IE. **Figure 8.2** illustrates the new theoretical proposition of this study and shows the key stages of institutional change and IE.
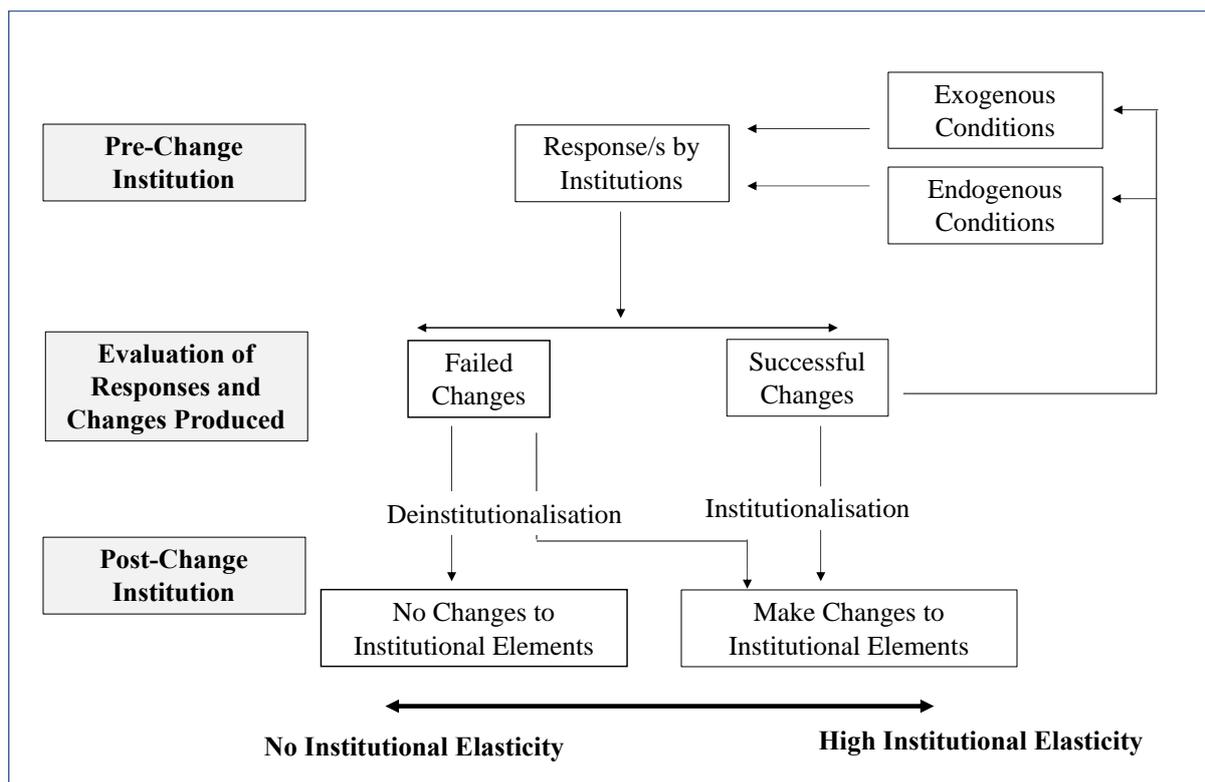
Figure 8. 2: Key stages of Institutional Change and Elasticity of Institutions

As shown in **Figure 8.2**, institutions identify the exogeneous or/and endogenous conditions and respond to such conditions in different ways. However, the results of such responses may vary from failed change to successful change. Hence, the *evaluation of responses and the changes they produce* on institutions are important for either institutionalisation or deinstitutionalisation of the respective responsive measures/changes. In the previous studies, a '*failed change*' has been identified based on the scope of change. The efforts that are 'unable to transform all the three institutional pillars—regulative, normative, and cultural cognitive' have been recognised as a *failed change* (Awasthi et al., 2020, p.24). This claim implies that a change that transforms all three institutional pillars qualify to be a '*successful change*'. However, as discussed earlier, evidence from Colombo showed that even after experiencing transformations in all three pillars, such institutional responses were not recognised as *successful changes* in the long run. Hence, the findings of the study suggest that the *success* or

the *failure* of institutional responses can be determined only through an evaluation of the effectiveness of both responsive measures and the changes it produce, but not merely based on the scope of the change.

Likewise, even after a seemingly *successful* change, an institutionalisation should take place only with a comprehensive evaluation of the responsive measures and the changes it creates. Perceived success can lead to '*extreme institutionalisation*' which takes the institutional practices for granted. Thus, it does not encourage actors to question the practices (Dorado, 2005). The *lack of post-project evaluation and learning* within public organisations was identified as one of the critical factors that affect underutilisation of public land in Colombo. This organisational constraint has been negatively affecting the information and knowledge management on PLD. Hence, as shown in **Figure 8.4,** a comprehensive evaluation should be a pre-condition for both institutionalisation and deinstitutionalisation.

In summary, this study suggests the ability of an institution to effectively respond to exogenous and endogenous conditions via institutionalisation and/or deinstitutionalisation of changes as appropriate is recognised as the IE. Institutions that are capable of making changes through this process will have a high IE or greater responsiveness. However, this study did not aim to operationalise the concept of IE. Based on the evidence from Colombo, it provided novel insights that enrich the existing theoretical knowledge on IE.

8.4.2. Underutilisation: Assess the Underlying Process, not Just the Outlook

As the findings revealed, the conceptualisation of underutilisation of public lands is paradoxical (Section 6.4 in **Chapter 6**). Despite certain agreements, this 'condition' (underutilisation) of public lands has been contested due to the multiple interests or values (mostly contradictory)

that are perceived by different actors associated with the land. However, regardless of this contested 'outlook' of underutilisation, multiple case studies provided uncontested evidence of an underlying 'process' that grapples with deep-rooted institutional backlogs. The analysis recognised the process that drives public lands towards underutilisation as a vicious cycle. In this context, a theoretical framework that can effectively explain and analyse this underlying 'process' is found to be far more crucial than a debate over the outlook or the 'outcome' of the problem (underutilisation). Hence, the following section discusses how the findings on the underlying process of PLD is developed as a theoretical framework to assess the underutilisation of public land.

While recognising the strengths of the methodology followed during the analysis of underutilisation in Colombo, the study suggests that any assessment of underutilisation of public lands needs to adhere to the following three basic principles.

- The assessment should follow a relational approach that can help to capture the complexity of public land and its development through its network of relationships, rather than considering the land as a physically bounded entity.

- The assessment should be able to assess the multiple dimensions of PLD, namely, a) Phases of the development process, b) Levels of development planning (site level, organisational level and policy level), c) Role of actors with multiple interests (landowners, development proponents, investors etc.), and d) Resources required for the development process.

- The assessment must examine and integrate the narratives of key actors (i.e., landowners, development proponents, investors, residents) who express multiple interests over public lands that are under investigation.

The network analysis carried out during the data analysis provided a detailed account of critical factors and their inter-relationships in PLD. The findings suggested that underutilisation is not merely determined by a range of factors, but by the complex inter-relationships among factors. The analysis recognised the process underlying underutilisation in terms of five distinctive clusters (See **Figure 7.6** in **Chapter 7**). Hence, the outputs of the network analysis can be used as a guiding framework to analyse the PLD process comprehensively. **Figure 8.3** below shows the framework suggested for the assessment of the underlying development process and institutional context of PLD in Colombo.

However, the original network diagram derived from data analysis was modified in terms of the positioning of several critical factors to make it less complicated as an analytical framework. For example, as per the network analysis which analysed the interrelationships among critical factors, *limited provisions of legal enactments (A9)* was positioned in Cluster 5 (Delays in land disposal) due to its effect on disposing of land in the market. However, in this modified theoretical framework critical factor A9 was positioned in Cluster 1 (Powers of the public landowner) since it is an attribute particularly, related to the public landowner. Further, *post-evaluation and research in PLD* was part of Cluster 5 in the original network. In the modified framework, *post-evaluation and learning* is identified as a distinctive cluster/phase in PLD. Because firstly, it was recognised as one of the most crucial connections that produce an iterative cycle of underutilisation. Secondly, the discussion on IE also recognised the importance of evaluation in recognising the failures or successes of institutional responses for building IE. However, apart from these minor modifications, none of the interrelationships among the critical factors which were identified by data analysis was changed.

Post-Evaluation & Learning

Powers & Functions of Public Landowners

Property Management

Assessment of the Development Context and Planning

Land Disposal

Consensus Building

Mandates for Land Development and Asset Management

Policy for Public Land Management

Post-Project Evaluation & Research

Information & Knowledge Management

Skills and Expertise

Financial Capacity for PLD

Property Maintenance

Manage Unauthorised Uses

Revenue Generation

Feasibility of Land Development Model

Marketing Strategy

Provisions of Legal Enactments

Bureaucratic Power

Cost of Land

Legal Disputes

Institutional Coordination in Planning

Political Interest & Support

Planning and Building Regulations

Attracting Investors

Long-term Vison for Public Infrastructure Delivery

Resettlement of Existing Uses

Socio-Political Climate of the Country

Schedule Adherence

Agreement for Land Alienation

Mechanism for Sharing the Benefits

Institutional Procedures

Trust over Development Proponent

Legitimate use of Power by Public Agencies

Attitudes of Public Officers

Financial Risk Management

Socio-cultural Values

Figure 8. 3: The development process and the institutional context of PLD

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Figure 8.3 illustrates the institutional context of PLD through six key overlapping phases of the development process, which are, 1) Powers and functions of public landowners, 2) Property management, 3) Assessment of the development context and planning, 4) Consensus building, 5) Land disposal, and 6) Post-evaluation and learning. However, the relationships shown in the diagram should not consider as a blueprint of relationships in PLD as they might differ across different organisations or projects. This framework can help to diagnose institutional backlogs (if any) in PLD and their implications on the PLD process. The unit of analysis could be a public organisation that vests public land or a PLD project/programme.

Apart from diagnosing underutilisation, this assessment can be useful in discovering the interventions or institutional changes that are necessary to break a vicious cycle of underutilisation. Because if the PLD and its institutional environment function as a network of interrelationships and there should be many alternative means to break a vicious cycle. For example, if public landowners are not effective enough in managing their lands and property, which is mostly the case with fragmented public land ownership, an external public agency with adequate power may enter the PLD process. At this point, rather than transferring the land to an external agency, empowering public landowners to engage in PLD could be an alternative means available to address the institutional constraints. Therefore, this assessment will provide guidance to identify the institutional changes required to address the constraints and enhance the responsiveness of the institutions in PLD.

Likewise, this framework can capture the responses of institutions towards endogenous and exogenous conditions along with the consequences of the responses. Such information can provide necessary inputs to understand the elasticity of land institutions.

However, since this framework was derived from context-specific findings, adaptation of the framework to places outside Colombo will be appropriate only when there are similar institutional and developmental contexts. Therefore, examination of the context of land development with respect to property rights, political-economic backdrop and development needs is a precondition for analytical or theoretical generalisation.

It is important to discuss the visual presentation of the proposed framework of this study. The relationships and clustering of factors were derived from the analysis of data carried out via the Gephi software. In terms of the visual presentation, this framework may appear to be marginally similar to the concept of the 'Web of Institutionalisation' proposed by Caren Levy (1996). The web of institutionalisation intends to examine how to incorporate and sustain new perspectives into the regular practices of organisations that are involved in development processes, recognised as the *institutionalisation* by Levy (1996). Hence, apart from adopting a relational approach, the framework suggested in this study is different from Levy's proposition.

8.5. Chapter Summary

This chapter discussed how this study tested its hypothesis against the findings derived from case studies. In this study, testing of the hypothesis referred to the process that re-examine the findings derived from Colombo against the 2 propositions of the hypothesis that were used to elucidate the underutilisation of public land. The process revealed that the land institutions are required to respond to endogenous conditions (property rights related constraints, organisational constraints) and exogenous conditions (public needs & market potentials, socio-market based uncertainties) in PLD. However, the responses of land institutions have not always been effective enough to address these conditions. *The vicious cycle of underutilisation* indicates the lack of elasticity of land institutions. Hence, underutilisation of public lands is

attributed to the lack of IE in PLD. However, the hypothesis was partially accepted and found to be partially effective in explaining the underutilisation of public lands in Colombo.

The case-based theory-building process helped to develop new theoretical insights on 1) the IE, and 2) the assessment of underutilisation of public land. The study did not aim to operationalise the concept of IE but provided novel insights to enrich the existing theoretical knowledge on IE. Finally, the study suggested a framework to assess the underutilisation of public lands via the assessment of the development process and the institutional environment underlying PLD. Besides facilitating the diagnosis of the institutional backlogs and their implications, the framework is useful for identifying the institutional reforms required in PLD. The next chapter will provide a summative view of the research process mainly in terms of objectives and their outcomes.

CHAPTER 9

CONCLUSION

9.1. Introduction

This thesis investigates the underutilisation of urban public land with special reference to Colombo, Sri Lanka. The research process and its outcomes are discussed in detail from Chapter 1 to Chapter 8. The thesis records the progress from the stage of problem identification, literature review, developing the hypothesis and methodology, carrying out data collection and analysis, testing the hypothesis, and finally, to developing a new theoretical framework. This final chapter provides a summarised view of the research process by highlighting the research outcomes with respect to the objectives of the study, implications of the findings, limitations of the study, and recommendations for future research.

9.2. Key Findings of the Study

This study aimed to address the research question of '*why public lands with development potentials remain underutilised for prolonged periods in the urban areas of Sri Lanka*'. To address this question, the study established five specific objectives.

The key findings of the research inquiry are as follows.

9.2.1. Findings in Relation to Objective 1

a) Despite the regular usage of the term, the concept of 'underutilisation' of land is theoretically ambiguous and contested due to its conceptual lapses.

b) The key conceptual lapses identified are; 1) Over-emphasis on the economic value of land, 2) conceptualising underutilisation in relation to the idea of the 'highest and best use' of

land, and 3) subjectivity of interpretation. These conceptual caveats have negative implications for decision making.

9.2.2. Findings in Relation to Objective 2

a) The systematic literature review identifies 11 critical factors that influence public land development. *The need for an effective land allocation strategy, generating revenue and managing financial risks*, and *delivering affordable housing and public infrastructure* are the three most widely discussed factors by the previous studies.

b) The review identifies three knowledge gaps; 1) Withholding public lands and keeping them idle without using them productively is found to be an ubiquitous practice in many cities. Yet, this issue has rarely been raised in scholarly discussions, 2) There have been no attempts at explicitly dismantling and analysing the public land and its development as a system of networked relationships, and 3) scholarly attention on PLD in the developing Asian countries is inadequate.

9.2.3. Findings in Relation to Objective 3

a) The cross-case synthesis identifies 31 critical factors that affect underutilisation of public lands in Colombo. Based on the initial screening, critical factors are classified into two categories; 1) the adverse conditions experienced by public landowners, and 2) the challenges in planning the development and consensus-building.

b) The critical factors are capable of effectively capturing the complexity of the PLD process and its institutional context since these critical factors cut across multiple dimensions of PLD.

9.2.4. Findings in Relation to Objective 4

a) Two main types of critical factors are identified in terms of the significance of the factors (based on the interrelationship within the network) as *influential factors* and *vulnerable factors*.

b) Based on the relationships within the network, critical factors are classified into five clusters. The clusters are: 1) Limited powers and functions of public landowners; 2) Inefficiencies in property management; 3) Challenges in planning the development; 4) Failures in building consensus between key actors; and 5) Delays in disposing of land in the market.

c) The relationships across clusters reveal a cyclical movement, which is recognised as the '*vicious cycle of underutilisation*' that leads public lands in Colombo towards underutilisation.

9.2.5. Findings in Relation to Objective 5

a) The *vicious cycle of underutilisation* indicates the lack of elasticity or the responsiveness of land institutions towards exogenous and endogenous conditions.

b) The study recognises IE as the ability of institutions to evaluate the successes and failures of institutional responses that address exogenous and/or endogenous conditions and, subsequently, take deliberate actions to: 1) discontinue failed changes (deinstitutionalise) and/or 2) adopt or validate successful changes (institutionalisation).

c) Analysing the underlying 'process' of underutilisation is far more crucial and reliable for discovering the deep-rooted institutional backlogs of PLD than a debate over the 'outlook' or the 'outcome' of the problem.

d) The study proposes a theoretical framework that can be used to assess the underlying process and institutional context of PLD in Colombo.

As summarised above, the study was successful in achieving its five objectives. In the nutshell, this Section 9.2 has clearly re-iterated the key findings of this study that make an original contribution to knowledge on PLD (see Section 9.2.1 (b); Section 9.2.3 (a); Section 9.2.4 (c) and Section 9.2.5 (b and d) above).

9.3. Implications of the Findings

This study has the following theoretical and practical implications.

In terms of theoretical implications, the study makes an original contribution to the scholarship on PLD. First of all, this study shed light on the concept of *underutilisation*, its conceptual lapses and their implications for planning decision making, a topic that has been largely overlooked in scholarly debates to date. Secondly, based on the evidence from Colombo, the study discovered the phenomenon of the *vicious cycle of underutilisation.* This finding was also examined through the theoretical lenses of *institutional elasticity,* a novel concept used in institutional studies. Findings from Colombo were able to provide new insights, particularly into the post-change institutions and deinstitutionalisation. The findings provide a counterargument and hence challenge and modify the existing theoretical interpretation of institutional elasticity. These theoretical constructs have not been employed before to study land development in general and public land development in particular. Therefore, this study has brought about a novel theoretical perspective towards PLD and the elasticity of institutions. Also, it offers room for theoretical generalisation.

As regards its practical implications, the study has provided useful insights for decision-makers, urban planners and other professionals when dealing with PLD in urban areas of Sri Lanka. Particularly, its theoretical framework can be employed to assess the underlying institutional process for public lands, in the context of fragmented property rights. The framework can

diagnose if the institutional backlogs have driven public lands towards underutilisation. Also, it can recognise the institutional changes necessary to break the vicious cycle, through enhancing the responsiveness of institutions for PLD. Hence, this framework can be a useful analytical tool for informed decision making in PLD.

9.4. Limitations of the Research Study

Despite achieving the objectives through the best possible means, the study was subject to several limitations during the process.

Firstly, due to the fragmented public land ownership, and the limited coverage of cadastral mapping, Sri Lanka still does not have centralised and up-to-date data on public lands. Under these circumstances, apart from the scattered evidence, the inability to provide accurate information on public land ownership and its underutilisation in urban areas of Sri Lanka is recognised as one of the key limitations of the study. Diverse sources such as recent development plans/programs and proposals, annual progress reports of public agencies and newspaper articles provide evidence for the prevailing underutilisation of public lands in Sri Lanka. Hence, the study collected fragmented data from different public agencies yet, many agencies have incomplete information relating to their land. As a result, obtaining a holistic view of public land utilisation was challenging and the data collection turned out to be a time-consuming exercise.

Secondly, semi-public documents produced by public agencies were found to be highly useful and reliable sources of data in identifying the inter-organisational processes in PLD. Even though the key informants were willing to share information related to decision making via interviews, access to semi-public documents such as the minutes of meetings were not always

available or provided by every public agency. Hence, drawing evidence from multiple sources was adopted as an alternative method to overcome the challenge.

Thirdly, there are some limitations in terms of the scope of the study. Intending to strike a balance between the available time and the rigour of investigation, this study selected five cases of PLD from Colombo, the commercial capital of Sri Lanka for investigation. The proposed theoretical framework in this study can be effectively adopted to examine the urban PLD in Sri Lanka. As qualitative research, the study aims for theoretical generalization. However, this framework was developed based on the findings derived from a place (Colombo, Sri Lanka) with fragmented public land rights and ownership. Cities or countries outside Sri Lanka may experience the fragmentation of public land ownership in different degrees and there can be diverse institutional arrangements for PLD. Hence, due to the context-specific nature of PLD, the proposed framework may be applicable only for cities/ countries with a similar institutional environment in PLD.

Fourthly, there was an unexpected upsurge of the Covid-19 pandemic during the period scheduled for data collection and it produced many unexpected challenges to the research process. It curbed the opportunities for visiting the public agencies to collect data and conduct face-to-face interviews with key informants. However, within the limited time available for data collection, alternative means such as online interviews were conducted to achieve the expected outcomes.

9.5. Recommendations for Future Research

The findings of the research study offer several pathways for future research.

Firstly, expanding the scope of investigation on the subject of underutilisation of land can open up more avenues for future research. One of the options available for future research is to conduct a study with a larger sample of cases. It may help seek the validity of the phenomena of the vicious cycle of underutilisation and the lack of IE. Likewise, this study only focused on the urban context in the examination of underutilisation of public land. However, underutilisation of land may exist and manifest in different forms in the non-urban context. Thus, widening the scope of the investigation will bring about new insights into underutilisation of land.

Secondly, network analysis, the key analytical method used in this study, proved to be a powerful tool for analysing the complex network of inter-relationships that are underlying land development and management. As this study sought to investigate the critical factors that affect underutilisation, the examination was not exclusively designed to investigate inter-relationships between people (individuals and groups) in PLD. In-depth investigation of how the inter-relationships between key actors of PLD such as public landowners, development proponents, political leaders, professionals and private investors affect the PLD could be an extension to this study. Carrying out such examination using appropriate methodologies (i.e., *Social Network Analysis – SNA),* may help to unravel the power-relationships among key actors and hence, will be able to add the human dimension into the investigation of PLD.

Thirdly, *institutional elasticity,* the theoretical concept discussed in this study recognised the key aspects or phases of IE such as institutional responses, evaluation of institutional responses, deinstitutionalisation, and institutionalisation. This concept can be effectively used to examine

the responsiveness of land institutions towards certain socio-economic changes of the country such as economic recessions/boom, political instabilities and technological developments. Hence, this concept can be further modified, upgrade and validated with empirical evidence from diverse contexts.

These avenues for future research provide opportunities to expand and strengthen the existing scholarship on public land ownership, its development and underutilisation.

As the final chapter of the thesis report, this chapter has summarised how this research study achieved its research objectives. The study addressed its research question and provided a systematic explanation for why public lands with development potentials remain underutilised in urban areas of Sri Lanka. Despite several limitations, the study achieved its objectives through the best possible means. Further, the findings of the research provide an original contribution (i.e., conceptual lapses of underutilisation, the vicious cycle of underutilisation and institutional elasticity) to the existing theoretical knowledge on PLD and also have important practical implications.

The following pages provide the appendices and the references to the study.

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APPENDIX 1

The Interview Guide to Examine the Concept of Underutilisation of Urban Public Lands

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Interview Guide to Examine the Concept of *'Underutilisation'* of Public /State Lands and its Usage in Urban Planning

The objective of this interview is twofold; 1) to examine how the notion of underutilisation (and other comparable terms used in different contexts) is defined and employed to characterise a phenomenon related to public land, and 2) to identify conceptual lapses or limitations associated with the concept and its implications.

- Name of the Interviewee: ……………………………………………
- Area of Expertise**:**……………………………………………………
- Country:……………………………………………………………

1. What comes to your mind when you hear the term 'underutilisation' of land?

3. Based on your experience and observations in cities, how would you describe the attributes of an 'underutilised' land?

4. Does the city/ country that you live in use the term 'underutilisation' of land in planning decision making?

    4.1.   If not, what is the most commonly used terminology in your city/country to identify lands with similar conditions as above? (i.e., *Vacant Land, Surplus Land, Lazy land, Suboptimal use, Brownfield sites* etc.)?

    4.2.   Is there any debate around the above mentioned concept and its usage in planning decision making your city/country?

5. As scholars argued, Public Land is an asset that belongs to all citizens and hence, should serve the public interest.

    In this context, if the public lands are available in a city that grapples with problems such as affordable housing, and if those public lands are unable to serve the public needs adequately (through providing social housing or generating revenue for the public sector institutions), do you recognise it as an underutilisation?

6. Most of the time, inquiry on the 'Underutilisation' of land seems to go hand in hand with its seemingly opposite condition, the optimum utilisation. What is your take on that ?
   - What is the 'Optimum Use' or the 'Highest Best use'(HBU) of the (urban) public land for you? What are the attributes you identify related to this type/form of land utilisation?

7. Do you recognise any Strengths and Weaknesses of how the concept of 'underutilisation' (or any other comparable concept) is framed and used in contemporary urban planning practices in your city/country context (or any other place if you want)?
   (Follow-up questions)
   7.1. What is your take on the following claims on the concept of underutilisation?
      i.   Assessment of underutilisation always prioritise the economic value of land over the other values (i.e., public markets, low-density development with forest cover may be considered underutilised)
      ii. Underutilisation is recognised in relation to Optimum use/HBU. But this concepts or goals are also contested.
      iii. The immediate division into binary as 'underutilised' and 'optimum use' severely constrain the ability to understand the in-between states of two opposites.
      iv. Underutilisation is a subjective claim

8. If you identify the above limitations related to the concept or the definition, what would you like to suggest for developing a better and precise definition or characterisation of the status/ quality of public land utilisation?

APPENDIX 2

The Interview Guide to Examine the Critical Factors, Their Inter-relationships and Effects on Underutilisation

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Interview Guide to Examine the Critical Factors Affecting the *'Underutilisation'* of Public /State Lands in Sri Lanka

The objective of this interview is to investigate the 'underutilisation' of urban public land/ state lands (under the custody of different public agencies such as the SLR, the CMC and the UDA) in Sri Lanka, the critical factors affecting the underutilisation, interrelationships among critical factors and ultimately, how it affects the effective use of the public land.

- Date: ………………
- Name/Designation of the Interviewee: ……………………………………………
- Institutional Affiliation**:**………………………………………
- Years of experience related to public land development/ or urban planning: …………

PART I

1. What are the public land development projects or functions (i.e., policy formulation) that you have been involved in during the last couple of decades and in what capacity?

   (will show photographs of selected public lands in Sri Lanka for Interviewees)

2. Do these photographs inform/enlighten you about any specific phenomenon, condition or problem related to public lands in Sri Lanka? Can you elaborate?

3. Have you observed similar conditions associated with public lands in urban areas in Sri Lanka?

4. Do you recognise this condition as an '*Underutilisation*'? If yes, why?

5. If your organisation recognises any public land as underutilised, how do you define or characterise it?

6. There are public lands under the custody of your organization. Are you satisfied with the use and management of such lands?
    1. Can you explain why ?

[recognise one or several cases to discuss in detail: 1*) Tripoli market development, 2) Mount Mary, 3) Slaughterhouse land, 4) Kandawala Irrigation Land, and 5) Chalmers Granary*]

1. According to your experience, what are the critical factors affecting the current conditions associated with the above-identified public land and its development attempts?

2. (Interview Prompts); Do you identify any of the following aspects or factors that contributed/ affected the 'underutilisation' of above discussed public lands and its development attempts? Can you share your experience?
    i. Power (functional & fiscal powers) and capacity of public agencies involved (i.e.UDA, SLR)
    ii. Assessment of needs of the city and potentials of the land (for whom and what needs to be fulfilled with the land)
    iii. Mobilisation of Resources (i.e. information, finance, Skills and expertise, laws/procedures, leadership, political support etc.)
    iv. Strategies for Scaling up the best practices (i.e. identifying and expanding best practices from individual project to city level through policy changes, improvements to the institutional framework or organisational procedures/ Identifying the limitations of current practices/ project evaluations, Research on public land management)

3. How do you identify the possible inter-relationships between those critical factors and how such relationships affect the above-identified conditions ('underutilisation') of public lands? (*may ask the interviewee to draw a mind map to explain the relationships*)

4. The development project such as Tripoli Market development (Trace Expert city) in Maradana was implemented on public land which was claimed to be an underutilised railway land. If you have been involved in this project, could you explain what factors have caused this project to get materialised?

5. What are the strengths and weaknesses that you identify in the current organisational frameworks or the practices adopted for public land development/management within your organisation?
    a. How it affected the project we discussed above?

6. If given a chance to change or upgrade the organisational framework or current practices adopted for public land development in your organisation, what would you suggest to overcome the previously discussed weaknesses?

Questionnaire Survey for Member Checking

Questionnaire for Validating the Research Findings on Underutilisation of Urban State Lands in Sri Lanka and the Critical Factors Affecting Underutilisation

Dear Sir/ Madam,

I kindly request you to take part in this survey that is being conducted to achieve one of the objectives of an ongoing PhD study entitled *'Investigation of Underutilisation of Urban Public/ State Lands, Critical Factors and their Inter-Relationships: The Case of Colombo, Sri Lanka'*. The PhD study is being conducted at the Hong Kong Polytechnic University, Hong Kong.

Overview of the Research Study:
The purpose of this research study is to examine the critical factors affecting underutilisation of state lands in the urban areas of Sri Lanka. Hence, the research adopted the case study approach and selected four cases (land development projects) in Colombo for in-depth investigation. Selected cases have been recognised as *'underutilised'* lands and there have been attempts to develop these lands. The selected cases are, 1) Mount-Mary Railway Land, Dematagoda, 2) Slaughterhouse Land, Dematagoda, 3) Kandawala Irrigation Land, Ratmalana, and 4) Chalmer's Granary Land, Pettah. Data pertaining to case studies were collected through key-informant interviews and document analysis. Considering the similarities across cases, findings from the four cases were collated to identify the patterns, if any. Accordingly, the study identified 31 critical factors affecting underutilisation of state land in Sri Lanka and the inter-relationships between factors that cause state lands to remain underutilised for long periods. During the phase of data collection in Colombo, you have been contributed to this research study as a key informant and your contribution so far is greatly appreciated.

The Objective of the Questionnaire Survey:
This survey aims to validate the key findings derived after analysis of the data collected from multiple cases. The survey consists mainly of two parts. Part I focuses on how the concept of 'underutilisation' of state land is recognised in planning decision making in Sri Lanka. Part II focuses on the critical factors and the inter-relationships between them that affect underutilisation of urban state land.
Your feedback on how these findings match your experience and knowledge relating to urban state land development in Colombo, Sri Lanka is crucial for this study. All the information and responses collected from the participants will be held in confidence and will only be used for academic purposes. Please return the completed questionnaire within 2 weeks.
Your participation and response in this survey will be greatly appreciated.

Thank You.
Priyanwada I. Singhapathirana/PhD Candidate,
Department of Building and Real Estate, The Hong Kong Polytechnic University.

Questionnaire for Validating the Research Findings on Underutilisation of Urban State Land and the Critical Factors Affecting Underutilisation (with reference to Colombo, Sri Lanka)

Instructions: This survey will take approximately 10-15 minutes of your time. Please indicate your opinion on each question/ statement by ticking the box that best matches your answer.

> Please Note: In this study, the term *'State Land'* refers to the lands vested and managed by public agencies functioning at the central, regional or local government level, or any parastatal body (i.e., Municipal Councils, Sri Lanka Railways, Port Authority, etc.).

1. Your area of specialisation

Specialisation	
Urban Planning	☐
Property Valuation	☒
Engineering	☐
Surveying	☐
Other	☐

PART I – Concept of 'Underutilisation' of State Land

1. 'Underutilisation' of state lands in urban areas is recognised by the following attributes during the planning decision making in Sri Lanka.
   Please indicate your level of agreement with the following attributes of underutilisation.

No	Attributes of Underutilisation of State Land	Level of Agreement				
		Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
1	Physical deterioration of built structures	◉	○	○	○	○
2	Not being able to generate revenue (for public agencies) from a land located in a prime area of the city	○	◉	○	○	○
3	Incompatibility between the current use of the land and its surroundings in terms of the best possible use and the development density	○	◉	○	○	○
4	Undermining the potential capacity of the land for development	◉	○	○	○	○

2. Do you recognise any other attributes of underutilisation of state land?

> **Please Note**: This study is based in Colombo, Sri Lanka.
> - *Public Landowner'* refers to the public agency in which the state lands are vested (i.e., Sri Lanka Railways, Department of Irrigation, Colombo Municipal Council, and the Urban Development Authority in which the lands from other public agencies are vested).
> - '*Development Proponent'* refers to the Urban Development Authority (UDA), which directs the public landowners in the development of underutilised state lands. (The UDA primarily plays the role of 'Development Proponent'. However, it also can be recognised as a 'Public Landowner' after the UDA is vested with state land through different means. i.e., In the case of the Chalmer's Granary land, UDA is the 'Public Landowner').

1. How **Significant** are the following factors affecting underutilisation of urban state lands in Sri Lanka?
Please indicate your opinion by ticking the relevant box.

| No	Critical Factors affecting Underutilisation of State Land	Significance of Factors Affecting Underutilisation				
		Highly Significant (5)	Significant (4)	Neutral (3)	Less Significant (2)	Not Significant (1)
	Limited Powers and Functions of the Public Landowner					
1	Lack of skills and expertise (human resources) for land development	●	○	○	○	○
2	Ineffective information management & knowledge management	●	○	○	○	○
3	Public landowners without a mandate for land and asset management	●	○	○	○	○
4	Absence of a national policy for urban state land management	○	○	○	○	○
5	Limited provisions in the legal enactments for land development (i.e., Railway Act)	○	○	○	○	○
	Inefficient Property Management by the Public Landowner					
6	Lack of financial capacity for land development	○	●	○	○	○
7	Ineffective property maintenance	○	○	●	○	○
8	Ineffectiveness of generating financial and economic returns from land assets	○	○	●	○	○
9	Unauthorised use of land and property	○	○	○	○	●
10	Political interferences and lack of political will	○	○	○	○	●
	Challenges in Planning the New Development (Collaboration between the Public Landowners and the UDA)					
11	Absence of a long-term vision for public service/ infrastructure delivery	○	○	○	○	○
12	Unsupportive attitude and lack of commitment of public officers	●	○	○	○	○
13	Financial risk and burden on the public development agency; The UDA	●	○	○	○	○
14	Lack of consensus (between public agencies) over sharing the benefits of new development	●	○	○	○	○
15	Challenges in the resettlement of current uses	●	○	○	○	○
16	Conflicts with Socio-cultural values	●	○	○	○	○
	Failures in Consensus Building between Public Agencies (i.e.,UDA and Sri Lankan Railways/Colombo MC)					
17	Lack of institutional coordination in planning & conflicting claims on underutilisation	○	○	○	○	●
18	Negative reputation of and mistrust over the development proponent	○	●	○	○	○
19	Resistance of stakeholders to the land alienation from the public landowner to UDA	○	●	○	○	○
20	Land disputes and litigations	○	○	○	●	○
21	Time-consuming institutional procedures (i.e valuation of properties, land vesting)	○	●	○	○	○
22	Misuse of legally vested power by the development proponent	○	●	○	○	○
23	Bureaucratic power	○	●	○	○	○
	Challenges in Disposing of the Land in the Market					
24	Unfavourable political- economic climate in the country	○	●	○	○	○
25	High cost of land	○	●	○	○	○
26	Lack of feasibility of the land disposal & development model	●	○	○	○	○
27	Difficulties in attracting investors	○	●	○	○	○
28	Unexpected schedule delays	●	○	○	○	○
29	Development restrictions imposed by planning/building regulations	○	●	○	○	○
30	Lack of post-project evaluation, learning & research within public organisations	○	●	○	○	○
31	Limited scope for marketing the land for development	●	○	○	○	○

2. The study classified the critical factors affecting underutilisation into five clusters as presented in the above table. These clusters of critical factors identify important phases of a sequential process. Hence, the following statements summarise **the key phases of the process and how each phase causes underutilisation.**

Please indicate your Level of Agreement with the following statements by ticking the appropriate box.

	Statement	Level of Agreement				
		Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
1	Despite having lands in their possession, public landowners (except for the UDA) do not have the powers and functions for land/ asset management. Further, they do not have adequate resources (i.e., finance, information, skilled human resources, legal provisions, etc.) to manage their lands or real properties effectively.	○	◉	○	○	○
2	Due to the lack of powers and inadequate resource capacity, Public Landowners experience inefficiencies in property management (i.e., property maintenance, rent collection, avoiding unauthorised uses, management of tenants and lease agreements, etc.)	○	◉	○	○	○
3	Compared to other public agencies, UDA as a 'Landowner' is equipped with the necessary powers and resources for land development. However, UDA also encounters difficulties in property management, particularly in generating expected financial returns from the lands vested in the UDA (e.g., From 1980 to 2011, Chalmer's Granary land had not been put to the intended development).	○	◉	○	○	○
4	UDA identifies underutilised lands in the city and approaches the public landowners to carry forward new developments. However, planning collaboratively and building consensus between public agencies for new development are extremely challenging tasks. Hence, some projects are even abandoned due to the inability to reach consensus between the agencies.	○	◉	○	○	○
5	If the public agencies manage to build consensus for development, the land will be prepared for disposal in the market. However, disposing of lands in the market is a long-term exercise due to the challenges of attracting investors and also other external factors such as the socio-economic instabilities prevailing in the country.	○	◉	○	○	○
6	The absence of post-evaluation of projects, not learning from failures and lack of research within public organisations do not support to generate new information and advanced knowledge (i.e., information on the extent of underutilised land owned by the organisation, innovative methods for land disposal/marketing, methods of consensus building, etc.). Thus, these limitations do not empower the public landowners to be effective in state land development and management.	○	◉	○	○	○

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3. Please indicate your Level of Agreement with the following simplified visual interpretation of the relationships among the four key phases of the development process that lead to the underutilisation of state land in Colombo, Sri Lanka.

Level of Agreement				
Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
○	◉	○	○	○

Cyclical Process that drives the Underutilisation of State Land in Colombo

Lack of post-project evaluation and research do not generate new knowledge. Thus, it does not generate new information for public landowners that can support better management of properties

1.Limited Powers and Functions of the Public Landowners in Land/Asset Management

Lack of power and functions of the Public landowners create inefficiencies in property management

Lands become underutilised due to dilapidated structures, vacant properties, unauthorised uses etc.

Lands will remain as it is unless an investor is found

4.Challenges of Disposing the Land to the Market

Underutilisation of Public Land

2.Inefficiencies in Property Management

Projects gets abandoned due to the inability of building consensus

Once the associated stakeholders build consensus for development, land will be prepared to dispose to the market. Yet, legal disputes & time-consuming Institutional procedures cause Schedule delays

3. Challenges in Planning and Building Consensus for a New Development

Public sector development proponent (UDA) identify the Underutilised land in the city and propose new developments

4. If you disagree with the above visual interpretation that explains the '*cyclical process*' that leads to the underutilisation of state lands in Colombo, please explain why.

5.Please indicate your level of agreement with the following statement.

No	Statement	Level of Agreement				
		Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
1	The above findings on underutilisation of urban state land (31 critical factors and the cyclical process that illustrate the underutilisation of state land in Colombo) can be applied/used to understand the underutilisation of state lands in other urban areas outside Colombo in Sri Lanka.	○	◉	○	○	○

6.Please provide, if any, other general comments on the concept of underutilisation of state lands, factors affecting underutilisation and the cyclical process that drives the underutilisation of state land.

-The End -
Thank You for Participating in the Survey.